Technical Indicators VI: Relative Strength Index (RSI)

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Relative Strength Index (RSI) measures the strength of all upward movement against the strength of all downward movement in a specified time frame.

For mathematical formula of RSI is as follow:

- RSI = 100 - [100/(1+RS)]

- RS = average of n day's up closes / average of n day's down closes

The most common parameter for RSI is period 14, although users can pick their favorite period of time if they wish. It is one of the most popular oscillators that works well in range-bound market.

RSI can range from 0-100. In the formula, if RS = 1, which means the average n day's up closes equals to the average of n day's down closes, RSI = 50. In that case, the market is having an equal strength of upward and downward force. If RSI > 50, which means the upward force is stronger than the downward force. If RSI < 50, which means the downward force is stronger than the upward force.

Applications of RSI:

1. Detect overbought and oversold condition

If RSI > 70, the market is considered to be overbought, a selling signal is issued; if RSI < 30, the market is considered to be oversold, a buying signal is issued.

2. Spot Divergence

If the price near support/resistance level and the RSI begin to diverge and are heading different direction, it may signal a weakening of trend.

The occurrence of divergence can deemed to be the weakening of the current trend or a reversal is about to happen.

In the chart below, the price is making lower lows, however, the RSI does not make any lower lows, it lows are going higher and higher. That marks the weakening of the current downtrend.