Linear Regression is an eSignal charting tool using the least-squares t mathematical method to statistically plot a "best- t" straight line through the exact middle of the prices over a given period of time. A Linear Regression trendline shows where an equilibrium or mid-point price exists.

General Overview of the Linear Regression Tool

Linear Regression identifies when prices overextend from a median point. The distance a price migrates above or below a linear regression line indicates the extreme buying or selling perspective from the average point.

The slope of the line is called the midpoint or median line. The midpoint or slope of a line is determined by the calculation method. In eSignal, the "close" of a data bar is the default value used for the linear regression calculation.

Linear Regression Channels are parallel lines that are a standard deviation away from the linear regression line on either side of it. These lines are also called confidence bands. They act as support and resistance lines.

Statistically, linear regression channel lines should contain price movement. The percentage of price containment depends on the standard deviation used. Prices may extend outside the channel lines for a brief time. However, if they remain outside the channel, it suggests that, either an existing trend is accelerating or a possible reversal in trend is growing.

The space inside the channel is where the equilibrium exists, where price may deviate from the linear regression line yet stay within the existing overall trend.

Setting Standard Deviations

Trading effectively using Linear Regression requires setting appropriate standard deviations. Use parallel lines as support and resistance confidence bands spaced equally on either side of the regression line.

Standard deviation settings vary based on the slope of the existing trend. Experimentation suggests that a standard deviation setting of 1 is too tight for trading in normal conditions, and a setting of between 2 to 3 is effective. A setting of 5 can be used in extreme range scenarios.

In addition, the number of bars used in a calculation also determines how well the Linear Regression "fits" the immediate price trend pattern. The more data bars in a calculation, statistically speaking, the better the fit. Aggressive Number of Bar settings used include 60, 70 and 90. The eSignal default set to 0 means all data is used for a Linear Regression calculation.

While there are several ways to trade using Linear Regression Channels, this strategy focuses on using the following settings: Source = Open, Number of Bars = 0, Standard Deviation = 2.

The eSignal Linear Regression Channel Trading Strategy: The Setup

A simple trading strategy is to set the standard deviation to 2, look for a stock trading in a trend and trade the extreme Linear Regression Channel swings. To use this strategy, make the Linear Regression median line your first target. In a best-case scenario, use the opposite linear regression channel line as your second target. Use the outer channel lines and price pivot as an initial stop loss, trail stops appropriate to the position and, as price approaches targets, tighten your trailing stop.

NOTE: Use this setup for the Sell Strategy and the Buy Strategy described subsequently.

1. Right click on an eSignal chart to activate the main menu and select "Basic Studies" from the menu.
2. Select "Linear Regression".

3. Adjust the settings in the Linear Regression basic study window as follows: Source = Open, Number of Bars = 0, Standard Deviation = 2.

Disclaimer: The strategies are believed to be accurately presented. However, they are not guaranteed as to accuracy or completeness. Nor is it guaranteed that using them will result in profits that they will not result in losses. Past performance is not a guarantee of future results. Only risk capital should be invested in the market. All investments and trades carry risk, and all trading decisions of an individual remain the responsibility of that individual.