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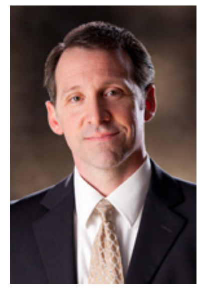
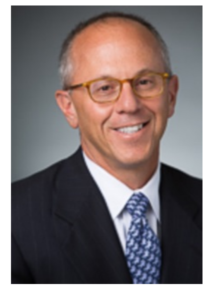
Time to energize?
The outlook for oil, equities, and high-yield bonds

Dan Morris, CFA
Global Investment Strategist

Tim Hopper, PhD
Chief Economist



Michael Ainge, CFA
Head of Corporate Credit Research



Jeff Bellman
Energy Research Analyst

Executive summary

- Oil prices have bottomed and could trade as high as $90/barrel by April next year, even as the dollar strengthens.
- After previous oil price corrections, the returns of the commodity outpaced both equities and high-yield bonds; we anticipate the same will occur this time.
- We expect the Energy sector of the S&P 500 will outperform the broader index, with Exploration and Production (E&P) and Oil Services the higher beta industries.
- High-yield energy sector yields are nearly two standard deviations above historical norms. We believe yields in the sector more than compensate for the additional risk, though selectivity is key.

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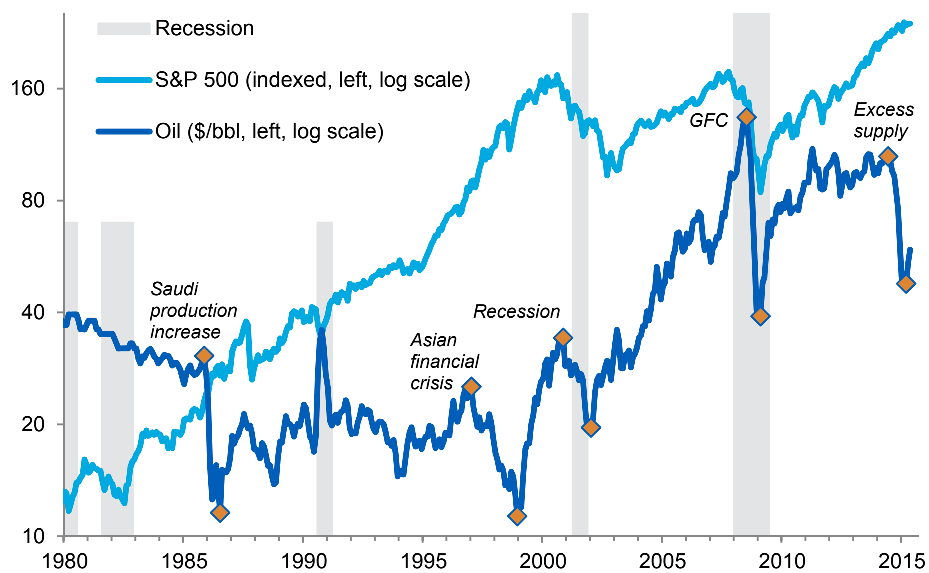
History's prism

The collapse in oil prices since the summer of 2014 was certainly not the first time that markets have fallen dramatically (see Figure 1). In the past, though, prices tended to rebound just as sharply, and in each of the previous episodes the gain in oil prices exceeded the S&P 500's return in the year after oil prices bottomed.

Oil has generally outperformed equities in the year following the bottom in oil prices.

Figure 1: Oil prices (WTI) and equities



Data as of May 7, 2015. Sources: Bloomberg, TIAA-CREF Asset Management.

Once oil prices hit a trough and began to recover, equity markets generally advanced as well. The S&P 500 Energy sector and associated sub-indexes did not always outperform the broader market, however (see Figure 2). There are nonetheless patterns in the returns of the indexes that might indicate how equity markets could behave this time, with the caveat that historical comparisons provide valuable perspective but are not predictive. The causes of the previous downturns in oil prices shown were distinct, with varying macroeconomic environments: Policy rates were rising and GDP growth was strong in two periods (1986 and 1998), but in two others interest rates were flat/falling and GDP growth was below 2% (2002 and 2009). The multiple on the S&P 500 ranged from 11x to 22x. Moreover, the structure of the industry has evolved significantly since the mid-1980s.

