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The 20-Year Record for Oil

A Monday Morning Musing from Mickey the Mercenary Geologist

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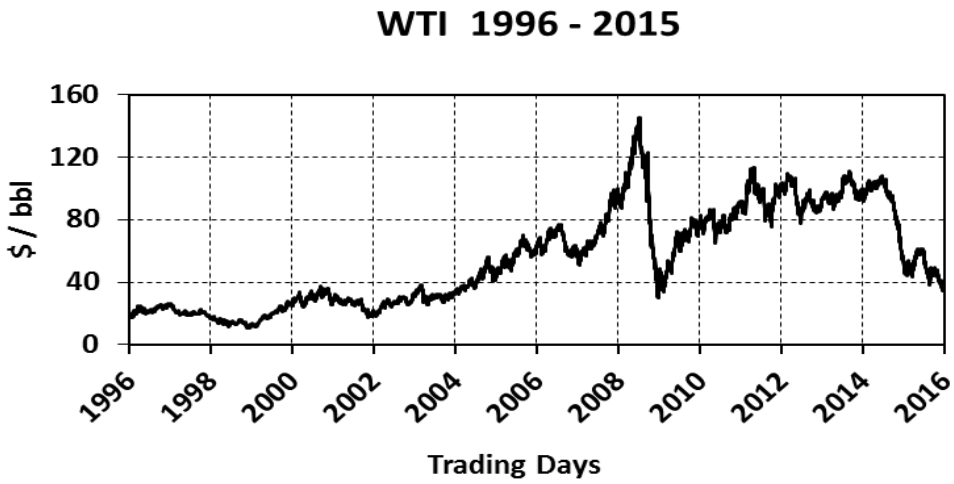
Early this year I presented a musing documenting seasonal moves in the price of gold over the past 20 years (**Mercenary Musing, January 4, 2016**).

Employing the same tools, I now report our research on the price of crude oil from 1996 to 2015.

In a series of normalized charts, I will show that regardless of overall year-over-year bull, bear, or neutral market conditions, there are predictable intra-year trends in the price of the North American benchmark oil, West Texas Intermediate crude (WTI).

The chart below plots the 20-year record of oil prices. Please note that all data is spot WTI, Cushing, Oklahoma, at daily New York close:

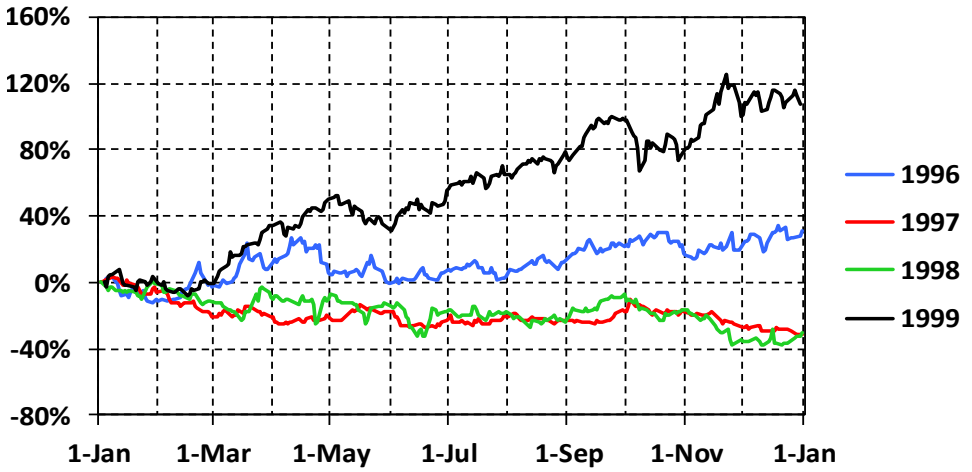


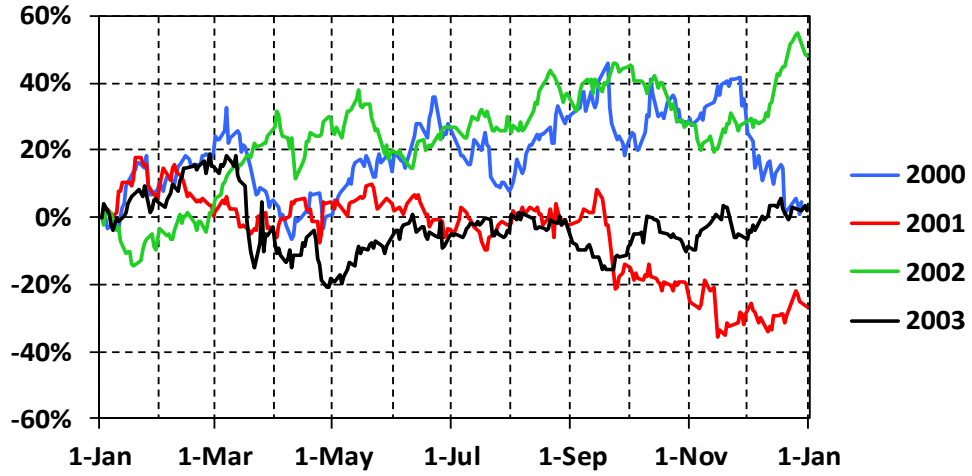
Over 20 years, the price of oil has shown significant fluctuations and at times, extreme volatility and wild swings in five market cycles of varying duration.

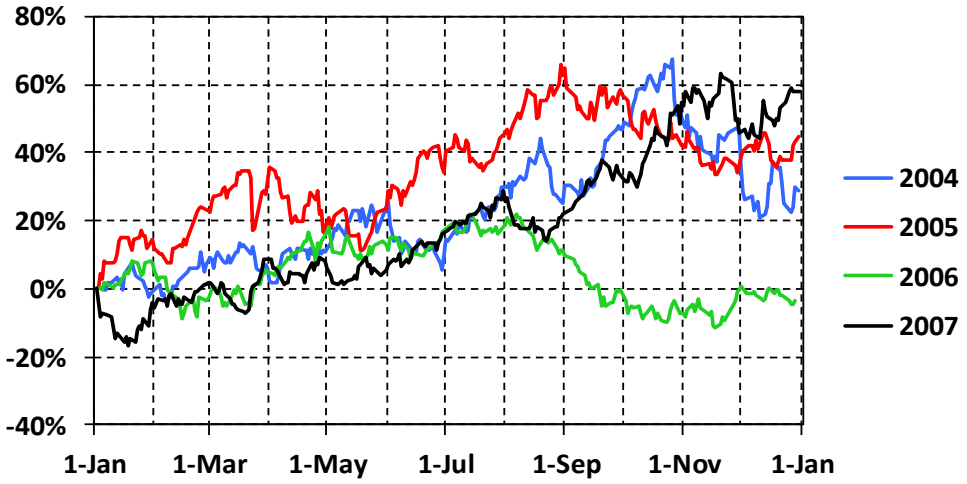
Besides basic supply and demand fundamentals, there are many other inputs that directly affect the oil price. They include: the health of the world's economy; influence of the OPEC cartel and especially, Saudi Arabia on swing supply; geopolitical events mainly in the Middle East but also in Eastern Europe and Asia; advent of new technologies for exploration, development, and recovery; and recently, global environmental and economic policies designed to curb use of fossil fuels.

In addition to the above, supply-demand fundamentals and external factors are exacerbated by worldwide speculation in petroleum market derivatives. The result is a highly volatile and cyclical market for crude oil.

The following series of five charts shows the percentage change in the daily price of crude normalized to January 1 for each year:






80%
60%
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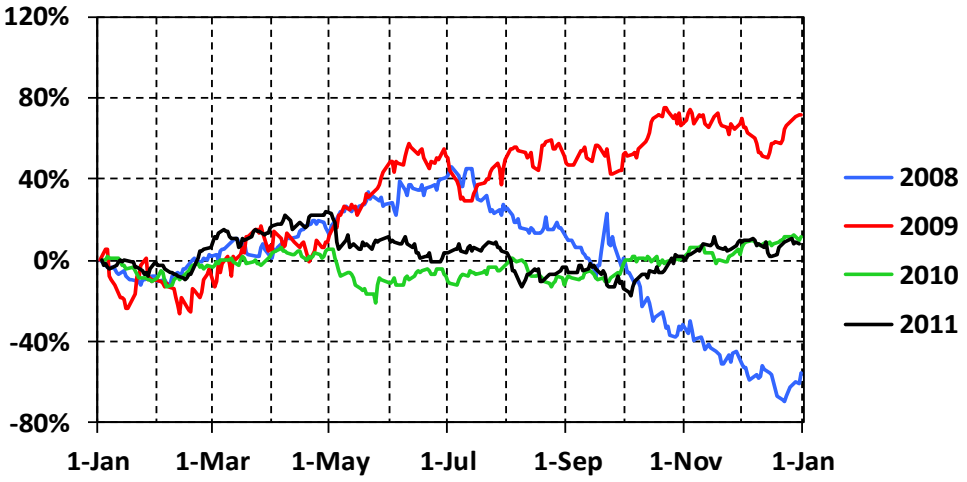
120%
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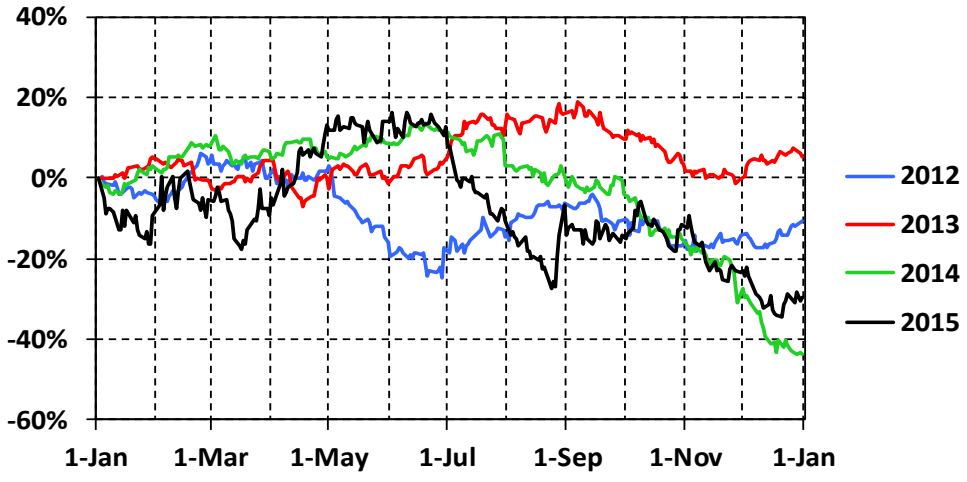
2011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2012
2013
2014
2015

Based on annual opening and closing prices, we define bull years for crude oil (**green**) as those in which the price closed the year > 10% higher than it opened; bear market years (**red**) as those in which the price closed the year >10% lower than it opened; and neutral years (**black)** as those in which the percentage change was less than 10%:

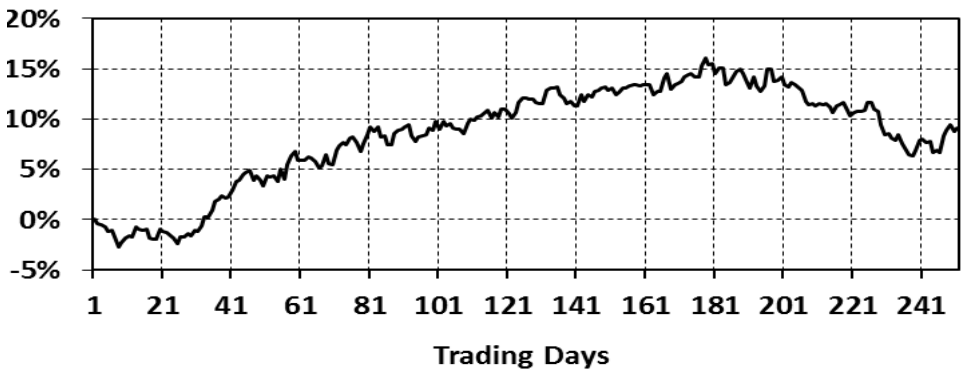
WTI Oil ($ / bbl)

Year	Jan Open	Dec Close	% Change
1996	19.83	25.90	30.61
1997	25.55	17.65	30.92
1998	17.41	12.14	30.27
1999	12.42	25.76	107.41
2000	25.56	26.72	4.54
2001	27.29	19.96	26.86
2002	21.13	31.21	47.70
2003	31.97	32.51	1.69
2004	33.71	43.36	28.63
2005	42.16	61.06	44.83
2006	63.11	60.85	3.58
2007	60.77	95.95	57.89
2008	99.64	44.60	55.24
2009	46.17	79.39	71.95
2010	81.52	91.38	12.10
2011	91.59	98.83	7.90
2012	102.96	91.83	10.81
2013	93.14	98.17	5.40
2014	95.14	53.45	43.82
2015	52.72	37.13	29.57

