

Trend Direction identifies pullbacks and rallies in up and down moves, and Put/Call Ratio tracks options trading. Here's a guide to the indicators. **By PAUL CIANA, CMT**

WO STUDIES CREATED by Phil Erlanger are available on the Bloomberg Professional service. Erlanger, a two-time president of the New York–based Market Technicians Association and former senior technical analyst at Boston mutual fund giant Fidelity Management & Research, heads Phil Erlanger Research Co. in Acton, Massachusetts. You can access the studies, called Erlanger Trend Direction and Erlanger Put/Call Ratio, in G and Launchpad charts.

Erlanger Trend Direction aims to identify the current trend in price. The proprietary indicator is predominantly based on so-called doublesmoothed exponential averages of price. The indicator signals trend direction in four ways: up trend; pullback in an up trend; down trend; and rally in a down trend. As a coincident (to slightly lagging) indicator, you can use the study to confirm whether the price has formed a top or bottom or is only retracing a part of the prior move.

You can use Trend Direction on multiple time frames to determine the overall trend. For example, you could link 60-minute, 240-minute and daily charts in Launchpad and use them to scan through a list of securities to identify short-, intermediate- and longer-term trends. The periods you select should reflect your investment horizon and risk appetite.

Erlanger Put/Call Ratio analyzes the volume of put and call options traded for a selected underlying security. Equity put options are contracts that grant the right but not the obligation to sell shares at a set strike price before expiration. Call options likewise grant the right to buy. When options traders are

Trend Direction

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You can use the Custom Charts (G) function to create a chart that includes the Erlanger study. First type G <Go>1 <Go> to create a new chart. Type 3 <Go> for a single-security chart and click on the Next button. Tab in to the SECURITY field and enter a ticker. Click on the Next button. Enter a name in the TITLE field and click on Next. Click on Add Data Series & Studies. Next, click on the plus sign to the left of Erlanger Studies to expand the list. Click on Erlanger Trend Direction so it appears on the right side of the screen under Data Series and Studies Selected. To display the chart, click on the Update button.



An uptrend is under way when a green band is shown above the centerline.

A downtrend is under way when there is a red band below the centerline.

Put/Call Ratio

To add the Erlanger study to a singlesecurity G chart, click on the Edit button on the red tool bar and select Data Series & Studies. Click on the plus sign to the left of Erlanger Studies and then click on Erlanger Put/Call Ratio. Click on the Update button.

After adding the indicator to a chart, you'll see two lower panels. The first panel displays the Call/Put Median line and the second shows the Put/Call Median line. To add ratio lines, click on the gray Study button. In the Studies panel that appears, click on the pencil to the right of PCR. Click on the Display Options tab. To display the Put/Call Ratio line, for example, click on the arrow to the right of Put/Call Ratio under Style and select SolidLine. Click on Update to display the chart.

bullish, call volume exceeds put volume and the put/ call ratio falls. When traders are bearish, put volume exceeds call volume and the put/call ratio rises. A low put/call ratio can be a signal of a market poised to fall. A high ratio may indicate an impending rise.

The study measures the volume-weighted value of all options contracts for a security. The Put/Call Ratio line it displays is calculated by dividing the volume-weighted average put price by the call price. The Put/Call Median line is the median of the Put/Call Ratio over a number of



The Put/Call Ratio and Put/ Call Median set noticeable highs, signaling a potential rise in stock price.

periods—10, for example—that you can specify by editing the study's properties. For more about Phil Erlanger Research, type ERLN <Go>. **B**

Paul Ciana, CMT, is a Bloomberg technical analysis application specialist in New York. pciana@bloomberg.net

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