

General help



Information Technology for Finance

ITCharts Light+

2007 edition

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Introduction

This presentation will allow you to understand the basics of our ITCharts Light + tool in just a few minutes.

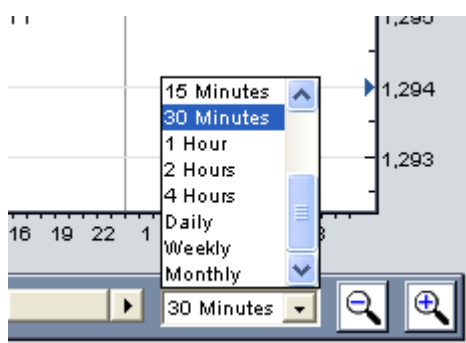


Views

You can modify the time interval of the charts by using the drop-down list located in the lower right hand side of the software:



You have a large set of choices at your disposal:



- ◆ Tick by tick
- ◆ 1 Minute
- ◆ 2 Minutes
- ◆ 3 Minutes
- ◆ 5 Minutes
- ◆ 10 Minutes
- ◆ 15 Minutes
- ◆ 30 Minutes
- ◆ 1 Hour
- ◆ 2 Hours
- ◆ 4 Hours
- ◆ Daily
- ◆ Weekly
- ◆ Monthly

Please note that modification of the time interval automatically changes all the charts, as well as all the indicators and lines drawn.

Duration: selecting the number of visible bars



The following buttons allow you to display more or less bars in the screen:



Type of scale: linear, logarithmic



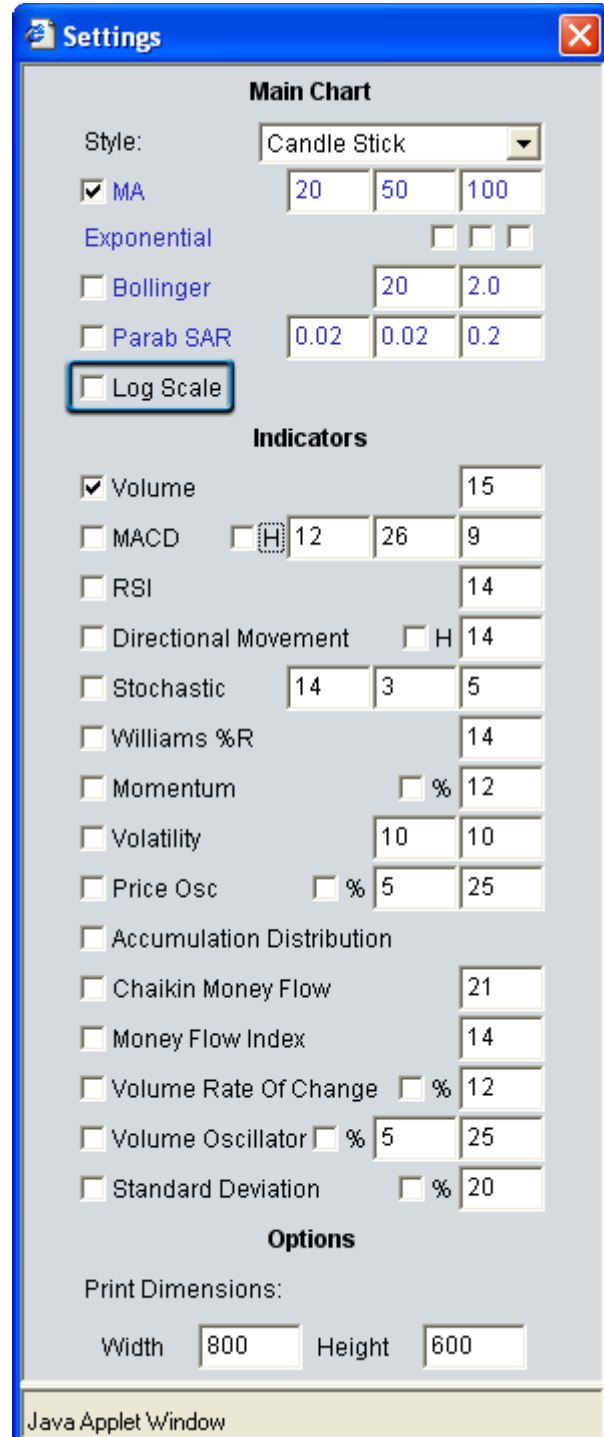
Click on the “Settings” button located below to the left of the application. A window will appear.

