

# Getting Technical

Take a more disciplined approach to the markets by using technical analysis

**It's true** that many investors have watched their portfolios shrink this year, but one positive development from the end of the bull market is that it's forcing people to rethink their goals, strategies, and expectations. Many investors—including many active traders—are learning to be more disciplined in their approach to the market.

Ken Tower, chief market strategist at UST Securities, says he believes the best way for active traders to be more disciplined and focused in their trading strategies is to embrace the basic principles of technical analysis. He recommends using “trend-following” indicators, such as moving averages, to understand the direction a stock or market may be headed, and “oscillators,” such as stochastics, to better determine whether a stock is overbought or oversold.

In the coming pages we will examine some of the most common technical analysis tools, and how technical analysis can be employed as part of a successful trading strategy. We will also highlight how those studies can be used with StreetSmart Pro, Schwab's premier trading tool for qualified active investors. For more information, consult the StreetSmart Pro Technical Charting education module, under “Traders' Education” in the Active Trader Center at schwab.com. Or call Schwab Trading Analytics at 888-673-5588 for answers to your questions about technical analysis.

## A Disciplined Approach

Let's begin by looking at how tech-



anical analysis can be employed generally. “Technical analysis tools are exactly that—tools,” Tower explains. “They are not perfect. But without them you miss out on a disciplined way to trade.”

Tower subscribes to the view that investors too often let their emotions get in the way of their decision-making.

Technical analysis can help curb those emotions by giving traders a solid framework for getting out of a losing position before it goes lower. Or, if the stock is on an up trend, to pinpoint the spot at which prices are likely to meet some resistance. That kind of information can help traders determine when they might be able to sell at a reasonable

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profit instead of waiting for the next big move, which may never come.

“There’s an old Wall Street saying that goes, ‘Let your profits run and cut your losses short,’” Tower says. “But behavioral economics studies have found that what people tend to do is to take small gains and let losses run. It’s human nature. People don’t want to admit that they made a mistake buying something they shouldn’t have, so they hang on to a losing stock and hope it will come back.”

The recent bull market “rewarded people for making mistakes,” Tower explains. “You could wait for a stock to bounce back because it often did. But that is abnormal. It’s knowing when to sell that really takes the most work. But it’s also true that if you are looking to buy, you want to avoid buying into the 3-day swing in favor of the 20-day rally. If you know what kind of investor you are, and you understand technical analysis, you can use it to help identify those kinds of trends.”

## Basic Principles

Traders should begin by looking at trend lines to determine the direction of prices over a given period of time. Trends can be major, which generally are considered to be in effect for over a year; intermediate, which last anywhere from three weeks to months; or near-term, which is usually defined as anything less than two or three weeks. Trend lines are drawn by joining the significant highs and lows on a price chart.

But no price trend goes up or down indefinitely, so in addition to looking at price trends traders should understand support and resistance levels. Support is defined as an area on the bottom of a price chart that indicates where buying interest appears to be sufficiently strong to overcome selling pressure. Resistance is the opposite of support. The longer trading occurs at an area of support or resistance, the more significant that area becomes.

Novices should spend time studying the pattern of prices within a trading range. As an example, assume for a

moment that a stock has been trading within a narrow band of support and resistance but prices suddenly break out of the range for several sessions. Such a move could indicate the market has shifted its opinion of the stock. Whenever a support or resistance level is broken by a significant amount, the previous levels can reverse roles and indicate either a buying or selling opportunity. Trend lines, along with concepts like support and resistance levels, are lagging indicators, meaning they reflect only trading that has already occurred.

## Moving Averages

With these elementary technical analysis principles in mind, Tower recommends that traders next become familiar with the moving average, which is one of the more versatile and widely used of all technical indicators. It can be either simple or exponential. Simple moving averages (SMAs) are the most common of the two. SMAs show the average value of a securities price over a predetermined time period. SMAs give



Shown above is a 100-day price and volume chart of Cisco with two trend lines overlaid onto the price graph. The downward-sloping trend line suggests a long-term down trend, while the flat line displays an area of previous support.



Here is a similar Cisco chart, but with three simple moving average lines—8-, 21-, and 63-day. Note how the 8-day SMA crossed below the 21-day SMA in early August, just prior to a significant decline in the stock price.

equal weight to each price used to calculate the average. Exponential moving averages (EMAs), on the other hand, put more weight on recent prices. EMAs reduce time lag and react more quickly to recent price changes.

A common method of interpreting a moving average is to compare the relationship between the moving average and the price itself. This technique often involves what is known as a crossover. Changes in a price trend are not necessarily identified by a reversal in the direction of the moving average line, but rather by the price crossing through the moving-average line. When the price crosses and goes below a moving average, it's typically a bearish indicator. It's generally bullish if the price crosses above the moving average.

When using moving averages to study price trends, Tower says, it is important to keep in mind your trading horizon. He recommends looking at moving averages over periods that are two to three times longer than the average time an active investor holds a trade.

If, on average, you hold a trade for five days, you should look at a 15-day moving average for the stock. If you usually hold your trades for a month, use a 63-day moving average.

"That length of time tends to be good for smoothing out the fluctuations and de-emphasizing the minor swings up or down that can occur," he explains.

Traders should also watch volume levels when studying moving averages. Volume acts as a confirming indicator. A breakout price move on light volume would tend to indicate that there may not be sufficient steam behind the activity and thus it might be discounted as a significant trend. Heavy volume, on the other hand, could mean that the market's attitude toward a stock has changed enough to merit attention.

