On the Fickle Correlation Between Stocks and Oil Prices

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eResearch Corporation is pleased to provide a weekly commentary, authored by Tom McClellan, entitled "The McClellan Chart-In-Focus", which is a free technical analysis article published each week.

In this article, Mr. McClellan looks at the relationship between stock prices and crude oil prices.

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May 16, 2019

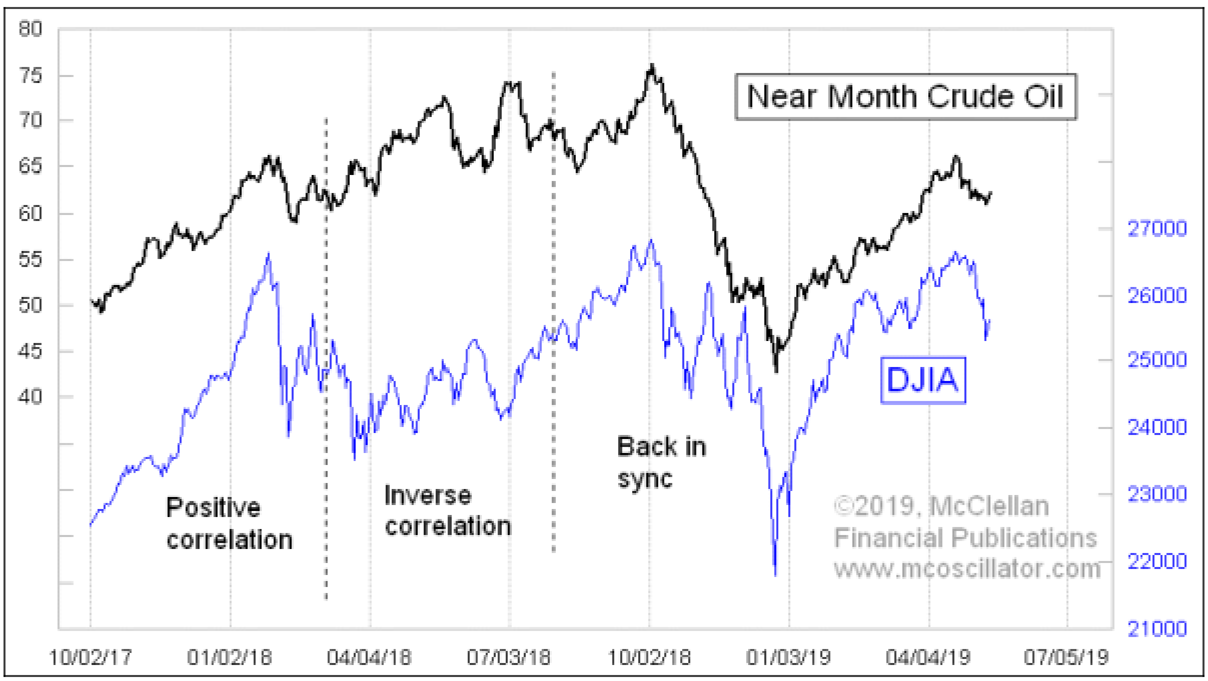
The McClellan Chart-In-Focus

by Tom McClellan (bio at end)

On the Fickle Correlation Between Stocks and Oil Prices

The sharp decline in crude oil prices in Q4/2018 helped to take down the stock market in sympathy. Then the rapid rebound by oil has coincided with a robust rebound in stock prices, with strong breadth numbers to help confirm the stock market's strength in 2019. But, if you think you understand the relationship between stock prices and oil prices, then you have not looked at enough data yet.

Oil and stocks have been in a strong positive correlation since around the beginning of August 2018. But for the 5 months prior to that start point, they were in an inverse correlation, and they were in a positive correlation leading up to March 2018. That is why I refer to it as a fickle relationship.



I can construct reasonable arguments for both relationships. It makes sense in one respect that there should be an inverse relationship. After all, higher oil prices are inflationary, and that could lead the Federal Reserve to hike short-term interest rates, potentially harming the stock market. Higher oil prices also impact the corporate earnings of companies which use petroleum products to make or ship things (although having higher oil prices helps the companies selling the oil). High prices for oil leads to higher gasoline prices, which impacts the consumer's ability to spend money on other things.