It allows you to adjust most of the parameters of the software.

The choice of the scale is made via the tick box “Log Scale”.

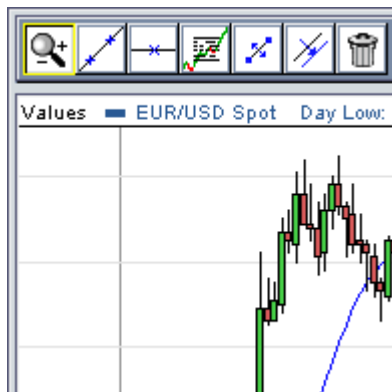
The linear scale is the default one. This implies that there is no visual difference on the Y axis between 10 and 20 and between 100 and 110.

However, the semi-logarithmic scale transforms the Y axis by applying the log function to the representation of the prices: therefore, there is no visual difference between 10 and 20 and between 100 and 200 on the Y axis.



Drawing functions

This section gives some easy to use examples of the drawing interface.



The toolbar located at the top to the left of the tool gives you access to all drawing features.

Tracing lines

You can draw lines of support, resistance and channels. To do this, simply select the icon framed in yellow as shown in the image below:



Left-click where you want to define the first point of the line. Move the mouse and left-click again to define the second point of the line. The line will be drawn.

Modifications

Remember that every object drawn on the graph can be modified or deleted later on by using the appropriate tool.



For example, the button framed in yellow allows moving a line. After clicking on the button, left-click on the line you want to move. Once the movement has been made, left-click again to leave the line in this new position.

Description of the toolbar buttons

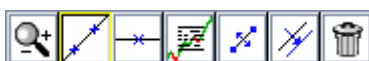
➤ A. Zoom views in the chart



The icon that looks like a magnifying glass represents the zoom feature, selected by default.

To define the first date of the period of time on which to zoom, left-click on the corresponding chart area. Then, move the mouse towards the right and left-click again to define the second date. You can use the horizontal scrollbar to display the prices at other dates within the same zoomed view.

➤ B. Drawing a line



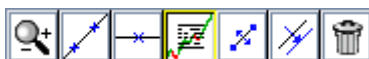
The icon shown in yellow allows is used to draw lines. Click with the left button of the mouse to define successively two points which will be crossed by the line.

➤ C. Drawing a horizontal line



The icon shown in yellow also allows the drawing of a line, but in this case the line will be horizontal.

➤ D. Fibonacci levels



Select the icon shown in yellow, then left-click on the two points of the chart that will define the end values of the Fibonacci levels.

A series of horizontal lines are drawn at the Fibonacci levels of 0.0%, 23.6%, 38.2%, 50%, 61.8% and 100% of the trend line.

➤ E. Moving an object



The icon shown in yellow allows you to move any drawn object.

After you have selected it, left click on the item you wish to move. Once you have completed the move, left click again to fix the new position of the item.

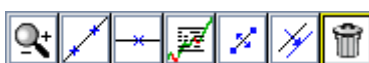
➔ F. Copying an object



The icon shown in yellow representing two parallel lines enables you to copy any drawn object in your chart. Simply click on the object to copy and click anywhere else on the chart to paste the new object.

Notice that when you approach an object, this object turns to light blue, indicating that you can already click with your left mouse button to select it, thus preventing you from having to aim precisely on the object and giving you a wider area in which to click.

➔ G. Deleting an object



Clicks on the icon shown in yellow, then click again on any object (text or line) to delete it.

Notice that when you approach an object, this object turns to light blue, indicating that you can already click with your left mouse button to delete it.

