

# Moving Average Convergence-Divergence (MACD)

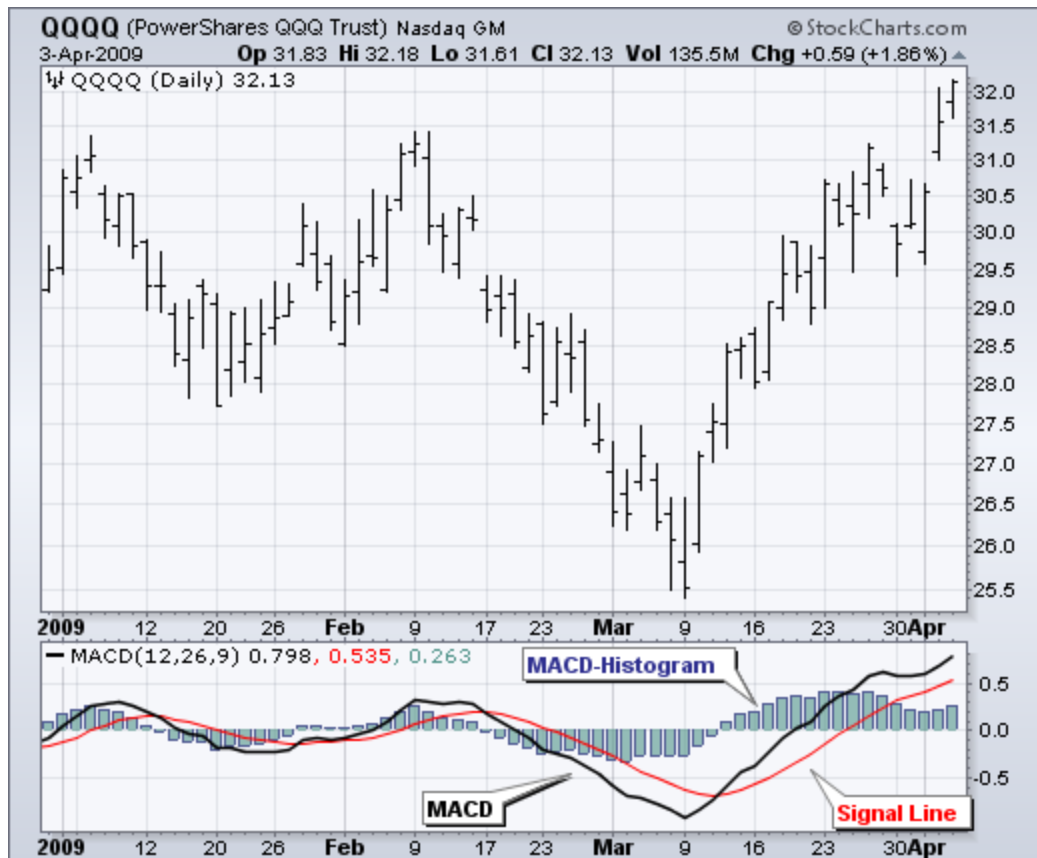
## Introduction

Advertisement

Developed by Gerald Appel in the late seventies, the Moving Average Convergence-Divergence (MACD) indicator is one of the simplest and most effective momentum indicators available. The MACD turns two trend-following indicators, [moving averages](#), into a momentum oscillator by subtracting the longer moving average from the shorter moving average. As a result, the MACD offers the best of both worlds: **trend following and momentum**. The MACD fluctuates above and below the zero line as the moving averages converge, cross and diverge. Traders can look for signal line crossovers, centerline crossovers and divergences to generate signals. Because the MACD is unbounded, it is not particularly useful for identifying overbought and oversold levels.

Note: MACD can be pronounced as either "MAC-DEE" or "M-A-C-D".

Here is an example chart with the MACD indicator in the lower panel:



Click the chart to see a live example.

## Calculation

MACD Line: (12-day EMA - 26-day EMA)

Signal Line: 9-day EMA of MACD Line

MACD Histogram: MACD Line - Signal Line

The MACD Line is the 12-day [Exponential Moving Average](#) (EMA) less the 26-day EMA. Closing prices are used for these moving averages. A 9-day EMA of the MACD Line is plotted with the indicator to act as a signal line and identify turns. The MACD Histogram represents the difference between MACD and its 9-day EMA, the Signal line. The histogram is positive when the MACD Line is above its Signal line and negative when the MACD Line is below its Signal line.

The values of **12**, **26** and **9** are the typical setting used with the MACD, however other values can be substituted depending on your trading style and goals.

