

RESEARCH UPDATE

THE EFFECT OF FALLING OIL PRICES ON THE CURRENT ECONOMIC LANDSCAPE

Today's world is a complex system that is struggling to shake off the effects of the Great Recession. In this context, many central banks are pursuing unprecedented monetary policies in order to jump start employment and increase demand. While the short-term results have appeared encouraging, Highland believes that the long-term consequences are:

- Pulling forward future expansion to artificially inflate current growth,
- Creating greater fragility within the global economy,
- Increasing capital market volatility.

This type of environment leaves investors searching for any news that could change the status quo and propel the economy out of a slow growth phase and into one that is more sustainable over the long-term. Could the recent decline in oil be the catalyst? Traditional economic theory might suggest so, but Highland believes that the current environment makes it difficult to answer this question in a conventional framework.

Current Landscape

Why is the Price of Oil Falling?

Like any commodity, the price of oil is ultimately determined by supply and demand. According to the latest International Energy Agency (IEA) Oil Market Report, the global supply of oil was estimated to be 93.8 million barrels per day (mb/d) in September, a substantial year-over-year increase of 2.8 mb/d. The same report forecast oil demand for 2014 to be 92.4 mb/d, a year-over-year gain of just 0.7 mb/d due to weaker than expected economic growth. This imbalance between supply and demand growth is the primary driver behind the recent sharp decline in crude oil prices, which have fallen from \$105 per barrel in late July to under \$80 in November. Should output growth continue to outpace demand growth, there is potential for further price declines.

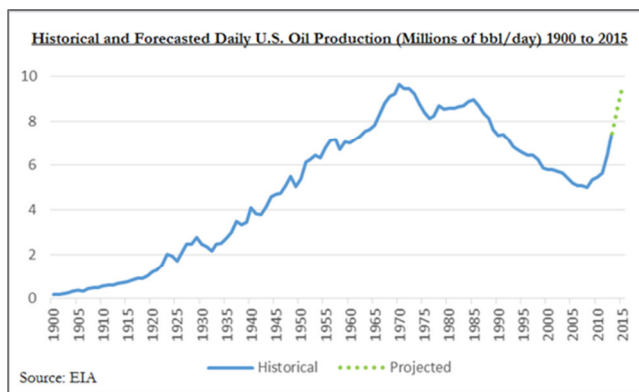
The IMF's most recent World Economic Outlook continues to call for an economic recovery, albeit slower and uneven at the region or country level. Economic growth in the U.S., Canada, U.K. and developed Asia is expected to remain positive, while struggles are expected to continue in Europe and Japan. Emerging economies are projected to

grow at a healthier pace than advanced ones, but slowing growth in China and Latin America are expected to take their toll on world growth. In this slowing growth scenario, IEA estimates oil demand growth to climb back to 1.1 mb/d next year, in line with growth of 1.1 mb/d and 1.2 mb/d in 2012 and 2013.

The recent oil price decline should be positive for demand. It must be noted that the elasticity of oil demand tends to be asymmetric, with demand tending to fall more on high prices than it rises on low prices. Still, even with a strong rebound in demand, supply should continue to exceed needs in the very near term; as a result, an immediate and significant rebound in prices is not anticipated.

Global oil supply growth is being driven predominantly by increases in non-OPEC supply, which has grown 2.1 mb/d this year, versus just 0.7 mb/d for OPEC supply. The U.S. has been the major contributor to increased supply, having grown production from 5.1 mb/d in 2008 to 8.7 mb/d in September. **Figure 1** illustrates the recent resurgence in U.S. daily oil production following decades of declines.

Figure 1



Shale plays in Texas and North Dakota are showing healthy increases and are responsible for most of the added production.

Production gains in these shale fields have relied heavily upon unconventional drilling methods, such as hydraulic fracturing and horizontal drilling, which tend to carry much higher costs than traditional vertical drilling. There has remained plenty of profit potential despite these higher costs and lower than \$100 per barrel oil. These unconventional plays also tend to have much faster production declines than conventional wells, thereby clouding future supply visibility.