Energy Equipment & Services consistently outperformed the S&P 500 in previous episodes.

Figure 2: One-year returns from oil price trough

	Market Cap ($bn)	Month of trough				
		Jul-86	**Dec-98**	**Jan-02**	**Feb-09**	**Mar-15***
Asset class returns						
Oil (WTI)		98%	141%	83%	125%	36%
S&P 500 Index	$18,491	35	20	-24	50	1
BAML High Yield Index†	1,373	11	2	1	56	2
Equity sector returns relative to S&P 500 Index						
Energy	**$1,551**	**30**	-4	**10**	-23	**6**
Energy Equipment & Services	**251**	**37**	**15**	**8**	**22**	**13**
Oil & Gas Drilling	27		**40**	**19**	**19**	**23**
Oil & Gas Equipment & Services	224		**15**	**4**	**22**	**12**
Oil, Gas & Consumable Fuels	**1,280**		-5	**11**	-29	**5**
Integrated Oil & Gas	630	**17**	-5	**9**	-41	**4**
Oil & Gas Exploration & Production	391		-2	**29**	**18**	**9**
Oil & Gas Refining & Marketing	112		-46	-6	-64	**2**
Oil & Gas Storage & Transportation	140		-18	-43	**22**	**4**
Coal & Consumable Fuels	7				**55**	**19**
Bond sector returns relative to BAML High Yield Index						
Energy	**201**		**8**	**22**	-18	**4**

Data as of May 7, 2015. *Returns through May 7, 2015. †Cash pay. Sources: Bloomberg, Standard & Poor's, Bank of America Merrill Lynch, TIAA-CREF Asset Management.

Despite the variation in circumstances, certain industries regularly outperformed the S&P 500. The most consistent, Energy Equipment & Services, has outpaced the S&P after each downturn and has outperformed again since March of this year. (Note that the full S&P GICS sector hierarchy as shown in the table exists only from 1990, so returns are not available for every industry for every period.)

The performance of companies in the Oil, Gas & Consumable Fuels industry, whose revenues are more directly linked to the price of their respective underlying commodity, did not hold up as well. This is partly because the industry was far more fragmented during previous cycles, while today there are just two major players.

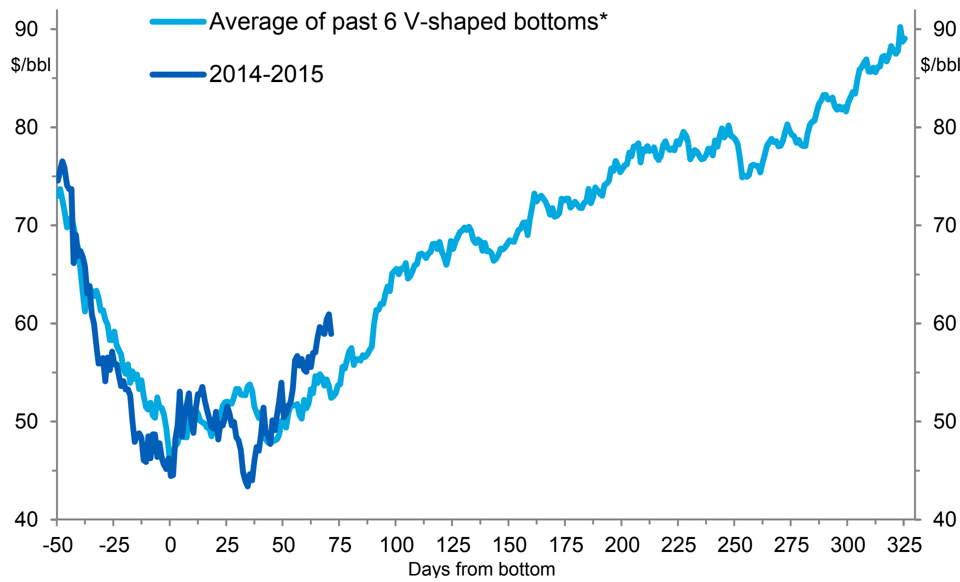
On the fixed-income side, high-yield bonds generally performed worse than equities or oil, though energy sector high-yield bonds outperformed high-yield overall in two out of three cases.

