

Technical Analysis - 4

03 June 2025 09:05

Moving Average Convergence/Divergence Indicator (MACD) - Trend Following Indicator

The moving average convergence divergence (MACD) is a trend following momentum indicator, and it is a lagging indicator that can show you when trading momentum changes from being bullish to bearish and from being bearish to bullish. The MACD also tells when traders are becoming overextended, which usually results in a trend reversal.

Moving Average Convergence Divergence (MACD) is the difference between a fast and a slow exponential moving average. Typically, 12 and 26-day EMAs are used. MACD is the difference between the values of these two EMAs. A signal line is formed by calculating the EMA (typically 9-day) of the MACD. The difference between MACD and the signal line is calculated and plotted as a histogram.

Calculations:

MACD is calculated as -

$$MACD = EMA(12) - EMA(26)$$

The Signal line is plotted as -

$$Signal\ line = EMA(MACD, 9)$$

And the histogram is plotted as -

$$Histogram = MACD - Signal\ Line$$

When to us

The most common signal is MACD crossing over the signal line. A buy signal is generated when MACD crosses above the signal line, whereas a sell signal is generated when it crosses down through the signal line. Since the histogram is the difference between the MACD and the signal line, it helps you identify this crossover. Buy/Sell signals are also generated by divergences (A divergence is said to exist if the price and the indicator move in opposite directions). A positive divergence arises when the price makes a low or moves sideways, but the MACD moves in an upward direction. You can change the settings of MACD as per the set of moving average combinations that you want to use.

MACD

×

Inputs

Style

Fast Length

12

↑
↓

Slow Length

26

Source

close

▼

Signal Smoothing

9

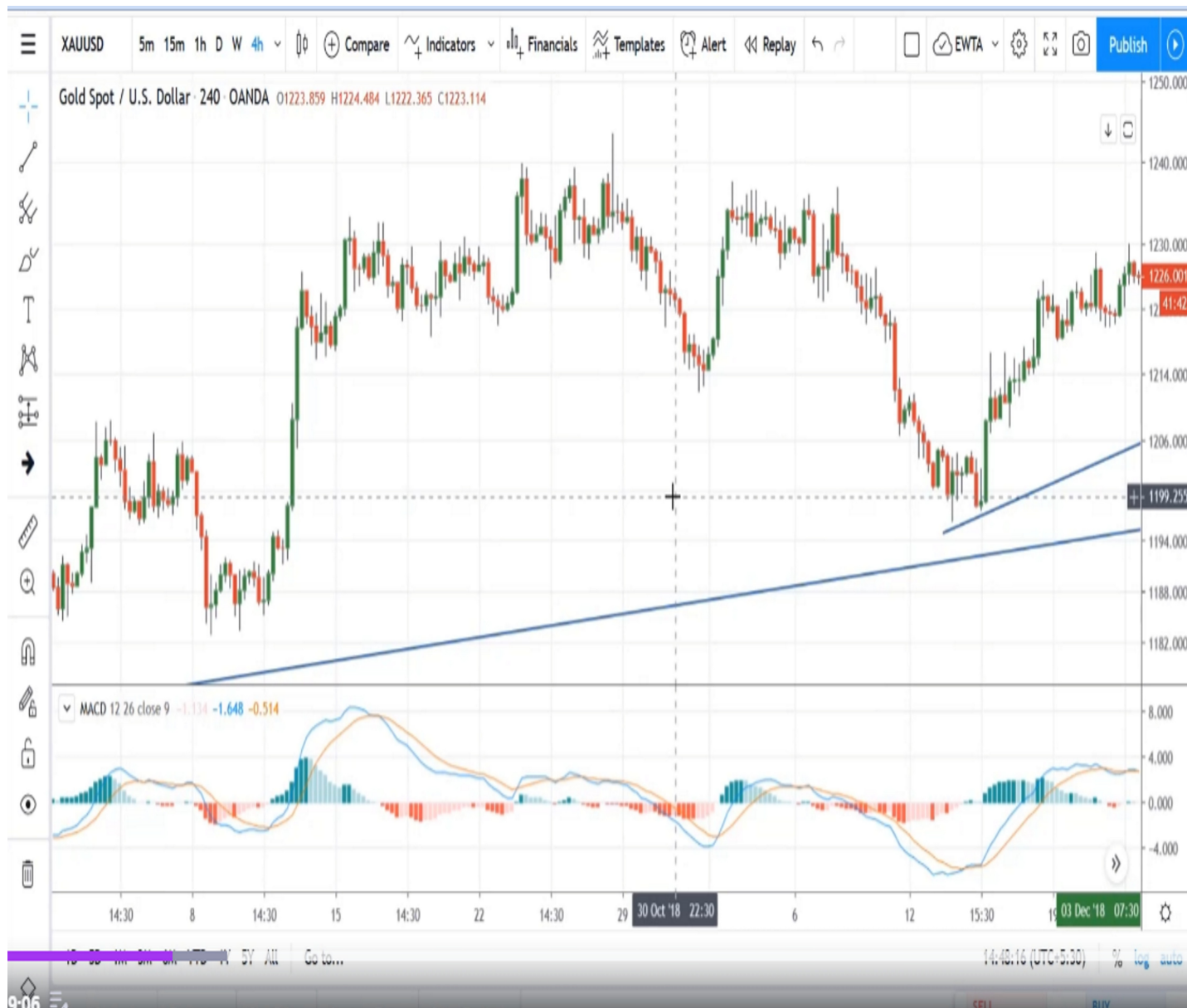
☐ Simple MA(Oscillator)

☐ Simple MA(Signal Line)

Defaults ▼

Cancel

Ok



Here, the blue line is the signal line, and the orange line is the MACD line. When both the line crosses the middle line market looks bullish.

- **Bullish:** Blue line goes below the orange line and the histogram should be rising
- **Bearish:** Blue line goes above the orange line and the histogram should be lowering