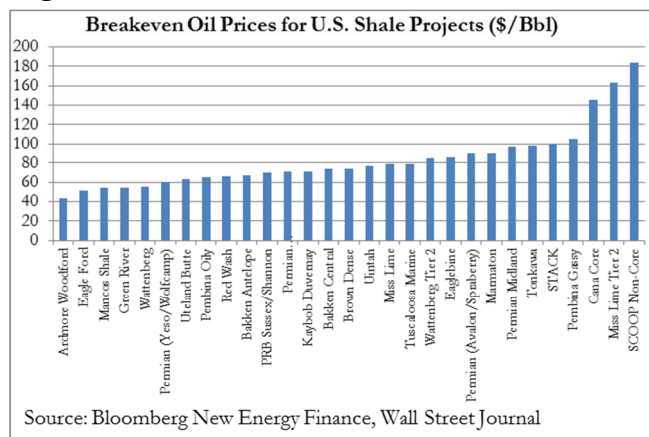
Within OPEC, Iraq and Libya have increased production during the last few months, although geopolitical risks could threaten the nascent production recovery in these markets. Most importantly, Saudi Arabia, the world's largest oil producer by far, also has the most spare capacity at over 2.5 mb/d and appears determined to protect its market share by refusing to reduce its contribution to global supply. This should have the effect of driving the price of oil lower in order to drive higher cost producers to the sidelines.

Not all OPEC members agree with the Saudi stance and should the market share argument gain further support within OPEC members (for example: Iran), production could ramp even higher and prices could fall even further. It is unlikely that Saudi Arabia will agree to production cuts at the behest of other members at the late-November OPEC meeting; however, should they agree to do so, this could provide temporary support for oil prices.

A driller's cost of production will ultimately determine its success or failure in an environment

where oil prices remain low for an extended period. The cost of production is not only producer specific, but each project within a firm's portfolio has its own marginal cost of production which is influenced by the associated basin, extraction method, technology used, and project scale. Conventional vertical drilling is much less expensive than the unconventional methods that have driven recent supply, with Forbes noting that initial costs for conventional methods are as low as 20% of comparable costs associated with unconventional methods in the Permian Basin. The up-front and marginal costs for the 10 commonly used shale extraction methods can vary greatly, and those with the largest initial costs typically have lower marginal costs. This suggests that economies of scale exist for active producing wells, and large and medium sized companies may be in a better position to survive should prices remain depressed or fall further. **Figure 2** depicts the average cost by basin.

Figure 2



While lower oil prices present a challenge for a notable percentage of U.S. producers, these companies represent only a small percentage of total production volume. PIMCO estimates that 75% of U.S. crude production currently comes from the largest 20% of producers, many of which have

conveyed a marginal cost of production between \$50 and \$60 per barrel. Meanwhile, the International Energy Agency claims that only 4% of actual current U.S. production (barrels) has a breakeven price above \$80.

A further decline in oil prices could cause a greater percentage of production to be unprofitable. Goldman Sachs is forecasting crude oil to fall as low as \$70 per barrel by the second quarter of 2015, when they expect excess supply to reach its zenith. While many leading producers such as Pioneer, Noble Energy, and Devon Energy have insured protection against further price declines by hedging 75% or more of their 2015 output, many more producers will likely experience losses should the price of oil remain at \$70 per barrel for an extended period of time.

There continue to be many outcomes that can ultimately effect the long-term environment and could produce either positive or negative outcomes for the global economy. The next several sections will examine some of these outcomes that could have implications for investors.

Opportunities

What are the Benefits to Falling Oil Prices?

Falling oil prices driven by a greater supply are mostly positive for economic activity. It benefits most consumers and corporations and thus tend to stimulate overall economic growth. In October, Citigroup predicted that the decline in oil prices from \$105 per barrel to \$80 could result in as much as \$1.1 trillion in global stimulus per year, assuming prices stay at current levels. As a point of reference, energy represented 9.5% of the U.S. Consumer Price Index, which is indicative of a basket of goods and services purchased by the typical

consumer. The 20%+ drop in energy prices is therefore quite meaningful, as the typical consumer should see a 1-2% increase in discretionary income that will have a significant positive effect on other areas of the economy. Goldman Sachs believes that the net effect to global GDP would be positive from a further moderate, but not severe, decline in oil prices.

The increase in discretionary income should be a net positive for consumers, the economy and equity owners. Earnings growth potential may improve materially through increased sales and margins, which bodes well for growth investors in the short to intermediate time frame. Of course, those investors who can find value in out of favor sectors may still perform better over the long run.

A decline in oil prices will not treat all sectors equally and will likely create higher levels of dispersion between sectors. A strategy that will likely benefit from this occurrence is long/short equity. Industries where oil is a major overhead cost such as Airlines, Trucking, and Petrochemicals may have the most to gain from lower oil prices. The consumer discretionary sector will likely benefit as well. Likewise, there will certainly be individual energy companies that are more at risk with lower oil prices than others.

In recent years, credit market conditions resulted in a benign default environment. Distressed debt strategies may benefit from an increase in default rates within the energy sector. Should smaller energy companies become unable to pay their debts, distressed debt investors may become notable owners of these assets at reduced prices. Discussions with distressed debt managers confirm that certain opportunities are beginning to look interesting.

Threats

What are the Risks to Falling Oil Prices?