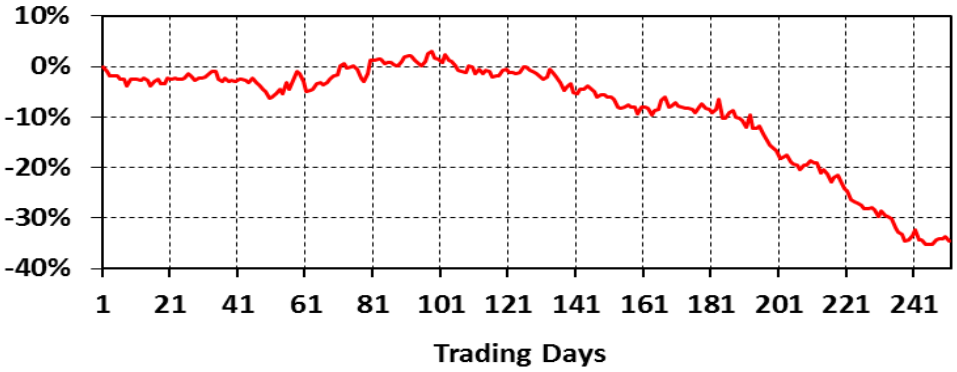
The volatility from annual beginning to end averaged nearly 33% over the 20 years in this study. Crude oil is arguably the most volatile natural resource commodity traded on world market exchanges.

The following four charts present composite yearly trends from January 1 to December 31 for the entire 20-year period, seven bear years (1997-1998; 2001; 2008; 2012; 2014-2015), eight bull years (1996; 2000; 2002; 2004-2005; 2007; 2009-2010), and five neutral years (2000; 2003; 2006; 2011; 2013):

