

Oil & Stocks: Is There Really Any Connection?

Every day, you hear that “high energy prices are bad for the stock market.” You may be shocked to learn, however, that financial “experts” were saying exactly the opposite five years ago.

So which is it – are high oil prices good or bad for stocks? This research paper shows you the truth. This report appeared in the Special Section of the August 2004 *Elliott Wave Theorist*, Robert Prechter’s monthly market analysis publication.

Just the Latest Example of a Purported Financial Relationship That Doesn’t Exist

OIL AND STOCKS: A CRUDE CONNECTION

by Tom Denham

For decades, people have fixated on some economic indicator *du jour* as the key driver of stock prices. This idea is seductive because, as Robert Prechter has noted many times, it helps investors “explain” otherwise mysterious market phenomena. In the 1980s, it was the weekly money supply report. Then it was the bond market and, off and on, inflation. Later it was the near-term trend of the U.S. dollar, and for a while, it was consumer confidence levels.

Each indicator came into vogue for a period of time and during that period was accepted without question. This acceptance occurred despite the fact that any decent historical analysis would have proved that the supposed correlation did not exist at all.

The Current Conventional Wisdom

If you have been keeping up with conventional wisdom, you know that the indicator *du jour* is the price of crude oil. Prominent market analysts claim that oil prices and stocks are inversely related, i.e., that rising oil prices are bearish for stocks and falling oil prices are bullish for stocks. Financial newspapers are replete with comments like these:

- “...historically high oil prices...pose a threat to global economic growth and the prospects for stock markets.” (29 May 2004)
- “The fall in oil prices...may bring some relief to financial markets.” (4 June 2004)
- “US stocks turn lower as oil price jumps.” (14 July 2004)

This is not the first time we have been told that oil prices are an indicator of stock trends. Before we investigate whether oil prices actually do correlate inversely with the price of stocks, we have two questions to explore.

Are Oil Prices Actually “Historically High”?

Speaking of “high oil prices” prompts the question, “What is high?” In December 1998, oil sold at \$10.35/barrel. After seven months, in July 1999, it was 100% higher at \$21.12. After 15 months, in March 2000, oil was 200% higher at \$34.20. After nearly five and a half years, in June 2004, oil was 300% higher at \$42.38. So when did oil become “too expensive”? At \$20? \$30? \$40? If oil was not too high after climbing 100% or 200%, what makes oil suddenly too high after crossing 300%? Sticker shock at \$40 oil is primarily a psychological event. How do we know this? Because real oil prices are actually substantially lower now than at several previous peaks. As Paivi Munter points out in “Bond Jury Out on Effects of Oil” (FT.com, 25 May 2004), “In 1979 to 1984, average annual prices in today’s money exceeded \$50 a barrel for four consecutive years, reaching \$72 in 1980.” Yet in the eyes of many, the issue of “high oil prices” now is bigger than ever. Apparently, perception of “historically high” oil prices is due as much to psychology as to actuality. We hasten to add that we are perhaps the most extreme bears on the planet with respect to stocks (for details, see *Conquer the Crash*), but the trend of “historically high” oil prices has nothing to do with our analysis, nor should it, as we are about to see.

If a Simultaneous Correlation Exists, Would It Be Valuable?

A prominent stock analyst recently asserted, “If crude oil extends today’s reaction, stock markets are likely to stage another technical rally. Conversely, if crude rallies, share indices will be under further pressure.” Fine. So what do investors know about next week? Answer: nothing. Even if we were to accept the analyst’s premise that oil prices drive stocks, unless he also tells us where oil prices are heading, his “forecast” is really no forecast at all. It tells us nothing about the path ahead for stocks. “It is not good enough to say, for instance, that stocks will go up as long as earnings increase,” Prechter wrote in *The Wave Principle of Human Social Behavior*. “You must predict earnings to arrive at a payoff. To do that, you need an indicator of earnings. And so on; the cycle is endless” when making external-cause claims.

Surprise, Surprise: There Is No Correlation

As with all external-cause claims relating to financial markets, there is a more serious problem with this supposed correlation between stocks and oil: It doesn’t actually exist.

People naturally default to the “external cause” model, borrowed from physics, when analyzing markets. This case, in which the price of oil is supposedly pushing stocks around, is no exception. But as Prechter explained and demonstrated in the May and June issues of *The Elliott Wave Theorist*, the laws of physics are not useful in describing or forecasting market behavior. Let’s take a moment to test the facts about the purported “obviously sensible” correlation between oil and stock prices.