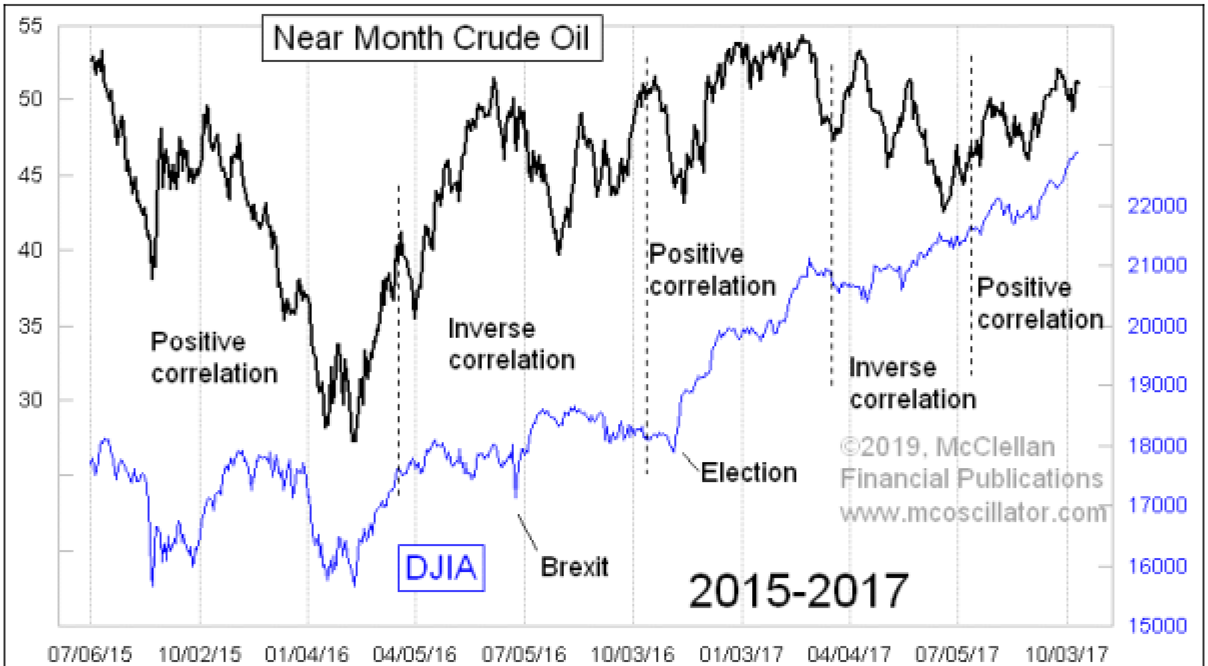
A positive correlation makes sense when we realize that a lot of the high-yield debt out there has been issued by oil drillers and others in that industry, who might have trouble if oil prices fall too much. Low oil could endanger those companies' ability to make debt payments, which could lead to defaults, harming the banking sector, and soaking up liquidity which might be otherwise available to lift stock prices.