Indicator parameters

There are a large number of indicators available. They are the most commonly used by the best technical analysts in the world.



Each indicator displayed in the "Parameters" window may be modified. This means you can sharpen your technical analyses by adjusting the parameters of the selected indicators.

For instance, you can modify the number of days to be considered in the calculation of the moving average. You can in fact notice that three separate moving average calculations are available in the workstation; should you not wish a moving average to appear, simply type 0 in the relevant field.

Tip: Ticked boxes activate indicators. Clear boxes if you want to deactivate corresponding indicators.

Default values are already set for all indicators. However, you may change these values as you wish.

Indicators plotted on the price chart

MA

➔ Calculation

Simple moving average =

$$(Current\ close + Yesterday\ close + \dots + close([X-1]th\ previous\ day)) / X$$

X is the count of days used in the calculation

➔ Interpretation

Moving averages are used to identify trends. You can put "0" as parameter in order to hide the indicator.

When a short term moving average crosses over a long term moving average, that means that the trend is bullish. When a short term moving average crosses under a long term moving average, that means that the trend is bearish.

You can also consider crossings between the price and the moving average.

Exponential MA (EMA)

➔ Calculation

First, we have to compute: $\%exponential = 2 / (period + 1)$

Then, the moving average is given by the formula:

$$(daily\ close * \%exponential) + (previous\ EMA * (100 - \%exponential))$$

➔ Interpretation

The EMA gives a higher weight to the most recent data, so it is a more accurate indicator that reacts faster when a new trend appears.

Bollinger (Bands)

➔ Calculation

Bollinger bands are indicators based on a moving average and the standard deviation. You can define the count of days used in the calculation of the moving average (first parameter), and the width of the bands as a multiple of the standard deviation (second parameter).

➔ Interpretation

95% of the prices bars should stay inside the Bollinger Bands if they were following a Gaussian law. That means that the Bollinger Bands can be considered as strong support and resistance when there is no trend in the market.

When the Bollinger Bands bring closer after a big trend, that means that the end of the trend is near.

Parab SAR (Wilder's Parabolic Stop And Reverse)

➔ **Calculation**

SAR points are computed with price and time data.

The parameters are the initial acceleration factor (typically 0.02), the additional factor (typically 0.02) and the limit of the acceleration factor (typically 0.2).

➔ **Interpretation**

The Stop & Reverse points are very useful to detect trends because they follow the price.

As long as the trends exists, the SAR indicator will follow the same direction as the trend, and will stay on the same side. When the SAR indicator crosses over the prices, a "Stop & Reverse" point is plotted, and it means that it is time to reverse the trend.

Indicators plotted in a new window

Volume

➔ **Calculation**

Volume is the cumulative summation of all the shares exchanged during the timescal chosen (daily, weekly intraday...)

➔ **Interpretation**

It measures how powerful the price's variation is, and it reveals the investors emotivity.

MACD , MACD histogram

➔ **Calculation**

The blue line of the MACD (or yellow depending on the background colour) is obtained by substracting the y days exponential moving average from the x days exponential moving average

The red line of the MACD is obtained by calculating a z days exponential moving average of the blue or yellow line.

x, y and z are the MACD parameters, typically equal respectively to 12, 26 and 9.

The MACD histogram is obtained by substracting the red line from the blue or yellow line.

➔ **Interpretation**

A buy opportunity appears when the blue or yellow line crosses below the red line.

A sell opportunity appears when the blue or yellow line crosses above the red line.

The divergences between the MACD histogram and the price quote identify major reversal points and give strong buy/sell signals.

A bullish divergence occurs when stock prices make new lows while the MACD histogram fails to make new lows.

A bearish divergence occurs when the stock price makes new highs while the MACD histogram fails to make new highs.

The bullish and bearish divergences are more significant when the MACD is in an overbought or oversold level.

The opportunities appearing in longer time horizons (weekly, monthly..) generate larger price movements.

Directional Movement

The DI+ measures upward movement. The DI- measures downward movement.

