

Indicators are transformations of price

INDICATOR

An indicator is an arithmetic transformation of price and sometimes volume, plotted separately or over the chart. Because the input is data already on the chart, an indicator adds no information - it reorganises what is there so a particular feature is easier to see. That is genuinely useful and it is also the reason stacking several rarely produces independent confirmation.

Open the indicator list on any platform and there are hundreds. They are transformations of the same few series: open, high, low, close and volume.

What that means

No information enters when you add an indicator. Every value is computed from prices already on your chart. If the price series does not contain something, no transformation of it will.

This is not an argument against using them. A transformation can make a real feature much easier to see, and eyes are bad at some comparisons that arithmetic is good at. It is an argument about what you are looking at: a restatement, not a second opinion.

What the common ones compute

RSI compares the size of recent gains to the size of recent losses over a lookback, scaled to sit between 0 and 100. A reading of 70 means gains have dominated losses over that window by a particular ratio. It is commonly read as overbought, which is a claim about what happens next, not a description of what it measures.

MACD is the difference between two exponential moving averages, plus a third average of that difference. Every criticism of moving average lag applies twice over.

Stochastics express where the current close sits within the high-low range of the lookback. Near the top means recent closes are near recent highs.

Bollinger Bands are a moving average with lines at a number of standard deviations either side. Price touching a band means it is unusual relative to its own recent variability, by a definition you chose when you picked the settings.

Why three indicators are not three opinions

Stack RSI, stochastics and MACD and they will usually agree, because they are computed from the same closes over similar windows. Agreement between correlated measures feels like confirmation and is closer to reading the same sentence three times.

Module 4 made this point about correlated positions. It is the same error in a different place: adding things that move together does not add independence.

The settings problem

Every indicator has parameters, and parameters can be chosen after seeing the chart. A 14-period RSI works better than a 9 on this pair over this window - and that sentence is fitting, not analysis.

The defaults are widely used, which by the logic of lesson three is a reason to prefer them: more participants watch the standard settings, so more orders cluster around them.

The honest position

Indicators are useful for making a rule explicit and checkable. "RSI below 30 on the daily" is a testable condition in a way that "looks oversold" is not.

What they do not do is tell you something the price did not already say. Treat an indicator as a lens on the same data, use few of them, know the arithmetic of the ones you use, and never treat agreement between correlated measures as independent evidence.

Check your understanding

1. Why can an indicator not add information to a chart?

- a. Because platforms compute them with rounding errors
- b. Because it is computed entirely from data already on the chart
- c. Because indicators lag price

Answer: b. Every value comes from the same open, high, low, close and volume series. A transformation can make a feature easier to see, but it cannot introduce anything the input did not contain.

2. RSI, stochastics and MACD all agree. How much independent confirmation is that?

- a. Three separate confirmations
- b. Very little - they are correlated transformations of the same closes
- c. Two, since MACD uses a different calculation

Answer: b. They are computed from the same data over similar windows, so agreement is close to reading one measurement three times. It is the correlated-exposure error moved from positions to signals.