## Interpretation

As its name implies, the MACD is all about the convergence and divergence of the two moving averages. Convergence occurs when the moving averages move towards each other. Divergence occurs when the moving averages move away from each other. The shorter moving average (12-day) is faster and responsible for most MACD movements. The longer moving average (26-day) is slower and less reactive to price changes in the underlying security.

The MACD Line oscillates above and below the zero line, which is also known as the centerline. These crossovers signal that the 12-day EMA has crossed the 26-day EMA. The direction, of course, depends on the direction of the moving average cross. Positive MACD indicates that the 12-day EMA is above the 26-day EMA. Positive values increase as the shorter EMA diverges further from the longer EMA. **This means upside momentum is increasing.** Negative MACD values indicates that the 12-day EMA is below the 26-day EMA. Negative values increase as the shorter EMA diverges further below the longer EMA. **This means downside momentum is increasing.**



In the example above, the yellow area shows the MACD Line in negative territory as the 12-day EMA trades below the 26-day EMA. The initial cross occurred at the end of September (black arrow) and the MACD moved further into negative territory as the 12-day EMA diverged further from the 26-day EMA. The orange area highlights a period of positive MACD values, which is when the 12-day EMA was above the 26-day EMA. Notice that the MACD Line remained below 1 during this period (red dotted line). This means the distance between the 12-day EMA and 26-day EMA was less than 1 point, which is not a big difference.

## Signal Line Crossovers

Signal line crossovers are the most common MACD signals. The signal line is a 9-day EMA of the MACD Line. As a moving average of the indicator, it trails the MACD and makes it easier to spot MACD turns. A bullish crossover occurs when the MACD turns up and crosses above the signal line. A bearish crossover occurs when the MACD turns down and crosses below the signal line. Crossovers can last a few days or a few weeks, it all depends on the strength of the move.

Due diligence is required before relying on these common signals. Signal line crossovers at positive or negative extremes should be viewed with caution. Even though the MACD does not have upper and lower limits, chartists can estimate historical extremes with a simple visual assessment. It takes a strong move in the underlying security to push momentum to an extreme. Even though the move may continue, momentum is likely to slow and this will usually produce a signal line crossover at the extremities. Volatility in the underlying security can also increase the number of crossovers.

The chart below shows IBM with its 12-day EMA (green), 26-day EMA (red) and the 12,26,9 MACD in the indicator window. There were eight signal line crossovers in six months: four up and four down. There were some good signals and some bad signals. The yellow area highlights a period when the MACD Line surged above 2 to reach a positive extreme. There were two bearish signal line crossovers in April and May, but IBM continued trending higher. Even though upward momentum slowed after the surge, upward momentum was still stronger than downside momentum in April-May. The third bearish signal line crossover in May resulted in a good signal.