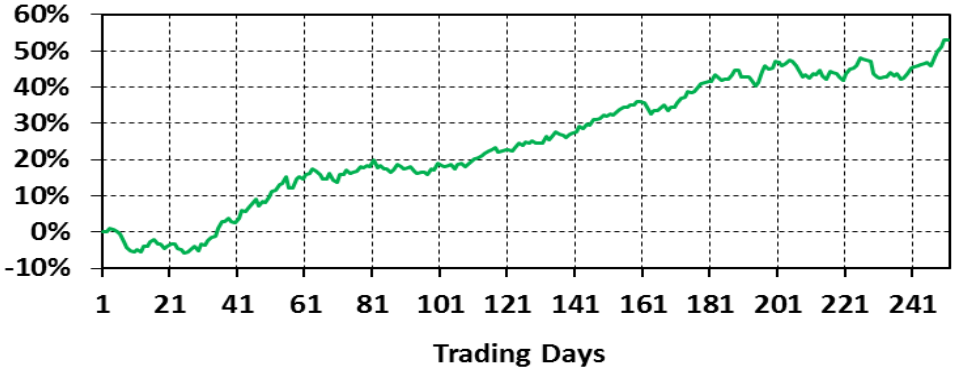
WTI Price
20-Year Composite

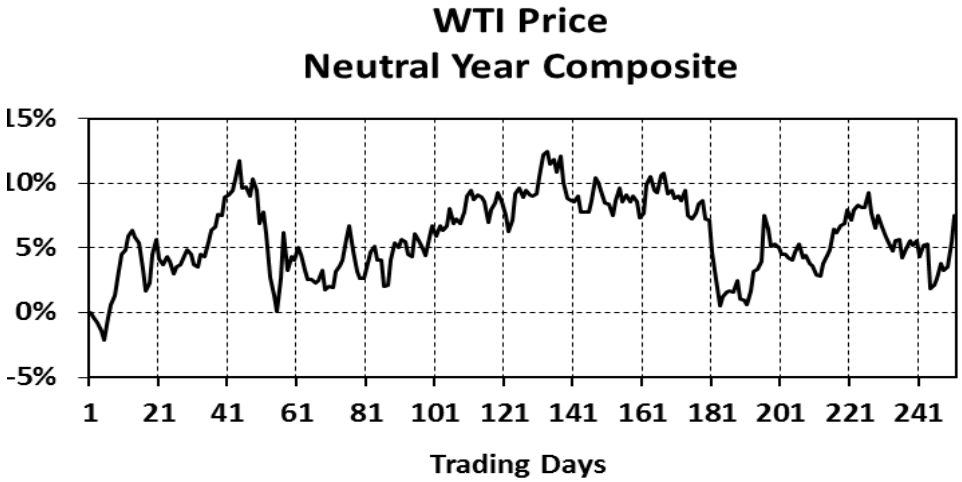


WTI Price
Bear Year Composite



WTI Price
Bull Year Composite





The composite charts illustrate some interesting seasonal trends for the price of North American crude oil:

- Oil dips from the first part of the year until mid- to late February for the 20-year composite. This period lasts significantly longer in bear years (mid-April) than in bull years (mid-February). In neutral years, the price actually rises before falling back sharply in mid-March.

- A late winter to late spring rally holds for all four charts. It peaks in late May in bear market years while in bull years, oil rises rapidly in mid-February thru April and flattens for the month of May. In neutral years, the overall rise is choppy and volatile.

- Overall, the price increases continue until Labor Day. However for bear years, the spring rally ends abruptly and the price goes on a slow downtick into the late summer. In bull years, there is a steady rise until Labor Day. In neutral years, the uptick is over by late June and the price is flat thru late August.

- The end of summer and the fourth quarter show strong divergence between bear and bull markets. The composite trend is flat to a slight downtick in September followed by a strong Q4 downturn until December's rising price. Considering only bear markets, the oil price goes on a steady and significant decline that continues thru year end.

  In bull markets, there is an oscillating pattern with no gain until a sharp rise in December. For neutral years, the four-month pattern is volatile and spiky but with an overall strong uptick.

Let's list some likely supply and demand factors for the oil price trends documented above:

- It is obvious that the price of crude oil anticipates seasonal demand for derivative refinery products of most import (gasoline, diesel, and heating oil) by two to three months.

- The dip in price during the early part of the year can be attributed to the upcoming end of the heating oil season with sufficient stocks having already been accumulated.

- The late winter to early spring rally is driven by the anticipated increase in demand for gasoline and ramp up by refineries as the summer driving season approaches.

- A complex relationship exists between the general health of the economy, the price of a gallon of gas, and the summertime driving habits of Americans. These factors have a direct impact on whether the oil price goes up or down during the late summer.

- The declining price after Labor Day is due to the end of vacation season and lower demand in the fall. The general rise in December foreshadows winter demand for heating oil in the northeastern tier of the United States, with speculation somewhat dependent on the mid-term weather forecast.

Our research indicates there is a pronounced seasonality in the crude oil price over the past 20 years regardless of bull, bear, or neutral market conditions. This seasonality affects the movements of speculative money in both the spot and high-risk paper derivative markets. The world economy runs on oil and banks, traders, hedge funds, oil companies, sovereign governments, and other speculators are major participants in these markets.

Unlike gold, where individual hoarders, traders, and speculators can readily buy physical product or an EFT to take timely advantage of well-defined annual seasonality, speculation in oil is big-boy football.

And in my opinion, folks, playing that game is best left to the pros.

Ciao for now,

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Acknowledgment: Gwen Preston is the editor and Steve Sweeney is the research assistant for **MercenaryGeologist.com**.

The **Mercenary Geologist Michael S. "Mickey" Fulp** is a Certified Professional Geologist with a B.Sc. Earth Sciences with honor from the University of Tulsa, and M.Sc. Geology from the University of New Mexico. Mickey has 35 years experience as an exploration geologist and analyst searching for economic deposits of base and precious metals, industrial minerals, uranium, coal, oil and gas, and water in North and South America, Europe, and Asia.

Mickey worked for junior explorers, major mining companies, private companies, and investors as a consulting economic geologist for over 20 years, specializing in geological mapping, property evaluation, and business development. In addition to Mickey's professional credentials and experience, he is high-altitude proficient, and is bilingual in English and Spanish. From 2003 to 2006, he made four outcrop ore discoveries in Peru, Nevada, Chile, and British Columbia.

Mickey is well-known and highly respected throughout the mining and exploration community due to his ongoing work as an analyst, writer, and speaker.

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