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Shale Oil: Not So Crude?

The last 12 months have witnessed price declines in a number of energy company stocks. While part of this attrition can be attributed to continued weakness in natural gas prices, that theme is not new, and has been a factor for a few years now. What is new, however, is concern related to the impact that increased tight oil (or shale oil) production in North America could have on the market. Some fear that shale oil will dampen oil prices in the same way that shale gas has depressed North American natural gas prices. While there may be a number of similarities between the two themes, we believe there are sufficient differences that make a significant and prolonged decline in oil prices unlikely. We therefore view the volatility in oil prices, and energy valuations in general, as attractive investment opportunities.

North American players in conventional natural gas and oil are the higher cost producers of their respective commodities relative to the rest of the world. But the vast reserves unlocked by technological advancements in North American shale gas have caused the marginal cost of gas to fall, and high-cost, conventional production is increasingly being displaced by its lower-cost, unconventional counterpart. These same technologies are being applied to unconventional North American oil producers with similar types of success. The concern many have now is whether North American shale oil will have a similar impact on marginal cost and result in a corresponding collapse in the oil price.

We argue that some significant differences exist, making it unlikely that oil will suffer a similar fate as natural gas:

1. **Shale is a small part of total oil production.** Shale oil only represents 1.5% of the global supply and is expected to grow to 3.2[1]% by 2015. In comparison, shale gas currently accounts for 16% to 20% of North American supply and is estimated to grow to approximately 50% by 2035[2]. (Natural gas is a regional commodity because it is primarily transported by pipeline whereas oil is more global in nature. As a result, we often compare natural gas to regional supply and oil to global supply). At a mere 3.2%, we don't believe shale oil's supply growth is significant enough to move the global marginal cost curve.

2. **Shale oil is not a low cost option.** While shale gas is lower cost compared to conventional natural gas, shale oil is not as clearly a low-cost option. A research report

[1] *Global Oil Prices: At "Base Camp" Before the Final Ascent*, Bernstein Global View; Bernstein Research, September 2012

[2] *Shale Gas and Tight Oil: Essentials*, UBS Research, September 7, 2012

from Sanford Bernstein[3] examined at what price levels production volumes are significant enough to be considered economic. Bernstein's research found that shale oil needs a price level of US$125/bbl to economically produce enough oil to supply four years of U.S. demand (or one year of global demand). At US$5/mcf, by comparison, natural gas can supply U.S. demand for 20 years. This differential indicates to us that shale oil is clearly not as low cost an option as unconventional gas has been and, at levels that are sufficient to supply just one year of global demand, volumes aren't large enough to have an impact on the market. While it is possible that future technological advancements may lower the cost for shale oil, it appears that productivity advancements have plateaued – at least for now.

3. The oil market is more controlled. The global oil market is structurally in a better position than the North American natural gas market. The OPEC cartel controls 40% of the global oil supply. In contrast, the top players in the fragmented North American natural gas market make up only 6% of supply, resulting in undisciplined competitive behaviour. Because oil production is controlled in just a few hands, there is much greater discipline and we believe OPEC will behave as it has historically: stepping in to protect prices should oil prices fall significantly.

These factors make us fairly confident that shale oil will not have a large impact on the price of oil. However, we continue to monitor technological advancements that may improve the quantity of reserves, productivity and economics of shale oil. In the meantime, we continue to find the energy sector attractive, and are taking advantage of the opportunities that these excessive fears have afforded us.

[3] *Global Oil Prices: At "Base Camp" Before the Final Ascent.* Bernstein Global View; Bernstein Research, September 2012