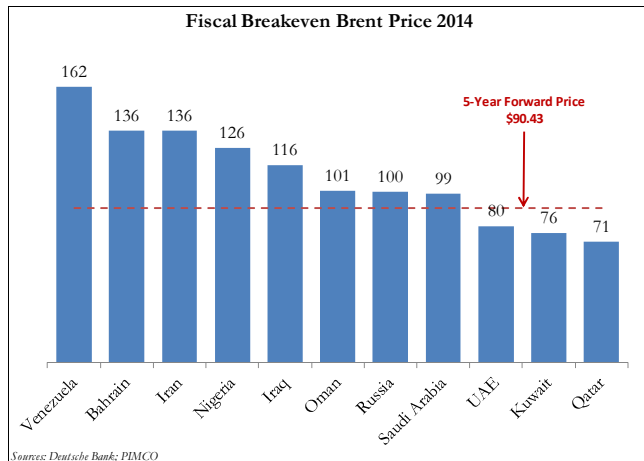
When price declines are driven by declining demand, the economic implications are far more negative than when driven by the supply side. As discussed earlier, weaker than expected economic growth has driven a deceleration in demand growth. Combining this information with trends currently experienced in other industrial commodities, such as steel which has been in a long-term destocking cycle, paints a bleak economic picture. These events support why interest rates have been stuck in neutral at historically low levels and real income growth has been relatively flat since the Great Recession.

Saudi Arabia's stance on maintaining market share by continuing current production can create geopolitical risks. **Figure 3** illustrates the oil price needed by many important oil-producing nations in order to breakeven fiscally. Most of the countries listed are already below fiscal breakeven when compared the current five-year forward price of \$90.43. Most of these countries are in the epicenters of today's geopolitical uncertainty, which can be amplified with low prices. Collapsing oil prices led to unrest throughout history¹. In the 1980s, OPEC disagreements led to a decline in oil prices which ultimately resulted in Iraq invading Kuwait. Prior to September 11th, a price collapse ferried in a new era of political uncertainty in oil producing nations¹. Finally, the free fall of oil prices during 2008 put in motion the events that would later become the Arab Spring¹. These events further illustrate that the current environment makes further geopolitical unrest a real possibility,

¹ 13D Research. (November 6, 2014). *What I Learned This Week*.

thus negatively impacting the global economy and capital markets.

Figure 3



In addition to broad economic risks, the decline in oil prices also puts pressure on many sectors. The recent shale boom in the U.S. has had a disproportionately large effect on business spending and even helped to mask weakness in other segments of the economy. The drop in oil prices puts large amounts of spending back into the pockets of consumers, but this increase in spending comes at the expense of the oil producing states of Texas and North Dakota. These regions accounted for approximately 23% of GDP growth over the past three years, which has fueled high-paying job creation. The recent drop in oil makes it difficult to continue creating high paying jobs, offsetting a significant portion of the gain experienced by consumers.

Federal Reserve data indicate that U.S. corporate non-financial capital expenditures totaled 9.1% of gross GDP in 2013, as the overall contribution of corporate capital spending fell for the third consecutive year. However, the energy sector has been the clear exception to this rule. Capital expenditures in upstream and midstream energy represented more than a quarter of total capital

expenditures in 2013, totaling \$411 billion according to Deloitte and the Oil & Gas Journal. As a point of reference, capital expenditures on oil and gas extraction, pipelines, and related facilities totaled only \$159 billion in 2008, according to the U.S. Census Bureau. Given the outsized influence of the energy sector recently, a 75% reversal in the recent gains in energy capital expenditures could negatively impact GDP by as much as 1.1%, with all else being equal.

Reducing capital expenditures translates into fewer exploration projects, which puts extreme pressure on the current cash flow position for producers. Ten years ago, producers received \$18 billion in net cash flow from spending \$1 billion in capital expenditures². This number has now completely flipped in the opposite direction as producers received \$19 billion in net cash flow from \$38 billion spent². This creates a razor thin margin for producers in which a decrease in capital expenditures could provide a tipping point.