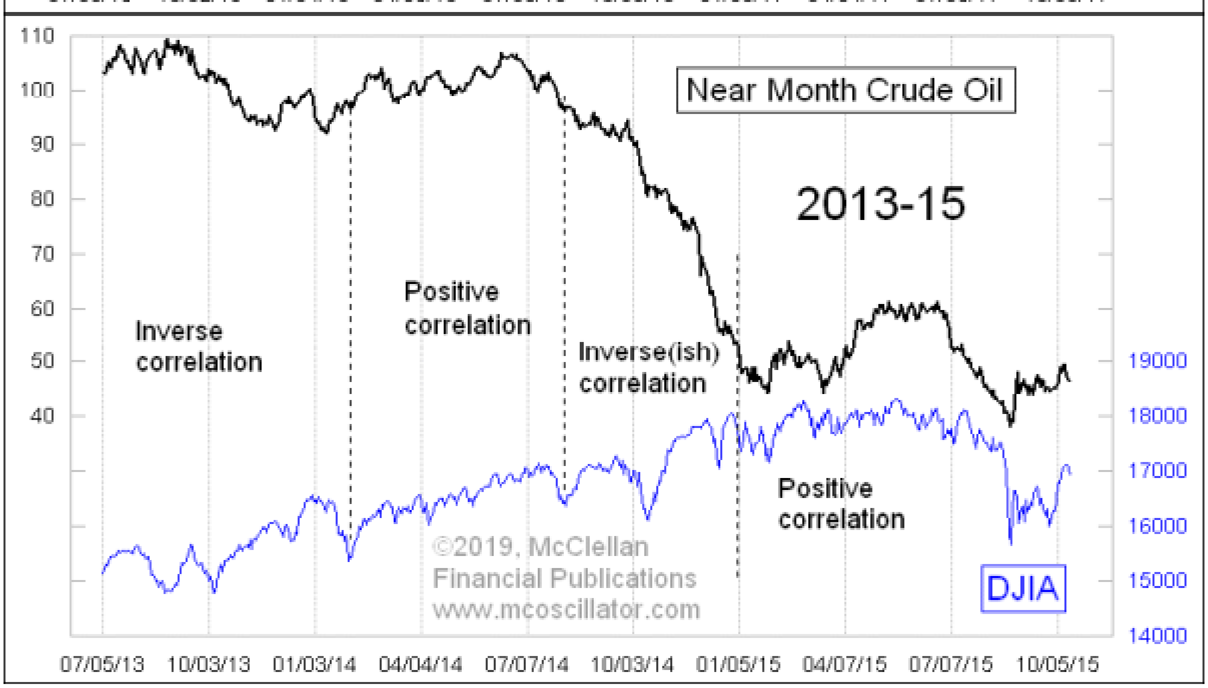
Both of these arguments are good arguments, and each is valid at different times. The curious point about this relationship is that these two conflicting arguments do not seem to operate much together. Investors cling to one argument sometime, and the other at other times. I have yet to figure out what factor causes that switch to flip, and to change the correlation from positive to inverse, and back again.

It seems to happen every few months, but the durations of positive and inverse correlation periods are highly variable, so as far as I can tell there is not a consistent time cycle driving those changes.

The alternating correlation is not a new phenomenon. It has been going on for many years.

Here are a couple of charts showing periods farther back in time:

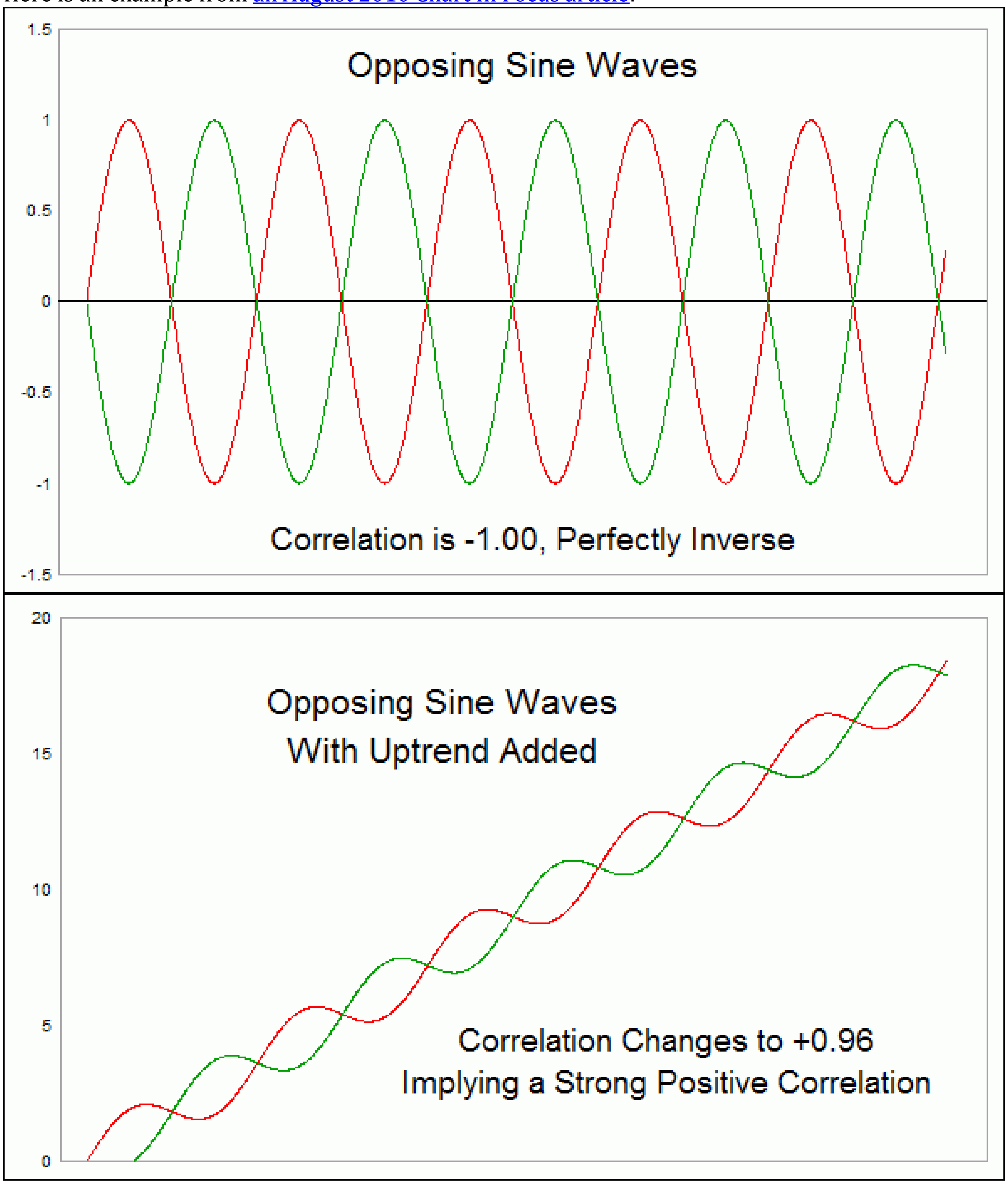




At the moment, the relationship between crude oil prices and the DJIA appears to be a positive one. But it has been positive for a long time now, so that might mean it is due for a flip. How to detect that change in real time is a difficult problem.

A lot of analysts like to use Pearson's Correlation Coefficient to track the correlations of various sets of data, even though that is the wrong statistical tool for time series data. Pearson's is great if you want to correlate something in a population study, like the height and weight of individuals in a group, for example. But time series data creates problems for Pearson's, because trends can skew the numbers.

Here is an example from [an August 2010 Chart In Focus article]:



There are better statistical tools for gauging the relationships between time series data, but they are harder to use, whereas Pearson's Correlation Coefficient can be summoned with just a few keystrokes in any spreadsheet program. Easy to use does not always mean good to use.

That is why I rely on visual analysis, even though I know that my own eye can be fallible. I strive to remember that what I think the relationship is at any moment could start to change without notice.

Tom McClellan, Editor, The McClellan Market Report

BW: Information on Tom McClellan and *The McClellan Market Report* and *The Daily Edition* is provided below.

ABOUT THE AUTHOR

Tom McClellan

Tom McClellan has done extensive analytical spreadsheet development for the stock and commodities markets, including the synthesizing of the four-year Presidential Cycle Pattern. He has fine-tuned the rules for inter-relationships between financial markets to provide leading indications for important market and economic data.

Tom is a graduate of the U.S. Military Academy at West Point, where he studied aerospace engineering, and he served as an Army helicopter pilot for 11 years. He began his own study of market technical analysis while still in the Army, and discovered ways to expand the use of certain indicators to forecast future market turning points.

Tom views the movements of prices in the financial market through the eyes of an engineer, which allows him to focus on what the data really say rather than interpreting events according to the same "conventional wisdom" used by other analysts.

In 1993, he left the Army to join his father in pursuing a new career doing this type of analysis. Tom and his Father spent the next two years refining their analysis techniques and laying groundwork.

In April 1995 they launched their newsletter, The McClellan Market Report, an 8-page report covering the stock, bond, and gold markets, which is published twice a month. They utilize the unique indicators they have developed to present their view of the market's structure as well as their forecasts for future trend direction and the timing of turning points.

A Daily Edition was added in February 1998 to give subscribers daily updates on their indicators and also provide market position indications for stocks, bonds, and gold. Their subscribers range from individual investors to professional fund managers. Tom serves as editor of both publications, and runs the newsletter business from its location in Lakewood, WA.

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