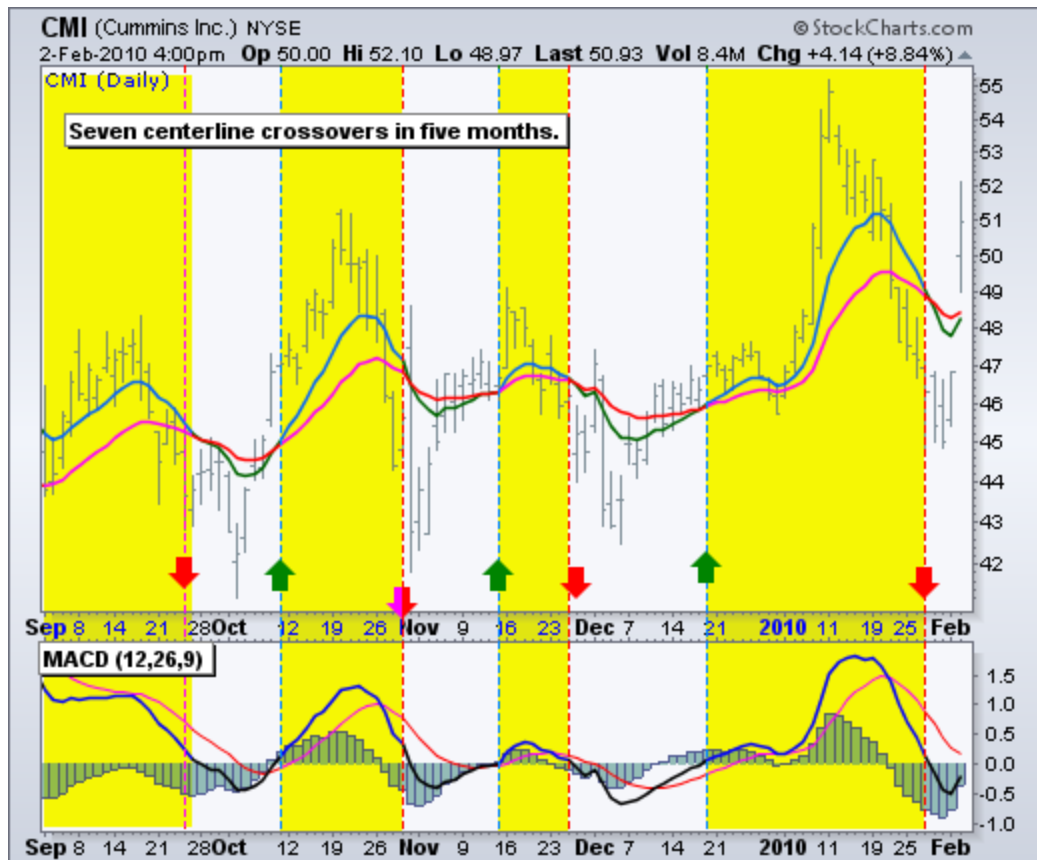
## Centerline Crossovers

Centerline crossovers are the next most common MACD signals. A bullish centerline crossover occurs when the MACD Line moves above the zero line to turn positive. This happens when the 12-day EMA of the underlying security moves above the 26-day EMA. A bearish centerline crossover occurs when the MACD moves below the zero line to turn negative. This happens when the 12-day EMA moves below the 26-day EMA.

Centerline crossovers can last a few days or a few months. It all depends on the strength of the trend. The MACD will remain positive as long as there is a sustained uptrend. The MACD will remain negative when there is a sustained downtrend. The next chart shows Pulte Homes (PHM) with at least four centerline crosses in nine months. The resulting signals worked well because strong trends emerged with these centerline crossovers.



Below is a chart of Cummins Inc (CMI) with seven centerline crossovers in five months. In contrast to Pulte Homes, these signals would have resulted in numerous whipsaws because strong trends did not materialize after the crossovers.



The next chart shows 3M (MMM) with a bullish centerline crossover in late March 2009 and a bearish centerline crossover in early February 2010. This signal lasted 10 months. In other words, the 12-day EMA was above the 26-day EMA for 10 months. This was one strong trend.



## Divergences

[Divergences](#) form when the MACD diverges from the price action of the underlying security. A bullish divergence forms when a security records a lower low and the MACD forms a higher low. The lower low in the security affirms the current downtrend, but the higher low in the MACD shows less downside momentum. Despite less downside momentum, downside momentum is still outpacing upside momentum as long as the MACD remains in negative territory. Slowing downside momentum can sometimes foreshadow a trend reversal or a sizable rally.

The next chart shows Google (GOOG) with a bullish divergence in October-November 2008. First, notice that we are using closing prices to identify the divergence. The MACD's moving averages are based on closing prices and we should consider closing prices in the security as well. Second, notice that there were clear reaction lows (troughs) as both Google and its MACD Line bounced in October and late November. Third, notice that the MACD formed a higher low as Google formed a lower low in November. The MACD turned up with a bullish divergence with a signal line crossover in early December. Google confirmed a reversal with resistance breakout.





A bearish divergence forms when a security records a higher high and the MACD Line forms a lower high. The higher high in the security is normal for an uptrend, but the lower high in the MACD shows less upside momentum. Even though upside momentum may be less, upside momentum is still outpacing downside momentum as long as the MACD is positive. Waning upward momentum can sometimes foreshadow a trend reversal or sizable decline.

Below we see Gamestop (GME) with a large bearish divergence from August to October. The stock forged a higher high above 28, but the MACD Line fell short of its prior high and formed a lower high. The subsequent signal line crossover and support break in the MACD were bearish. On the price chart, notice how broken support turned into resistance on the throwback bounce in November (red dotted line). This throwback provided a second chance to sell or sell short.



Divergences should be taken with caution. Bearish divergences are commonplace in a strong uptrend, while bullish divergences occur often in a strong downtrend. Yes, you read that right. Uptrends often start with a strong advance that produces a surge in upside momentum (MACD). Even though the uptrend continues, it continues at a slower pace that causes the MACD to decline from its highs. Upside momentum may not be as strong, but upside momentum is still outpacing downside momentum as long as the MACD Line is above zero. The opposite occurs at the beginning of a strong downtrend.

The next chart shows the S&P 500 ETF (SPY) with four bearish divergences from August to November 2009. Despite less upside momentum, the ETF continued higher because the uptrend was strong. Notice how SPY continued its series of higher highs and higher lows. Remember, upside momentum is stronger than downside momentum as long as its MACD is positive. Its MACD (momentum) may have been less positive (strong) as the advance extended, but it was still largely positive.