The Standard Contradiction

If you were to perform a quick survey of *Financial Times* market-related headlines from 1999 to the present, you might be amazed to discover that the polarity of the presumed correlation had changed to suit circumstances. Prior to 2000, the newspaper cited rising oil prices as a reason stocks were heading *up*, but once stocks topped in 2000, it blamed rising oil prices as a reason stocks were moving *down*.

How could this possibly be? It’s quite natural, really. As Prechter states in *The Wave Principle of Human Social Behavior*, “[A] duality of meaning holds for all [such presumed external-cause] relationships.”(p.376) In the case of oil, one can convincingly argue, “Rising oil prices hurt transportation and electric utility companies and are therefore bad for the economy.” On the other hand, it is quite reasonable to assert, “A healthily expanding economy requires more energy consumption, which naturally leads to higher oil prices. What else would you expect?” As always, “fundamental” arguments (1) always appear sensible,

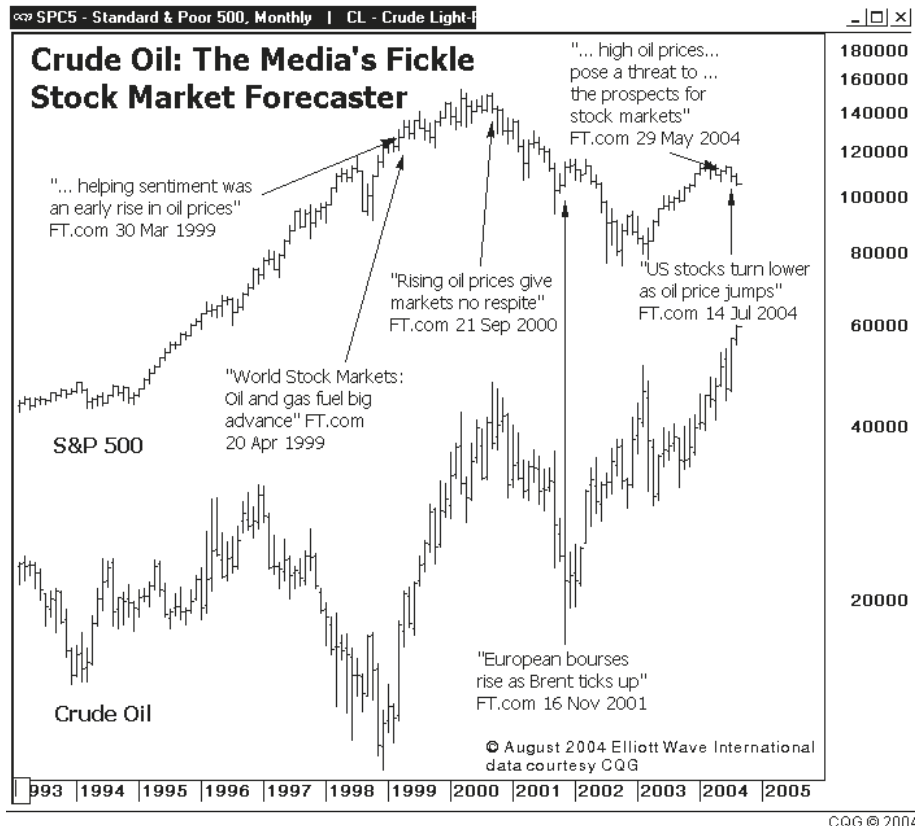


Figure 1

(2) can be utterly contradicted by another sensible argument and (3) never explain the data. See Figure 1 for a few examples relating to oil and the stock market.

Is There Any Consistent Correlation?

If the price of oil were a key driver of the stock market, we would see a consistent relationship between the prices of oil and stocks over time. Figure 2 is a chart of the S&P Composite index and crude oil for the past 20 years. Notice that when oil peaked at \$41.15 in 1990, the S&P was part-way along a two-decade rally. At crude's next peak at \$37.80 in 2000, the S&P was near a top. Then when oil spiked to \$39.99 in 2003, the S&P was near a low. Likewise, oil's four major lows during this time came at very different points in the trends for stocks. So anecdotally, at least, it appears that no relationship exists. But what about statistically?