Earnings contributors are dominated by sectors that don't benefit from falling oil prices. Of the 10 major sectors within the S&P 500, energy contributed 21% of total earnings since 2008. The next largest contributors are healthcare and information technology, which have combined to generate 29% of all earnings. According to FactSet, earnings growth in the energy sector totaled 7.3% in the most recent quarter, slightly trailing the S&P 500's overall blended earnings growth rate of 7.9%. However, due to the recent decline in oil prices, energy earnings are projected to decline by 8% during the fourth quarter, bringing full year growth for the sector to just 1.4%, and the lowest projected among all ten S&P sectors. In addition, FactSet

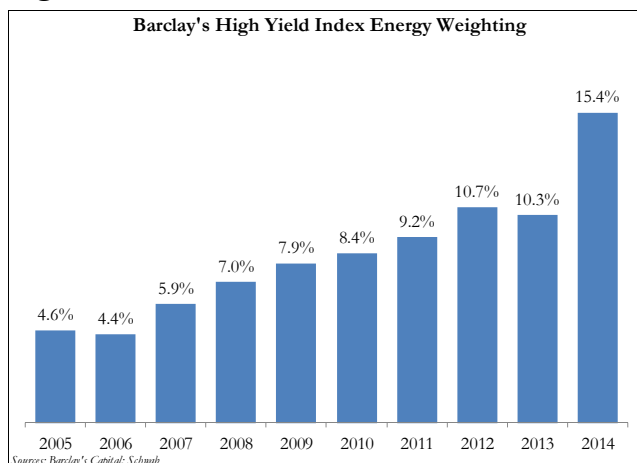
² 13D Research. (October 30, 2014). *What I Learned This Week*.

forecasts overall energy earnings to decline by -1.4% in 2015. If these estimates are correct, the smallest seven sectors by earnings will have to make up a fairly large deficit.

Commodities and financial assets indexed to inflation may be at risk for further near term declines. Energy prices comprise the largest proportion of many commodity indexes, including the S&P GSCI Commodity Index (78%), CS Commodity Benchmark (54%), and Bloomberg Commodity Index (34%). Selling pressure on these indices could cause broader declines in some commodities, which could impact financial assets indexed to CPI or other inflation measures.

High yield bonds are susceptible to increased risk as the proportion of energy related issues have increased across indices. As noted in **Figure 4** below, according to Barclays, energy currently comprises 15.4% of the U.S. High Yield Index, which represents more than a 200% increase from a decade ago (see **Figure 4**). Citi's High Yield Index contains as much as 17.4% in energy related issues, and the weight continues to grow, as U.S. high yield bond issuance by energy companies exceeded \$50 billion year to date, according to Bloomberg. High yield default rates have seen a recent increase to 1.9% on an annualized basis, and increased selling pressure could occur if lower energy prices result in a spike in the default rate.

Figure 4



Many companies within the energy sector have declined substantially in price, but others in related industries have experienced only moderate declines. The SPDR Energy Select Sector ETF (XLE) has declined by 11.5% (from August 30th through November 19th). The Alerian MLP Index, comprised predominantly of midstream energy assets, has only declined by 4.4% over the same time period. While these midstream energy assets have less direct exposure to energy prices, they are priced for substantial growth going forward, and access to capital is critical to achieving these lofty growth expectations. To the extent that the availability of affordable capital diminishes, some MLPs could be forced to reduce or eliminate dividend payments to investors. There is little margin for error considering the average distributable cash flow coverage ratio is 1.1x. The market is quick to punish firms that cut either dividend payments or growth forecasts as witnessed in recent history. In the face of lower oil prices, three of the largest producers, Exxon Mobil, ConocoPhillips, and Chevron, recently announced plans to reduce spending next year, which has the potential to slower growth in the industry.

Portfolio Implications

Do Falling Oil Prices Change My Portfolio?

Should prices for crude oil remain below \$80 per barrel for an extended period of time, it may present a number of opportunities and threats to various asset classes, sectors, and investment strategies. One should consider not only the direct implications but also the secondary effects. **Figure 5** shows how different portfolio strategies could benefit investors.

Figure 5

| | Driving Price Decline | |
|-------------|---|---|
| | Over Supply | Falling Demand |
| Overweight | Active Equities Credit Bonds Private Investments Real Estate | Nominal Treasuries Hedged Equities |
| Underweight | Treasury Bonds Hedged Equities | Equities Credit Bonds Real Estate |

Highland's Conclusion

Additionally, the dichotomy between the positive effects of demand growth on the back of strong supply growth versus the negative impact of slowing growth telegraphed by decelerating demand

should be on the radar of every investor. As stated previously, there are undertones to this price decline that could point in either direction. When we examine all of the factors, it appears to us that this price decline is the result of a combination of slowing growth in demand and strong supply driven primarily by huge production in the U.S. and market share defense in Saudi Arabia. To Highland, this is another offshoot of a global economy struggling to find its way through a protracted low growth era. While cheaper oil could provide stimulus and drive a consumer spending rebound, we are not yet convinced this is the game-changing factor that will change the growth trajectory going forward. For these reasons, we continue to hold steady to our current portfolio strategy.

HIGHLAND'S CURRENT POSITIONING

↓ DEFLATION/CRISIS HEDGES
↔ GROWTH
↑ VOL. CONTROLLED GROWTH
↔ INFLATION SENSITIVE

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