## Conclusions

The MACD indicator is special because it brings together momentum and trend in one indicator. This unique blend of trend and momentum can be applied to daily, weekly or monthly charts. The standard setting for MACD is the difference between the 12 and 26-period EMAs. Chartists looking for more sensitivity may try a shorter short-term moving average and a longer long-term moving average. MACD(5,35,5) is more sensitive than MACD(12,26,9) and might be better suited for weekly charts. Chartists looking for less sensitivity may consider lengthening the moving averages. A less sensitive MACD will still oscillate above/below zero, but the centerline crossovers and signal line crossovers will be less frequent.

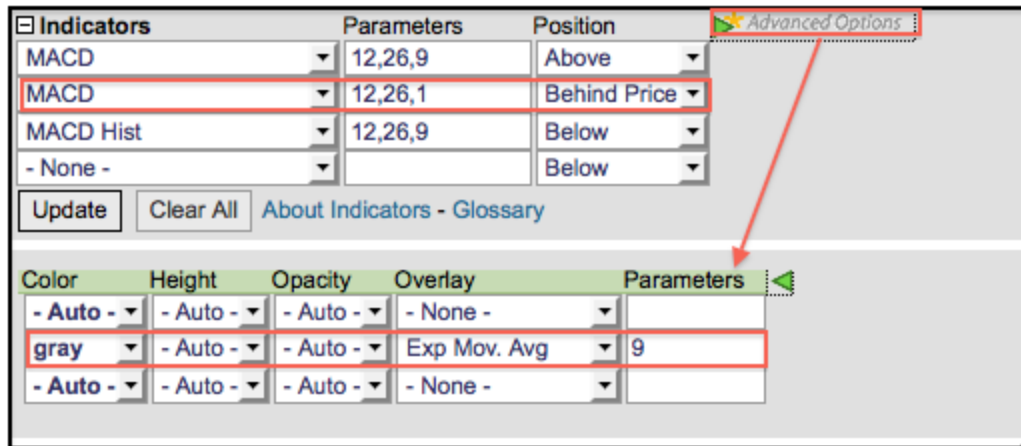
The MACD is not particularly good for identifying overbought and oversold levels. Even though it is possible to identify levels that are historically overbought or oversold, the MACD does not have any upper or lower limits to bind its movement. During sharp moves, the MACD can continue to over-extend beyond its historical extremes.

Finally, remember that the MACD Line is calculated using the actual difference between two moving averages. This means MACD values are dependent on the price of the underlying security. The MACD values for a \$20 stocks may range from -1.5 to 1.5, while the MACD values for a \$100 may range from -10 to +10. It is not possible to compare MACD values for a group of securities with varying prices. If you want to compare momentum readings, you should use [the Percentage Price Oscillator \(PPO\)](#), instead of the MACD.

## Adding the MACD Indicator to StockCharts Charts

The MACD can be set as an indicator above, below or behind a security's price plot. Placing the MACD "behind" the makes it easy to compare momentum movements with price movements. Once the indicator is chosen from the drop down list, the default parameter setting appears (12,26,9). These parameters can be adjusted to increase sensitivity or decrease sensitivity. The MACD-Histogram appears with the indicator or can be added a separate indicator. Setting the signal line to 1 (12,26,1) will remove the MACD histogram and the signal line. A separate signal line, without the histogram, can be added by choosing "Advanced Options/Exp Mov Avg".





[Click here](#) for a live chart of the MACD indicator.

## Using the MACD with StockCharts Scans

Here are some sample scans that StockCharts members can use to scan for various MACD signals:

**MACD Bullish Signal Line Cross:** This scan reveals stocks that are trading above their 200-day moving average and have a bullish signal line crossover in MACD. Also notice that MACD is required to be negative to insure this upturn occurs after a pullback. This scan is just meant as a starter for further refinement.

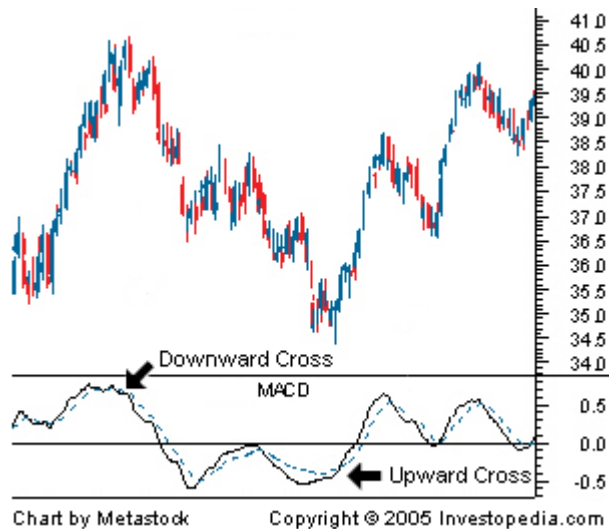
**MACD Bearish Signal Line Cross:** This scan reveals stocks that are trading below their 200-day moving average and have a bearish signal line crossover in MACD. Also notice that MACD is required to be positive to insure this downturn occurs after a bounce. This scan is just meant as a starter for further refinement.

