THOUGHT CAPSULE

BRIDGEWAY

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How Do Oil Prices Affect the Stock Market?

Our recent analysis suggests that long-term investors may not need to worry about what's happening with the price of oil.

The dramatic fall in oil prices and recent stock market volatility has some investors wondering whether the two phenomena are linked—and what might be in store for stocks if oil prices remain volatile. Oil prices declined 75% from a peak in July 2014 to a low in February 2016[1]. The drop had a strongly negative impact on energy stock prices, but it affected non-energy-related companies as well.

Since then, many analysts have predicted oil prices will rise soon, which some investors interpret as more bad news for equities. But before you make any changes to your investment allocation, let's look at the relationship between oil price and stock market returns.

Like all commodity prices, oil prices fluctuate based on the interaction of supply and demand. It is unclear whether the recent drop in oil prices is more due to supply factors—such as increased production from OPEC countries—or waning demand due to slowing global economic growth.

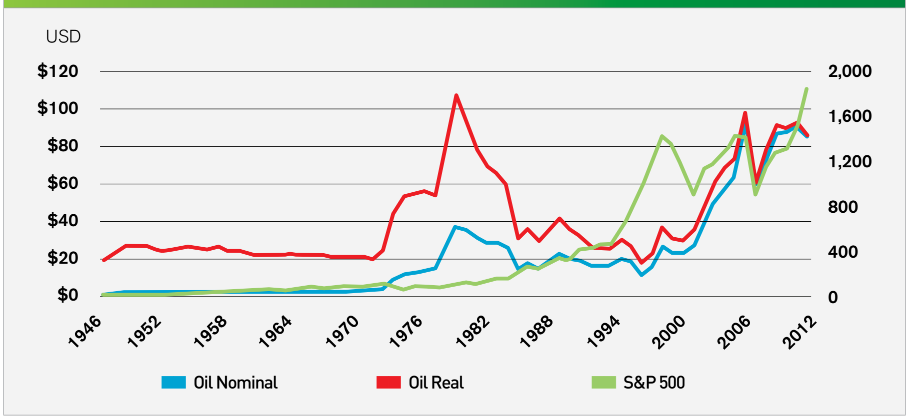
Likewise, rising oil prices could be the result of very different causes. An increase due to tighter supplies would generally be bad for the economy—and for non-energy stocks in particular—because it would amount to an added energy tax. But an oil price increase driven by higher demand could reflect a stronger economy, which would be good for stocks' returns.

Because it is impossible to predict what might drive oil prices in the future, it is best to avoid speculating on potential causes. Instead, we look to past market data to get a sense of what might lie ahead for investors.

We measured the relationship between stock returns and changes in oil prices dating back to 1946. As you can see in the chart below, stocks typically do better when oil prices fall —but they still do well enough when oil prices rise.

For example, the S&P 500 is generally up 16% during years of falling oil prices. But it's up 10% during years when oil prices rise. At the extremes, the S&P 500 gains an average of about 17% when oil prices drop the most and just 4% when oil prices rise the most.

Oil and Stock Prices



Oil prices based on the price of Illinois crude from http://inflationdata.com/Inflation/Inflation_Rate/Historical_Oil_Prices_Table.asp

S&P 500 Returns According to Direction Change in Price of Oil	Price Up or Down		Quintile by Direction of Price Change				
	Down	Up	Down Most	Down	Mid	Up	Up Most
Mean	15.82%	10.22%	17.65%	14.11%	11.39%	15.50%	4.33%
Standard Deviation	15.17%	18.08%	12.75%	17.41%	16.80%	15.39%	20.78%
Count	29	39	14	15	12	13	14
Minimum Return	-21.97%	-36.55%	-11.85%	-21.97%	-9.97%	-10.46%	-36.55%
Maximum Return	43.72%	52.56%	33.10%	43.72%	52.56%	37.20%	37.00%

Stock return numbers from Aswath Damodaran's web site (http://pages.stern.nyu.edu/~adamodar/); change in oil price based on same-year nominal % change in the price of Illinois crude, sourced from http://inflationdata.com/Inflation/Inflation_Rate/Historical_Oil_Prices_Table.asp

There is a plenty of volatility around these averages—as you can see from the standard deviations and minimum and maximum returns in the table above. It's also worth mentioning that when looking at the impact of the change in oil prices on the following year's stock returns, the differences are more muted, with little noticeable pattern.

In short, the data suggest that stocks tend to deliver positive returns in years of both rising and falling oil prices. Avoiding stocks in anticipation of rising oil prices may therefore mean missing out on those potential gains, even if they are moderate. So instead of speculating about the future direction of oil prices or stocks, focus on establishing a long-term investment allocation that works for you—and stick with it.

1 Source: The Federal Reserve. As measured by the price of West Texas Intermediate crude oil at Cushing, Oklahoma

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