



## Williams % R

Developed by Larry Williams, Williams %R is a momentum indicator that works much like the [Stochastic Oscillator](#). It is especially popular for measuring [overbought](#) and [oversold](#) levels. The scale ranges from 0 to -100 with readings from 0 to -20 considered overbought, and readings from -80 to -100 considered oversold.

William %R, sometimes referred to as %R, shows the relationship of the close relative to the high-low range over a set period of time. The nearer the close is to the top of the range, the nearer to zero (higher) the indicator will be. The nearer the close is to the bottom of the range, the nearer to -100 (lower) the indicator will be. If the close equals the high of the high-low range, then the indicator will show 0 (the highest reading). If the close equals the low of the high-low range, then the result will be -100 (the lowest reading).

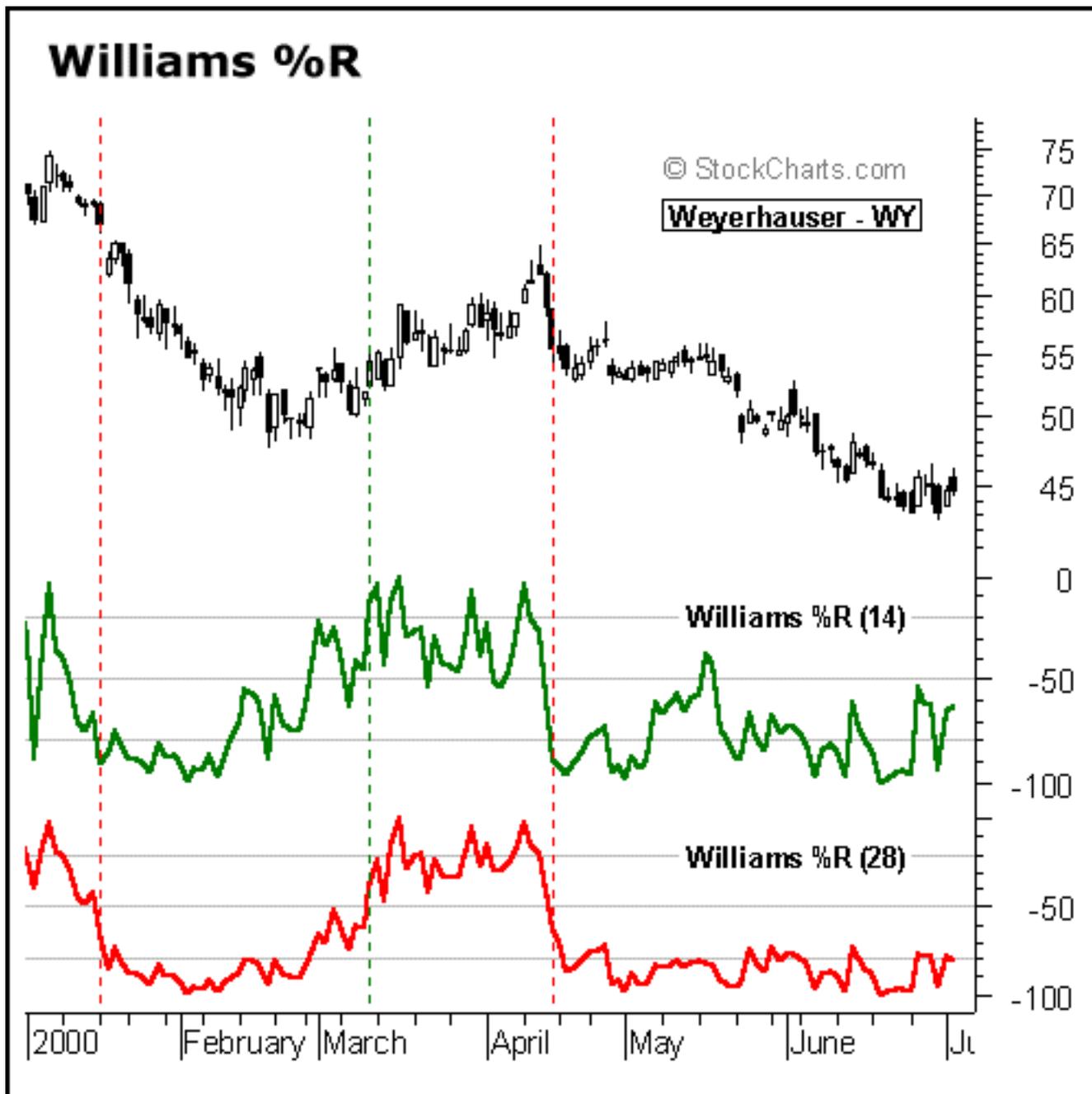
$$\%R = \frac{\text{Highest high over } x \text{ periods} - \text{close}}{\text{highest high over } x \text{ periods} - \text{Lowest low over } x \text{ periods}} \times -100$$

([Click here](#) to see a live example of Williams %R)

Typically, Williams %R is calculated using 14 periods and can be used on intraday, daily, weekly or monthly data. The timeframe and number of periods will likely vary according to desired sensitivity and the characteristics of the individual security.

It is important to remember that overbought does not necessarily imply time to sell and oversold does not necessarily imply time to buy. A security can be in a downtrend, become oversold and remain oversold as the price continues to trend lower. Once a security becomes overbought or oversold, traders should wait for a signal that a price reversal has occurred. One method might be to wait for Williams %R to cross above or below -50 for confirmation. Price reversal confirmation can also be accomplished by using other indicators or aspects of technical analysis in conjunction with Williams %R.

One method of using Williams %R might be to identify the underlying trend and then look for trading opportunities in the direction of the trend. In an uptrend, traders may look to oversold readings to establish long positions. In a downtrend, traders may look to overbought readings to establish short positions.



The chart of Weyerhaeuser with a 14-day and 28-day Williams %R illustrates some key points:

- 14-day %R appears quite choppy and prone to false signals.
- 28-day %R smoothed the data series and the signals became less frequent and more reliable.
- When the 28-day %R moved to overbought or oversold levels, it typically remained there for an extended period and the stock continued its trend.
- Some good entry signals were given with the 28-day %R by waiting for a move above or below -50 for confirmation.

Written by Arthur Hill

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