2)

## Definition of 'Moving Average Convergence Divergence - MACD'

A trend-following momentum indicator that shows the relationship between two moving averages of prices. The MACD is calculated by subtracting the 26-day exponential moving average (EMA) from the 12-day EMA. A nine-day EMA of the MACD, called the "signal line", is then plotted on top of the MACD, functioning as a trigger for buy

and sell signals.



## Investopedia explains 'Moving Average Convergence Divergence - MACD'

There are three common methods used to interpret the MACD:

1. Crossovers - As shown in the chart above, when the MACD falls below the signal line, it is a bearish signal, which indicates that it may be time to sell. Conversely, when the MACD rises above the signal line, the indicator gives a bullish signal, which suggests that the price of the asset is likely to experience upward momentum. Many traders wait for a confirmed cross above the signal line before entering into a position to avoid getting "faked out" or entering into a position too early, as shown by the first arrow.



2. Divergence - When the security price diverges from the MACD. It signals the end of the current trend.

3. Dramatic rise - When the MACD rises dramatically - that is, the shorter moving average pulls away from the longer-term moving average - it is a signal that the security is overbought and will soon return to normal levels.

Traders also watch for a move above or below the zero line because this signals the position of the short-term average relative to the long-term average. When the MACD is above zero, the short-term average is above the long-term average, which signals upward momentum. The opposite is true when the MACD is below zero. As you can see from the chart above, the zero line often acts as an area of support and resistance for the indicator.

Read more: <http://www.investopedia.com/terms/m/macd.asp#ixzz2JGzSNEKK>

3) The MACD indicator is a popular technical indicator used to produce or confirm buy and sell signals in the stock market. It's a great confirming indicator for online options trading.

Because stock options are so volatile, you need a technical indicator that's stable and prevents you from getting in and out of trades prematurely. This is where the MACD comes in handy.

I primarily use the MACD indicator as a confirmation tool. I evaluate the MACD before I enter a trade and once the trade has already been established, I look to see if the MACD is signaling me that the trend is changing.

The term MACD stands for Moving Average Convergence Divergence and is usually pronounced like so: "Mack-D."

The MACD indicator is the first of two lagging technical indicators I'm introducing you to. You've come a long way since Module 1 Lesson 1: [explain option trading](#) and you're almost to the end.

In the next learning module you'll begin to see how everything ties together to result in a profitable online options trading business.

## Understanding the MACD

The MACD is a technical indicator that is made up of two exponential [moving averages](#).

In the [stock volume](#) lesson, I introduced you to the concept of divergence (disagreement). It essentially means that object "A" is going in one direction and object "B" is going in the opposite direction.

The opposite of divergence is convergence. Convergence is when object "A" and object "B" are coming together.

You combine the two and you have the Moving Average Convergence Divergence (MACD). The two moving averages are either coming together or moving apart from one another.

The MACD is made up of two lines. One line shows the relationship between the difference (subtraction) of two moving averages of prices. The second line, called the signal line, is then plotted on top of the first MACD line.



## Making Money With the MACD

As you learn more about the use of technical indicators with online options trading, you will find that there are many uses for them. I use the MACD as a confirmation tool.

If you recall in some of the earlier lessons I stressed the importance of waiting for some type of price confirmation before you enter a new trade. The MACD is one of the price confirmation tools that I use.



The confirming signal that I use for the MACD is when the signal line crosses either up or down through the MACD line.

If you note in the picture below the [relative strength indicator](#) produced a signal to enter a long trade (up direction) at "Point 1." However, the MACD was still trending down.

**The MACD did not confirm that prices were going to continue to go higher.**

At "Point 2" the relative strength indicator gave us another signal to go long and roughly 4-6 days later, **the MACD signal line crossed up and through the MACD line.**

**This would be the price confirmation that I was looking for.** And as you may notice, prices did indeed continue in the up direction.



The example illustrates why traders use technical indicators. Without the MACD and the relative strength indicator, it would be hard for some people to see this kind of price action clearly.