### Other Indicators

Let's look at some of the other common technical indicators:

Moving Average Convergence/Divergence (MACD) is a trend-following indicator that shows the relationship

between two moving averages. It's calculated by taking the difference between a longer and shorter moving average period, typically a 26-day and a 12-day average, respectively. The interaction of these two moving averages gives this indicator its name. Over time, they are constantly converging and diverging. A signal line, which typically is a nine-period moving average of the MACD line, is also displayed. Technical analysts like to look for crossovers of the MACD line and the signal line. A bullish indicator can occur when the MACD line crosses above the signal line, while the opposite is typically considered a bearish indicator.

Stochastics represents a popular oscillator study that can warn of strength or weakness in the market. Stochastics compares the point at which the price of a security closed relative to its price range over a given time period. The stochastic oscillator consists of two lines representing the position of the market on a percentile basis, with zero at the bottom of the day-range being plotted and



Shown again is a 100-day chart Cisco price chart, but with a detailed technical graph displayed below. Included on the technical graph are two MACD trend indicators and two stochastics overbought/oversold oscillators.

Finally, here are two more studies overlaid onto the Cisco price chart—Bollinger bands (with a 20-day SMA), and a relative strength oscillator—another example of how you can combine various indicators in StreetSmart Pro.

100 at the top. The main line is called %K and the second line, called %D, is simply the moving average of %K. A stochastic value of 50 represents the midpoint of a given range of prices. Readings above 75% may indicate that a security is overbought while readings under 25% can indicate an oversold situation. Stochastics can also be used to look for divergences. Tower notes that stochastics “can be very good at highlighting reversals or tops, but they don’t tell you how far beyond those points prices might go.”

Relative Strength Index (RSI) is also a price-following oscillator that ranges between 0 and 100. Its name is something of a misnomer because it is not comparing the relative strength of two securities, but rather the internal strength of a single security. RSI can be used to look for a divergence in which the security is making a new high, but the RSI is failing to surpass its previous high. This divergence is usually considered an indication of an impending reversal. RSI can also be used to show support and resistance levels.

On-Balance Volume (OBV) is a study relating volume to price change. OBV is expressed as a running total of the volume, both moving in and out of a stock. If a stock closes up, all volume is assumed to be up. If it closes down, all volume is assumed to be down. The basic premise is that OBV precedes price changes and can indicate whether institutional money is flowing into or out of a stock.

Bollinger Bands were created by independent technical analyst John Bollinger. This study allows for a comparison of volatility and relative price levels over a period of time. It consists of three lines—an upper band, a lower band, and a moving average band—that are designed to encompass the majority of a security’s price. The basic interpre-

## Trading Analytics Teams Can Help

Schwab maintains specialized Trading Analytics teams, composed of brokers who are proficient in using technical analysis. They can help you:

- ◆ define key elements of a trading strategy, such as time horizon, risk tolerance, and exit strategy
- ◆ incorporate risk-management tools into a trading strategy
- ◆ review and evaluate stock charts from StreetSmart Pro, Velocity, or schwab.com
- ◆ get in-depth chart analysis using a selection of technical analysis indicators

Trading Analytics brokers are available to assist both clients who are beginning to explore technical analysis, as well as advanced clients who seek more specific help. To contact Trading Analytics, call 888-673-5588, Monday through Friday from 8:00 a.m. to 5:30 p.m. ET.

tation is that prices tend to stay within the upper and lower bands. Because price volatility is considered as part of this study, a distinctive characteristic of Bollinger Bands is that the spacing between the bands can vary. The bands tend to widen during highly volatile periods with extreme price changes. Prices breaking through a band may indicate a move that is strong enough to signal a new trend. To learn more about Bollinger Bands, you can contact the Trading Analytics team. The creator of this widely accepted study also maintains an educational Website at [www.bollingerbands.com](http://www.bollingerbands.com).

By taking the time to become familiar with technical analysis, active traders can use any of the above studies to provide a more solid framework for their trading strategies. StreetSmart Pro users with technical analysis experience can easily jump into using the more advanced studies by right-clicking on a chart you wish to examine. Select “Tools” and then “Studies.” Select the study you are interested in from the dialog box and then click on the right arrows. Select the time period you wish to study and click “OK.” StreetSmart Pro offers daily charts for a period of up to 500 days and intraday charts for

every minute, five minutes, or whatever interval you choose. Traders who are less proficient with technical analysis may first want to become comfortable with basic concepts like trend lines, support, resistance, and moving averages.

Regardless of your experience, all traders should keep in mind the basic principles of successful trading. Tower uses an analogy to illustrate the point. “Each trade is a time at bat, but too many traders try to swing for the fences each time they are up,” Tower notes. “Babe Ruth hit a lot of home runs, but he also struck out a lot. Successful trading over time comes from hitting a lot of singles. And use the charts. Take a loss when the indicator tells you to.”

Schwab makes no recommendations or endorsements with respect to any of the strategies, chart patterns, or indicators referenced; nor does Schwab recommend the use of technical analysis as a sole means of investment research.

At Schwab, we recommend that investors define their goals, risk tolerance, time horizon, and investment objectives in addition to researching possible investment choices through multiple channels.

Use of technical analysis may result in increased frequency of trading and, therefore, significantly higher transaction costs than a fundamental approach.

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