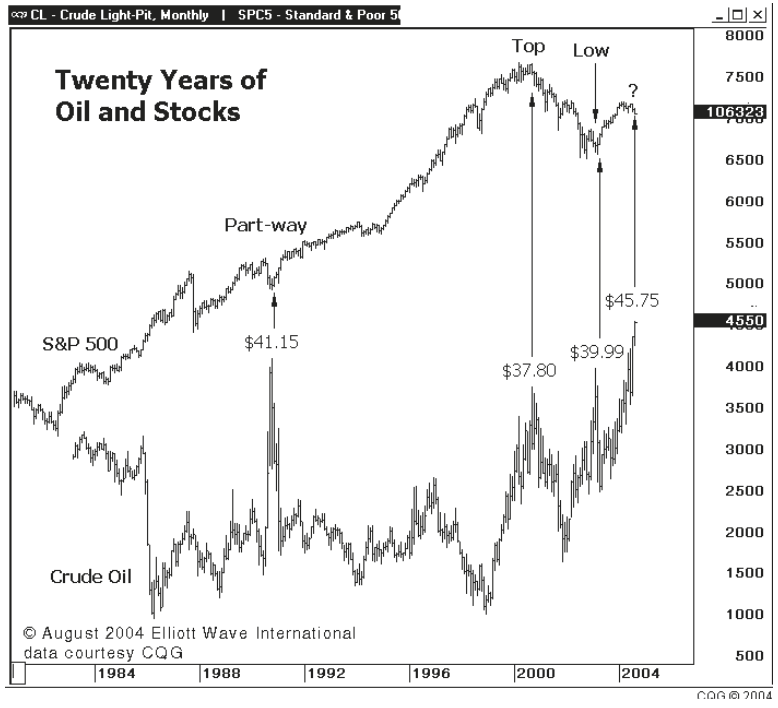


Figure 2

Figure 3 shows the statistical correlation of the S&P Index and crude oil in 10-week segments. If these markets were truly correlated on this timeframe, we would see a *flattish* line somewhere near the “100” line in either the upper or lower panel. Instead, what we find is that the correlation swings erratically from positive to negative. Sometimes oil and stocks advance or decline together, sending the correlation into positive territory, and sometimes oil and stocks move inversely to each other, sending the correlation into negative territory. So statistically, there is no consistent relationship between the prices of oil and stocks on this timeframe.

What about on a longer term basis? Figure 4 uses the same method to test the correlation of oil and stocks on a yearly basis. The swings are just as erratic. What’s more, the polarity of the relationship can change at any point; reversals sometimes occur at relative extremes and sometimes not.

What about over an even longer time frame? Table 1 reviews ten notable swings in the price of oil over the past 20 years and tracks what happened in the S&P during those moves. In event #1, oil declined 70% into April 1986 while stocks rallied 56%. In event #2, oil rallied 322% into 1990, and stocks rallied 20%. In event #3, oil declined 67% into 1993, and stocks rallied 60%, a near inverse. But oil and stocks then trended together in event #4 into 1996, when crude oil rallied 95% and stocks rallied 52%. And so on. Of the ten significant oil swings in this list, five coincide with a stock move in the opposite direction, and five coincide with a move in the same direction. (Event #2 turns current conventional wisdom on its head, as it was oil’s biggest rise of all yet accompanied a substantial advance in stocks.) So we find negative correlation half the time and positive correlation the other half, which is no correlation at all.