Don't forget the lesson I shared with you on [support and resistance](#) because even though the MACD gave you confirmation, you still would have had to pay attention or be on guard to the overhead resistance around \$27.

I've barely scratched the surface on the many uses of the MACD indicator. To learn a bit more about the tool, please watch the short video below and then check out the tutorial on the MACD indicator over at [StockCharts.com](http://StockCharts.com).

## 4) MACD

From Wikipedia, the free encyclopedia

Jump to: [navigation](#), [search](#)



This article includes a [list of references](#), but **its sources remain unclear because it has insufficient [inline citations](#)**. Please help to [improve](#) this article by [introducing](#) more precise citations. (December 2012)

**MACD** (moving average convergence/divergence) is a [technical analysis indicator](#) created by Gerald Appel in the late 1970s.<sup>[1]</sup> It is used to spot changes in the strength, direction, [momentum](#), and duration of a trend in a stock's price.

The MACD "oscillator" or "indicator" is a collection of three signals (or computed data-series), calculated from historical price data, most often the closing price. These three signal lines are: the MACD line, the signal line (or average line), and the difference (or divergence). The term "MACD" may be used to refer to the indicator as a whole, or specifically to the MACD line itself. The first line, called the "MACD line", equals the difference between a "fast" (short period) [exponential moving average \(EMA\)](#), and a "slow" (longer period) EMA. The MACD line is charted over time, along with an EMA of the MACD line, termed the "signal line" or "average line". The difference (or divergence) between the MACD line and the signal line is shown as a [bar graph](#) called the "histogram" time series (which should not be confused with the normal usage of [histogram](#) as an approximation of a probability distribution in statistics - the commonality is just in the visualization using a bar graph).

A fast EMA responds more quickly than a slow EMA to recent changes in a stock's price. By comparing EMAs of different periods, the MACD line can indicate changes in the trend of a stock. By comparing that difference to an average, an analyst can detect subtle shifts in the stock's trend.

Since the MACD is based on moving averages, it is inherently a [lagging indicator](#). However, in this regard the MACD does not lag as much as a basic moving average crossing indicator, since the signal cross can be anticipated by noting the convergence far in advance of the actual crossing. As a metric of price trends, the MACD is less useful for stocks that are not trending (trading in a range) or are trading with erratic price action.

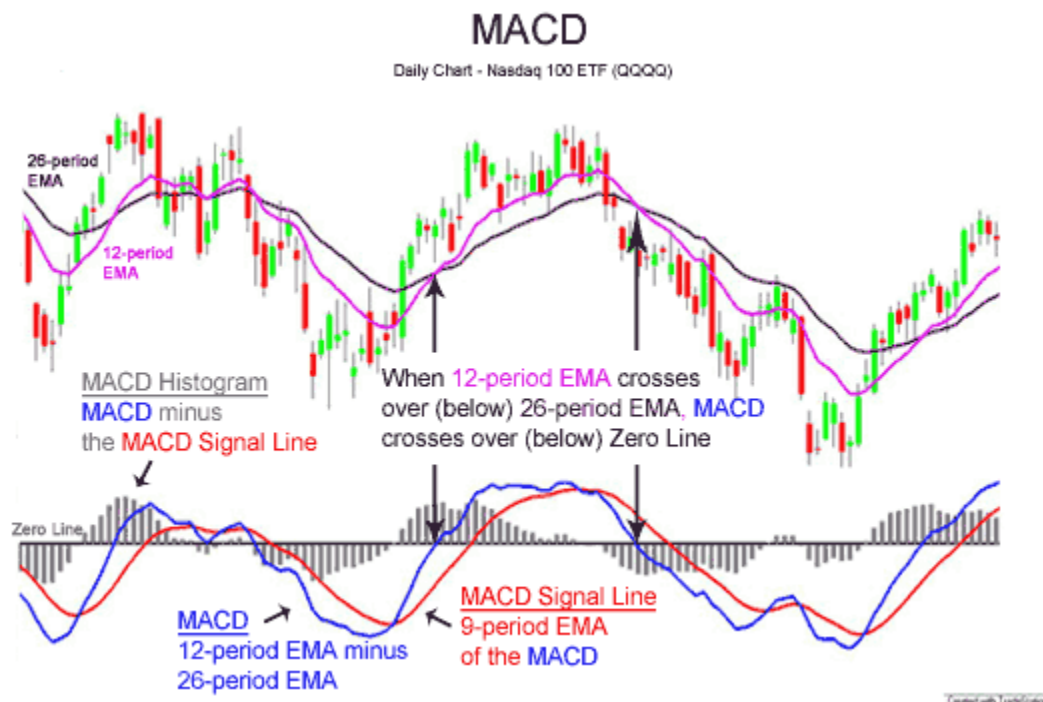
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## History

The MACD was invented by Gerald Appel in the 1970s. Thomas Aspray added a histogram to the MACD in 1986, as a means to anticipate MACD crossovers, an indicator of important moves in the underlying security.