Whither oil?

That was the past. Are oil prices likely to follow the path of previous downturns? Figure 3 suggests that on past experience, oil prices could recover to $90/barrel by April 2016.

If the past is any guide, oil prices could recover to $90 per barrel by April 2016.

Figure 3: Oil prices

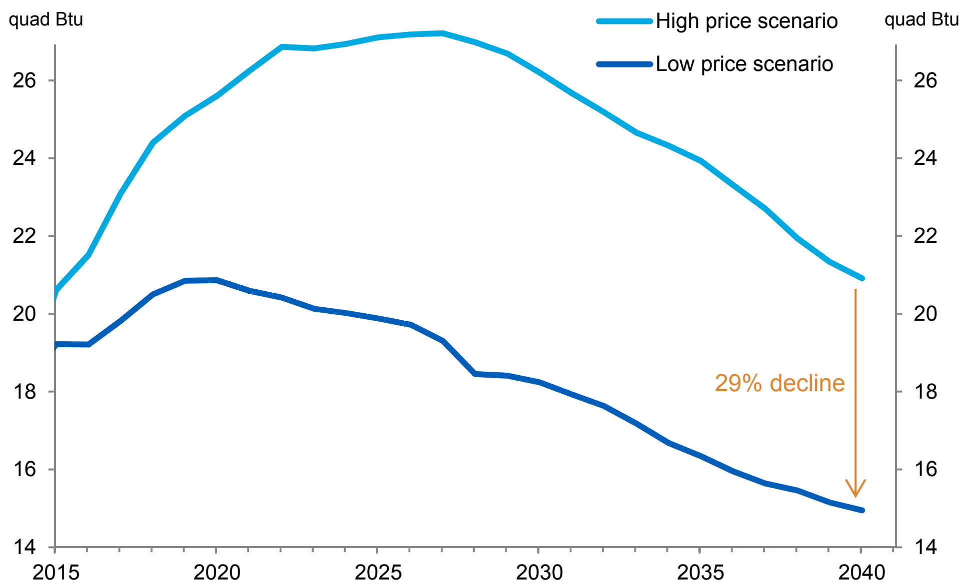


Data as of May 7, 2015. *Prices for previous episodes indexed to $44.45, price of WTI on January 28, 2015. Sources: Evercore ISI, Bloomberg, TIAA-CREF Asset Management.

The pace of the recovery in oil prices will depend on changes in both demand and supply. U.S. gasoline demand has already increased by 4% since December and SUV sales have jumped. On the supply side, the fall in prices has led to a sharp drop in activity at the source of much of that supply—the “Big 3” shale basins of Permian, Bakken, and Eagle Ford. Consequently, U.S. production forecasts are much lower if prices remain at this low level (see Figure 4). Global inventories of oil, which had risen for six consecutive quarters, are now likely to be drawn down to make up for the supply shortfall. We believe the combination of increased demand, lower production, and inventory drawdowns will lead to prices in a range of $70 to $90 by the end of this year.

U.S. oil production could gain at the expense of international sources.

Figure 4: U.S. crude oil production forecasts



Data as of April 14, 2015. Sources: U.S. Energy Information Administration's 2015 Annual Energy Outlook, TIAA-CREF Asset Management.

Longer term, the repercussions of the U.S. shale industry revolution could yet lead to lower global production (and hence higher prices) than the market is currently forecasting. The cost of U.S. shale production is likely to continue falling rapidly, thanks to ongoing technology improvements, which should lead to higher production. Unlike oil sources elsewhere in the world, U.S. supply comes with little geologic or political risk. In short, U.S. shale provides a much better risk-adjusted environment for investment compared to most other international opportunities.

Much of these international sources require ever-rising capital expenditures in order to offset declines in production. Consequently, the approximately 50 million bbl/d of oil supply outside the U.S. that is not controlled by OPEC looks relatively unattractive. International oil companies may reduce their investment in these fields and focus on the U.S. instead. The additional investment would lead to higher U.S. production, but it may be more than offset by declines in international fields, leading to a net decline in overall production.