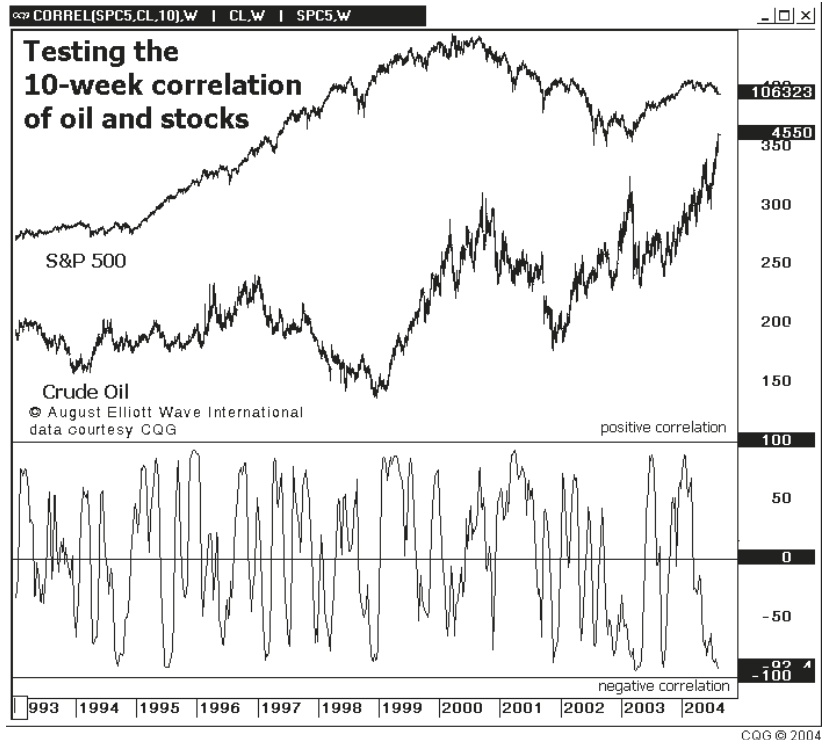


Figure 3

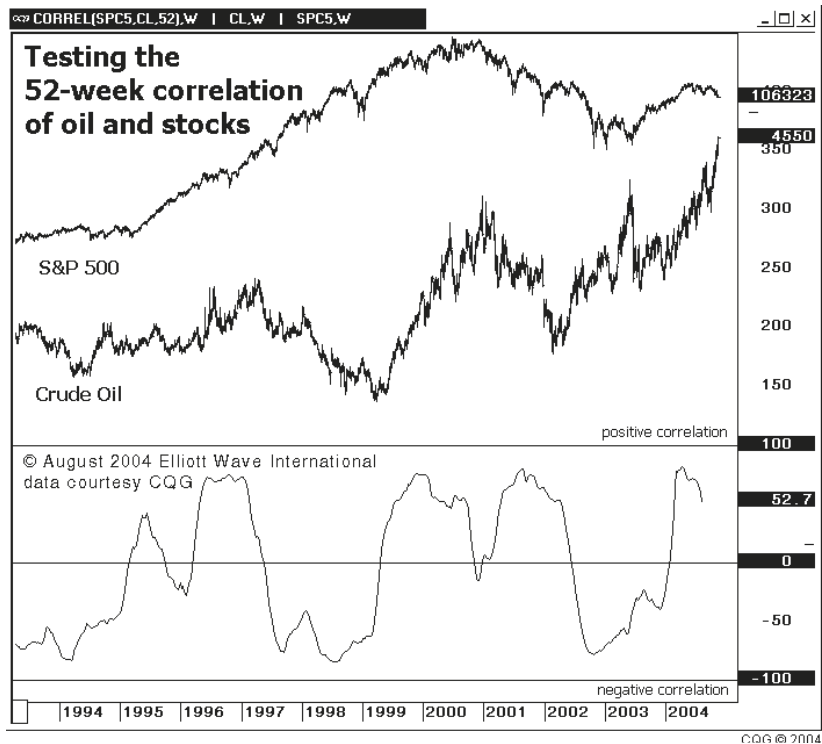


Figure 4

Event	Date	Oil	A	S&P 500	B	A/B	Conventional Wisdom?
0	August 1983	32.35		157.62			
1	April 1986	9.75	-70%	245.47	+56%	-1.25	Yes
2	October 1990	41.15	+322%	294.51	+20%	+16.10	No
3	December 1993	13.75	-67%	471.29	+60%	-1.17	Yes
4	December 1996	26.80	+95%	716.69	+52%	+1.83	No
5	December 1998	10.35	-61%	1,244.93	+74%	-0.82	Yes
6	September 2000	37.80	+265%	1,419.44	+14%	+18.93	No
7	November 2001	16.70	-56%	1,163.38	-18%	+3.11	No
8	February 2003	39.99	+139%	806.29	-31%	-4.48	Yes
9	April 2003	25.08	-37%	924.24	+15%	-2.47	Yes
10	August 2004	45.75	+82%	1,062.23	+15%	+5.47	No

Table 1

DAX, Too

The lack of correlation is just as dramatic when we compare oil prices to the German DAX stock index, as demonstrated in the latest issue of *The European Financial Forecast*. Rest assured — with the socio-economic insight as a guide — that you are unlikely to find any stock index that consistently tracks the price of oil.

Conclusion

To say it plainly, the data show no consistent relationship between oil and stocks of the type that conventional wisdom purports to be causally sensible. As we have already shown, even if there were, it wouldn't help you predict stocks. Therefore, paying attention to stock forecasts based on the price of oil is a waste of time. Worse, they are setups for bad investment decisions. Shorting stocks on an oil spike (presuming you even knew that it was a peak, which you wouldn't) or buying stocks at an oil trough may seem like a reasonable decision, but as this study shows, it's simply a blind gamble, and rolling the dice is not an investment strategy.

As far as we can see, there is no consistent *leading* or *lagging* relationship between these two sets of data either. If anyone would like to propose one, we will be happy to investigate it statistically.

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