## Basic components



MACD 12,26,9

The graph above shows a stock with a MACD indicator underneath it. The indicator shows a blue line, a red line, and a histogram or bar chart which calculates the difference between the two lines. Values are calculated from the price of the stock in the main part of the graph.

For the example above this means:

- MACD line (blue line): difference between the 12 and 26 days EMAs
- signal (red line): 9 day EMA of the blue line
- histogram (bar graph): difference between the blue and red lines

Mathematically:

- $MACD = EMA[stockPrices, 12] - EMA[stockPrices, 26]$
- $signal = EMA[MACD, 9]$
- $histogram = MACD - signal$

The period for the moving averages on which an MACD is based can vary, but the most commonly used parameters involve a faster EMA of 12 days, a slower EMA of 26 days, and the signal line as a 9 day EMA of the difference between the two. It is written in the form, MACD (faster, slower, signal) or in this case, MACD(12,26,9).

## Interpretation

Exponential moving averages highlight recent changes in a stock's price. By comparing EMAs of different lengths, the MACD line gauges changes in the trend of a stock. By then comparing differences in the change of that line to an average, an analyst can identify subtle shifts in the strength and direction of a stock's trend.

Traders recognize three meaningful signals generated by the MACD indicator.

When:

- the MACD line crosses the signal line
- the MACD line crosses zero
- there is a divergence between the MACD line and the price of the stock or between the histogram and the price of the stock

Graphically this corresponds to:

- the blue line crossing the red line
- the blue line crossing the x-axis (the straight black line in the middle of the indicator)
- higher highs (lower lows) on the price graph but not on the blue line, or higher highs (lower lows) on the price graph but not on the bar graph

And mathematically:

- $MACD - signal = 0$
- $EMA[fast,12] - EMA[slow,26] = 0$
- $Sign (relative\ price\ extremum_{final} - relative\ price\ extremum_{initial}) \neq Sign (relative\ MACD\ extremum_{final} - MACD\ extremum_{initial})$

### Signal-line crossover

Signal-line crossovers are the primary cues provided by the MACD. The standard interpretation is to buy when the MACD line crosses up through the signal line, or sell when it crosses down through the signal line.

The upwards move is called a bullish crossover and the downwards move a bearish crossover. Respectively, they indicate that the trend in the stock is about to accelerate in the direction of the crossover.

The histogram shows when a crossing occurs. Since the histogram is the difference between the MACD line and the signal line, when they cross there is no difference between them.

The histogram can also help in visualizing when the two lines are approaching a crossover. Though it may show a difference, the changing size of the difference can indicate the acceleration of a trend. A narrowing histogram suggests a crossover may be approaching, and a widening histogram suggests that an ongoing trend is likely to get even stronger.

While it is theoretically possible for a trend to increase indefinitely, under normal circumstances, even stocks moving drastically will eventually slow down, lest they go up to infinity or down to nothing.

### Zero crossover

A crossing of the MACD line through zero happens when there is no difference between the fast and slow EMAs. A move from positive to negative is bearish and from negative to positive, bullish. Zero crossovers provide evidence of a change in the direction of a trend but less confirmation of its momentum than a signal line crossover.

### Timing

The MACD is only as useful as the context in which it is applied. An analyst might apply the MACD to a weekly scale before looking at a daily scale, in order to avoid making short term trades against the direction of the intermediate trend.<sup>[2]</sup> Analysts will also vary the parameters of the MACD to track trends of varying duration. One popular short-term set-up, for example, is the (5,35,5).

### False signals

Like any stock market forecast, the MACD can generate false signals. A false positive, for example, would be a bullish crossover followed by a sudden decline in a stock. A false negative

would be a situation where there was no bullish crossover, yet the stock accelerated suddenly upwards.

A prudent strategy would be to apply a filter to signal line crossovers to ensure that they will hold. An example of a price filter would be to buy if the MACD line breaks above the signal line and then remains above it for three days. As with any filtering strategy, this reduces the probability of false signals but increases the frequency of missed profit.

Analysts use a variety of approaches to filter out false signals and confirm true ones.

## Oscillator classification

The MACD is an [absolute price oscillator \(APO\)](#), because it deals with the actual prices of moving averages rather than percentage changes. A [percentage price oscillator \(PPO\)](#), on the other hand, computes the difference between two moving averages of price divided by the longer moving average value.