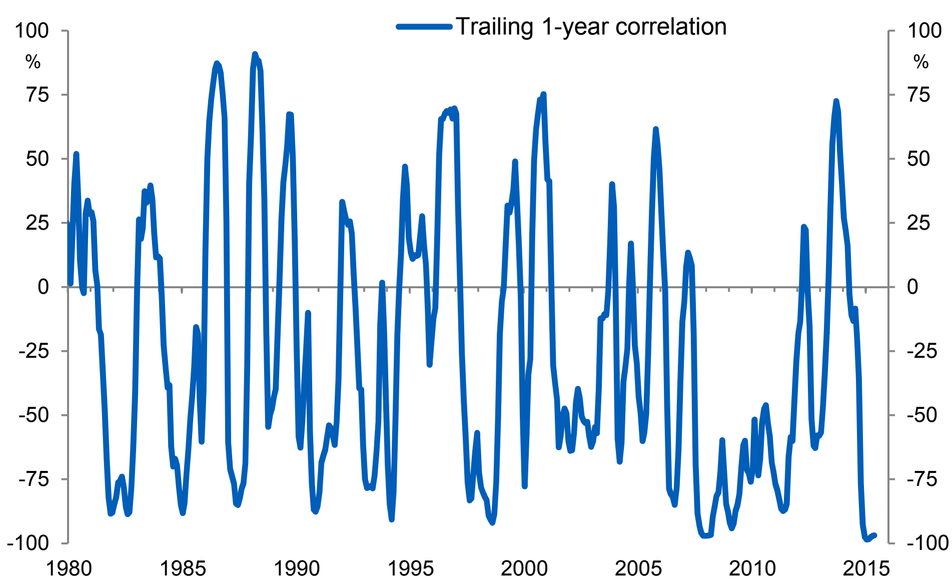
There is a scenario, however, in which the increase in U.S. production is great enough to prevent prices from rising too dramatically. Many smaller, independent shale companies are carrying a lot of debt and need to service it. They may continue producing even if the return on investment is not attractive, because at least the production generates cash to make debt payments. We will be watching to see if a significant number of the smaller producers follow this path.

The highly negative correlation of late between the dollar and oil prices is likely to reverse.

One consideration that will likely have less impact is the value of the U.S. dollar. There is a popular misconception that a rising dollar causes oil prices to fall (and vice versa). While the two assets certainly are influenced by similar economic forces (e.g., growth, exchange rates), the relationship has swung wildly over time, with the correlations ranging from nearly -100% to +100% (see Figure 5).

The degree of correlation depends on whether oil prices are being driven by demand or supply factors, and the dispersion of global growth. These obviously vary considerably over time, hence the wide moves. We expect the dollar to continue to strengthen—even if not at the pace we've seen since last summer—thanks to stronger U.S. growth, rising interest rates, and ongoing quantitative easing programs in Europe and Japan. As we also expect oil prices to rise, the correlation will move back toward positive territory.

Figure 5: Correlation between oil price and U.S. dollar



Data as of May 7, 2015. Note: Exchange rate is the broad effective exchange rate from 1994, narrow exchange rate prior. Sources: U.S. Federal Reserve, J.P. Morgan, Bloomberg, TIAA-CREF Asset Management.

Equity outlook

If oil prices move higher as we expect, the current high P/E multiples on E&P companies no longer appear unreasonable; in fact, on a price-to-book basis, they are well below average. Along with companies in the Oil Services industry, they are likely to have the highest beta relative to oil prices and therefore offer the best potential for relative outperformance.

Earnings results reported for the last quarter by oil services companies broadly outperformed consensus expectations, despite the steep drop in U.S. activity. While second-quarter earnings are expected to be lower than first quarter's, third-quarter earnings may show some stabilization, potentially marking the bottom of earnings downgrades.

A rising oil price combined with a stronger dollar is a double benefit for companies that produce oil outside the U.S., for example Russian oil companies. European oil services companies have typically outperformed integrated oil companies as oil prices have rebounded. The European companies are more exposed to deepwater drilling, however, while we see more potential in companies tied to U.S. onshore activity.