A buy opportunity may appear when DI+ crosses above DI- and a sell signal when DI+ crosses below DI-.

These signals are mostly valid when ADX has a high value: this indicates there is a trend.

RSI

➔ **Calculation**

$$RSI(n \text{ periods}) = 100 - 100 / (1 + p)$$

Where:

$P = \text{average of } n \text{ days up} / \text{average of } n \text{ days down}$

➔ **Interpretation**

RSI is an overbought / oversold indicator. Buy signals occur generally when crossing the 30 level and sell signals when crossing the 70 level.

RSI is always scaled between 0 and 100.

It also gives good divergence signals.

A bullish divergence occurs when the stock price makes new lows while the RSI fails to make new lows.

A bearish divergence occurs when the stock price makes new highs while the RSI fails to make new highs.

Stochastic

➔ **Calculation**

The first parameter is the number of days used to calculate %K, the second is the number of days to be considered for the moving average of %K (generally 1 for Fast Stochastic and 3 or 5 for Slow Stochastic), the third is the number of days to be considered for the moving average of %D.

➔ **Interpretation**

It is an overbought/oversold indicator depending on its position relative to the 0 level.

It also gives good divergence signals.

A bullish divergence occurs when the stock price makes new lows while the Stochastic fails to make new lows.

A bearish divergence occurs when the stock price makes new highs while the Stochastic fails to make new highs.

Williams %R

➔ **Calculation**

The parameter is the number of days used in calculation.

$$\%R = (-100) *$$

$$((\text{high on } n \text{ period} - \text{today's close}) / (\text{high on } n \text{ period} - \text{low on } n \text{ period}))$$

➔ **Interpretation**

Williams' %R is an overbought/oversold indicator. Values -80 and -20 can be used as limits to detect overbought/oversold situations.

Nevertheless, it is better to wait for a change in the price direction, which can be detected for instance through MACD indicator analysis, before buying or selling. Note that when %R makes a peak and reverses, a price decline often takes place.

Momentum

➔ **Calculation**

It is obtained by subtracting the x days before Close from today's Close. X is the parameter associated with Momentum.

➔ **Interpretation**

This oscillator has an unlimited range. It is thus not a good overbought/oversold indicator. However, crossing the 0 level gives good buy/sell opportunities.

It also gives good divergence signals.

A bullish divergence occurs when the stock price makes new lows while the Momentum fails to make new lows.

A bearish divergence occurs when the stock price makes new highs while the Momentum fails to make new highs.

Volatility (Chaikin)

➔ **Calculation**

Chaikin's Volatility is calculated by first calculating an exponential moving average of the difference between the daily high and low prices and then calculating the percentage rate of change of that moving average. The parameters are the number of days considered for the moving average and the rate of change.

➔ **Interpretation**

Chaikin's Volatility compares the spread between a stock's high and low prices. When the volatility is high a top might appear and when the volatility is low a bottom might appear.

Price Oscillator

➔ Calculation

The price oscillator is calculated by subtracting a short moving average by a long one. In its percentage form, the result is divided by the short moving average and multiplied by 100. The parameters are the number of days of both moving averages.

➔ Interpretation

Buy/Sell opportunities occur when the oscillator crosses the 0 level.

Accumulation Distribution

➔ Calculation

$$\text{sum}[\text{volume} * ((\text{Close} - \text{Low}) - (\text{High} - \text{Close})) / (\text{High} - \text{Low})]$$

➔ Interpretation

This indicator balances volumes using the closing price reported at the extreme points of the trading day. It must confirm the stock trend in progress by moving in the same direction as the stock trend. A divergence between prices and Accumulation/Distribution is often a signal that the current trend may reverse.

These volume indicators can be very useful in showing phases of accumulation or distribution.

Chaikin Money Flow

➔ Calculation

It is calculated from the Accumulation/Distribution indicator. The parameter is the number of days used in the formula. Calculation in histogram mode is identical.

➔ Interpretation

It indicates buying and selling pressures.

When the money flow stays significantly above 0, it indicates buying pressure and vice versa.