While an APO will show greater levels for higher priced securities and smaller levels for lower priced securities, a PPO calculates changes relative to price. Subsequently, a PPO is preferred when: comparing oscillator values between different securities, especially those with substantially different prices; or comparing oscillator values for the same security at significantly different times, especially a security whose value has changed greatly.

A third member of the price oscillator family is the [detrended price oscillator \(DPO\)](#), which ignores long term trends while emphasizing short term patterns.

## Signal processing theory

In [signal processing](#) terms, the MACD is a [filtered](#) measure of the derivative of the input (price) with respect to time. (The derivative is called "velocity" in technical stock analysis). MACD estimates the derivative as if it were calculated and then filtered by the two low-pass filters in series, multiplied by a "gain" equal to the difference in their time constants. It also can be seen to approximate the derivative as if it were calculated and then filtered by a single low pass exponential filter (EMA) with time constant equal to the sum of time constants of the two filters, multiplied by the same gain.<sup>[3]</sup> So, for the standard MACD filter time constants of 12 and 26 days, the MACD derivative estimate is filtered approximately by the equivalent of a low-pass EMA filter of 38 days. The time derivative estimate (per day) is the MACD value divided by 14.

The signal line is also a derivative estimate, with an additional low-pass filter in series for further smoothing (and additional lag). The difference between the MACD line and the signal (the "histogram") represents a measure of the second derivative of price with respect to time ("acceleration" in technical stock analysis). This estimate has the additional lag of the signal filter and an additional gain factor equal to the signal filter constant.

A MACD crossover of the signal line indicates that the direction of the acceleration is changing. The MACD line crossing zero suggests that the average velocity is changing direction.

## Sharpening Your Trading Skills: The MACD Indicator

By Jim Wyckoff  
Of Kitco News [www.kitco.com](http://www.kitco.com)

The Moving Average Convergence Divergence (MACD) indicator has the past few years become one of the more popular computer-generated technical indicators.

The MACD, developed by Gerald Appel, is both a trend follower and a market momentum indicator (an oscillator). The MACD is the difference between a fast exponential moving average and a slow exponential moving average. An exponential moving average is a weighted moving average that usually assigns a greater weight to more recent price action.

The name "Moving Average Convergence Divergence" originated from the fact that the fast exponential moving average is continually converging toward or diverging away from the slow exponential moving average. A third, dotted exponential moving average of the MACD (the "trigger" or the signal line) is then plotted on top of the MACD.

Parameters:

Mov1: The time period for the first exponential moving average. The default value is usually 12, referring to 12 bars of whatever timeframe plotted on the chart. (This is the fast moving average.)

Mov2: The time period for the subtracted exponential moving average. The default value is usually 26, referring to 26 bars. (This is the slow moving average.)

Trigger: The period of 9 bars for the signal line representing an additional exponential moving average.

(Note: For a graphic example of the MACD indicator, send me an email at [jim@jimwyckoff.com](mailto:jim@jimwyckoff.com) and I will email you back with the picture example.)

The MACD study can be interpreted like any other trend-following analysis: One line crossing another indicates either a buy or sell signal. When the MACD crosses above the signal line, an uptrend may be starting, suggesting a buy. Conversely, the crossing below the signal line may indicate a downtrend and a sell signal. The crossover signals are more reliable when applied to weekly charts, though this indicator may be applied to daily charts for short-term trading.

The MACD can signal overbought and oversold trends, if analyzed as an oscillator that fluctuates above and below a zero line. The market is oversold (buy signal) when both lines

are below zero, and it is overbought (sell signal) when the two lines are above the zero line.

The MACD can also help identify divergences between the indicator and price activity, which may signal trend reversals or trend losing momentum. A bearish divergence occurs when the MACD is making new lows while prices fail to reach new lows. This can be an early signal of a downtrend losing momentum. A bullish divergence occurs when the MACD is making new highs while prices fail to reach new highs. Both of these signals are most serious when they occur at relatively overbought/oversold levels. Weekly charts are more reliable than daily for divergence analysis with the MACD indicator.

For more details on the MACD, Appel has a book in print, entitled: "The Moving Average Convergence-Divergence Trading Method."

As with most other computer-generated technical indicators, the MACD is a "secondary" indicator in my trading toolbox. It is not as important as my "primary" technical indicators, such as trend lines, chart gaps, chart patterns and fundamental analysis. I use the MACD to help me confirm signals that my primary indicators may be sending.

That's it for now. Next time, we'll examine another important topic on your road to increased trading success.