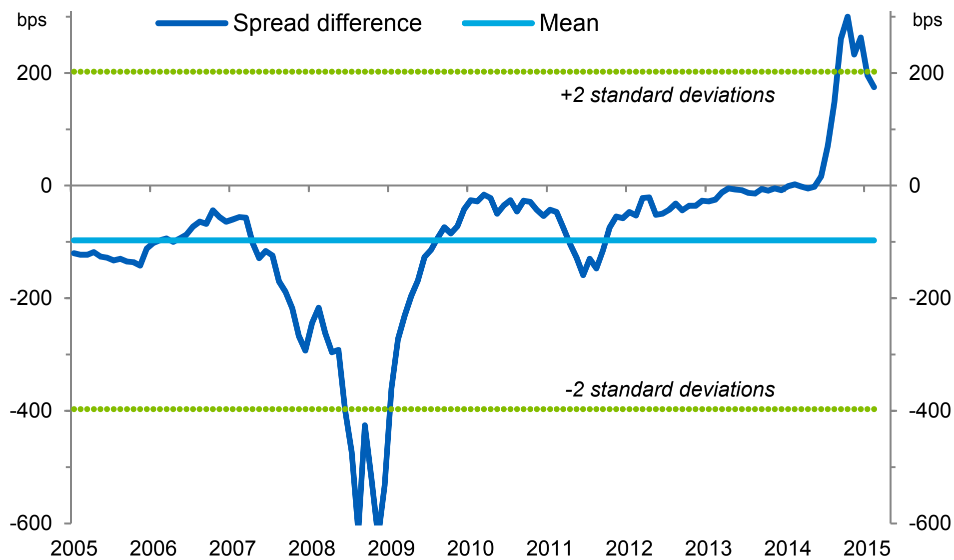
U.S. integrated oil companies face significant challenges. New sources of oil to replace existing production are ever more difficult to find, and ever more expensive to develop. This is one reason why the era of cheap oil is unlikely to return. These companies do have some advantages, however. Their size allows them to invest when prices are low, and some companies are talking of acquisitions. Equity prices will also be supported by the industry's relatively high dividend yield.

High-yield energy bonds are trading near historically high spreads compared to the broader high-yield index.

High-yield outlook

The pickup in yield between the high-yield energy index and the broader high-yield index is at an historical high (nearly two standard deviations from the mean; see Figure 6). The greater spread does reflect greater risk as the decline in oil prices is likely to lead to more defaults by energy companies. Moody's forecasts that high-yield defaults will rise from just 1.9% in the first quarter of 2015 to 2.7% by the end of the year, with the highest default rates expected in the metals and mining sector. Nonetheless, we see select opportunities among energy companies.

Figure 6: Spread of high-yield energy index over high-yield index



Data as of May 7, 2015. Sources: Bank of America Merrill Lynch, TIAA-CREF Asset Management.

We feel Oil Field Services is the least attractive sector, since it will be directly impacted by E&P companies cutting spending in response to low oil prices. There are still opportunities, however, in large, well-capitalized, diversified service providers and those more focused on the production part of the process.

The current environment is actually quite favorable for refiners.

Despite spending cuts by E&P companies, opportunities abound within this universe. Selectivity is paramount, however, as discerning between the thrivers, survivors, and failures will be the key to outperformance. We see opportunities in companies that have low-cost positions, long reserve lives or shallower decline curves, and/or balance sheets capitalized to weather the inherent volatility in the sector.

For more risk-averse investors, the Midstream / Gas Distribution sector provides more stability, albeit at lower yields.

The current environment is actually quite favorable for refiners.

Conclusion

Oil prices have bottomed and could trade as high as $90/barrel by April 2016, if history is any guide. After previous oil price corrections, the returns of the commodity outpaced both equities and high-yield bonds, and we anticipate the same will occur this time. The Energy sector of the S&P 500 should outperform the broader market, with E&P and Oil Services the higher beta industries.

With high-yield energy sector yields currently near two standard deviations above historical norms, there are clear opportunities in the space, though selectivity is key. Default rates are expected to increase (modestly), but overall we believe yields more than compensate for the additional risk. A renewal of the dollar's rise is not likely to pose a barrier to further gains in oil prices. Though the correlation has been highly negative recently, it varies greatly over time. It is indeed a good time for investors to energize their portfolios.

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