The divergence between the indicator and the price quote identifies major reversal points and gives strong buy/sell signals.

A bullish divergence occurs when the stock price makes new lows while the indicator fails to make new lows.

A bearish divergence occurs when the stock price makes new highs while the indicator fails to make new highs.

Money Flow Index

➔ Calculation

$$\text{Money Flow} = \text{typical price} * \text{volume} = [(H+B+C)/3] * \text{volume}$$

H the highest price

B the lowest price

C close price

If the median price > yesterday's median price then Money Flow is a positive flow

If the median price < yesterday's median price then Money Flow is a negative flow

Then calculate the money ratio:

$$MR = (MF+ / MF-)$$

The MFI is:

$$MFI = 100 - [100/(1 + MR)]$$

➔ Interpretation

If the MFI rises above the 80 level, this should signal that the security will outperform the market and a decrease in the price will take place.

On the contrary, if the MFI falls below the 20 level, then the security should underperform the market and a rise in the price should take place.

Volume Rate Of Change

➔ Calculation

The calculation is the same as for a ROC but calculated on the volume.

➔ Interpretation

The VROC divides today's volume by volume x days ago.

This indicator represents the speed of change of volume.

When the indicator rises above its resistance, a buy signal is announced.

Volume Oscillator

➔ **Calculation**

Calculate the moving average of the volume with two different periods.

$$\text{variation \%} = 100 * [(\text{short average} - \text{long average}) / (\text{long average})]$$

➔ **Interpretation**

When the short average rises above the long average, the oscillator becomes positive and vice versa.

In an uptrend, the prices and the volume oscillator both rise and in a downtrend, the prices and volume oscillator both decrease.

Standard deviation

➔ **Calculation**

$$\text{Std Dev}^2 = \text{summation}(\text{from } j=1 \text{ to } n [(\text{Close } j - \text{Moving average on } n \text{ days})^2 / n])$$

➔ **Interpretation**

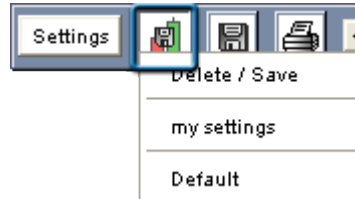
Standard deviation measures the volatility of prices.

It is often used in relation to some indicators. For example, the Bollinger bands are calculated from an arithmetic moving average. To plot an upper and lower band, add and subtract 2 * (standard deviation).

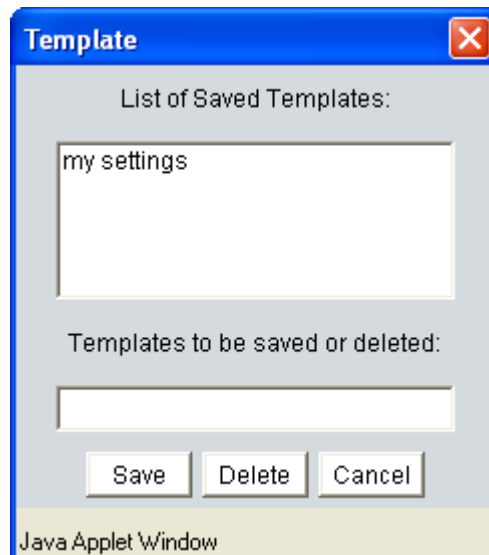
Saving your templates

Your template consists of your chosen options, the displayed indicators, the parameters used to draw them and also the size of the indicator windows.

If you wish to save a new template, click on the 'Template' drop-down menu in the top area of the main window and click on 'Save/Remove'. A small window appears allowing you to choose the name of the new template, for instance "My Template". Each saved template may be applied in the future. You can have as many saved templates as you wish.



As stated above, templates save the options you have chosen.



Saving your studies

IMPORTANT:

Do not forget to click on the diskette-looking icon every time you leave the software if you want to save all your lists, graphical studies and comments created or modified during your session.



Printing

Every time you click on the printer-looking icon, a new browser window containing a screenshot will open.



You may then print it out:

