Feeling Energetic About Natural Resources Shares Amid an Oil Rout

The current decline in oil prices may offer long-term return opportunities for patient investors that can tolerate volatility

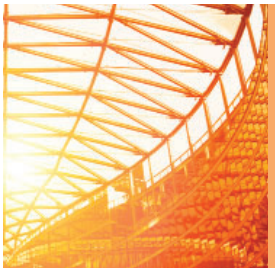
- Current oil prices appear sufficiently low as to encourage production declines over time as drilling activity wanes, even absent shutting-in of existing wells. The time required to move from production growth to production decline may be shorter than past cycles, because of the very rapid depletion rates of today's high-horsepower shale production in the United States.
- Natural resources equity valuations are now undervalued, and master limited partnership (MLP) yields have bumped back up to about 6.4%. As is the case for other asset classes, over a long time horizon, cheap starting valuations tend to be associated with decent subsequent returns for natural resources equities.
- Investors that can tolerate further sharp price declines should rebalance back to target allocations, recognizing that valuations may continue to decline and could take several years to rebound.

With oil prices having fallen by half from last summer's levels amid plump supply and slack demand growth, investors are wondering about the impact on portfolios broadly. More specifically, in this research note, we update our thoughts on oil market dynamics and discuss the outlook for publicly traded natural resources equities and energy-related master limited partnerships (MLPs).

C|A research publications aim to present you with insights from a variety of different viewpoints. The views of our Chief Investment Strategist can be found each quarter in VantagePoint.

The Oil Market's Thirst for Texas Tea Has Been Slaked

In October, with oil prices having fallen almost 25% since last June, we wrote about the supply and demand imbalance that has been pushing oil prices



downward.[1] Supply continues to grow unabated, with no indication that OPEC will blink, and with production growth continuing in the US shale regions that have grown rapidly in just a few years to now provide more than 5% of the world's oil (Figure 1).

In recent weeks, oil prices have continued to move down violently (more so than we anticipated in our October brief), and at roughly $45 today, they are now down 56% since June 30. Prices have shifted sharply along the entire futures curve: prices reflect 46% and 37% declines of Brent crude for December 2015 and December 2016 delivery, respectively (Figure 2).

While it is impossible to say how low prices will go before bottoming or when they will do so, oil production will likely continue to rise for at least a few more quarters, making prices vulnerable to further downdrafts amid bloated inventories.

[1] Please see Sean McLaughlin et al., "Oil Prices Can't Find Their Footing, Even Amid Geopolitical Turmoil," Cambridge Associates Research Brief, October 30, 2014.

Could Production Flatline, Even with the Spigots Open?

Prices may stabilize if OPEC or a major global producer announces a meaningful and credible supply cut, or once US production begins to level off. The number of operating rigs in the United States has begun falling rapidly[2] as oil prices plummet well below the marginal cost of production in many regions, and steep production-decline rates in the United States should help bring production in line with demand over the next year or two organically, even as operators continue to pump oil from existing wells. Production in a given region will likely decline quickly if investors don't drill additional wells—"shutting in" of wells is not necessary for production to shrink. This is because the production of oil wells in shale formations can ramp up quickly but also tends to decline much

[2] The rig count in the first week of January fell by 61 (3.4%), the largest decline for any week since 1991. In the Bakken Shale (located in Montana and North Dakota), the rig count has fallen by 13% from mid-December to mid-January, to 2010 levels.

Figure 1. Oil Production from Key US Regions
January 31, 2008 – February 28, 2015

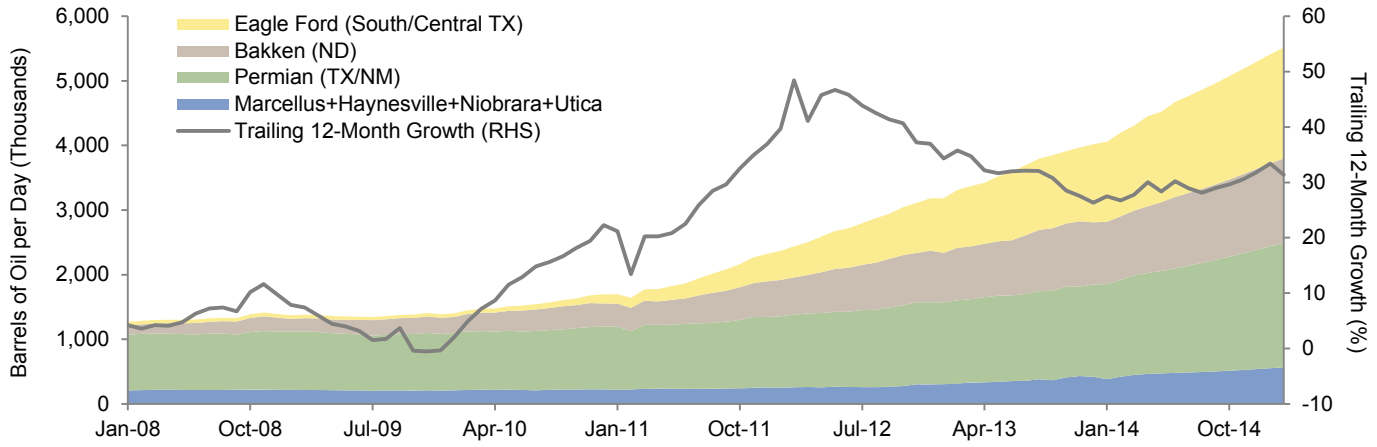
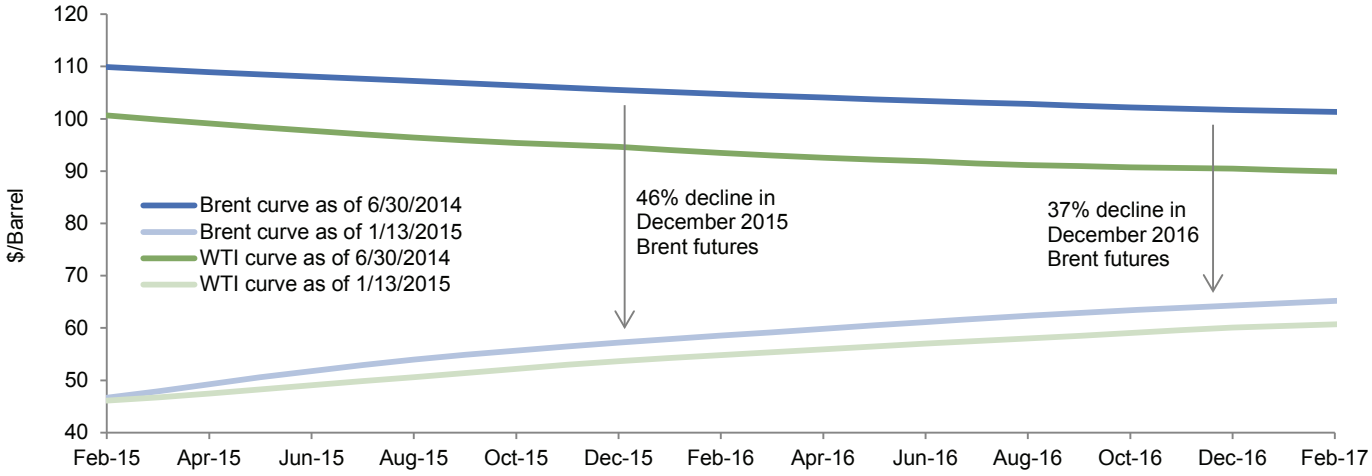


Figure 2. Crude Oil Futures Curves as of June 2014 and as of January 2015

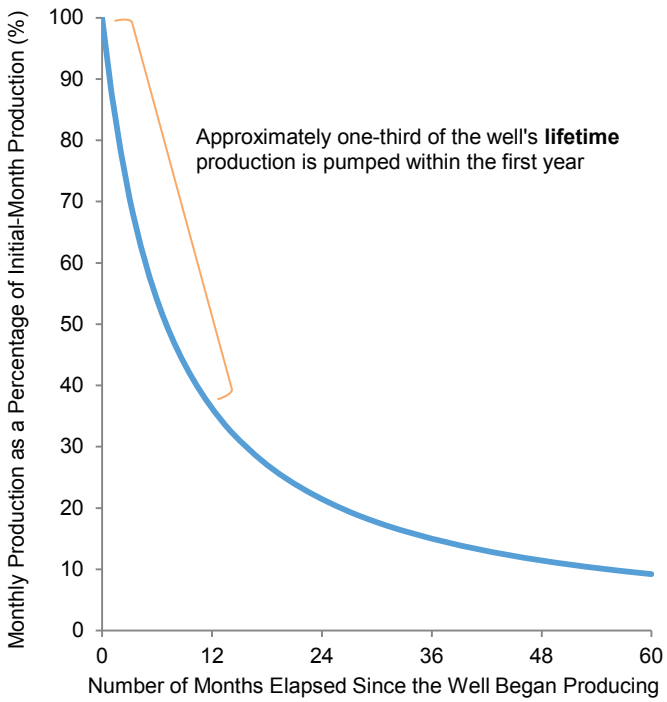


more rapidly than in conventional formations, which can chug along for decades (Figure 3).

Figure 4 is a stylized representation of how production within a shale play like the Bakken might respond to different price environments, and is based on metrics provided by the Department of Energy in a 2013 report. Many parts of the Bakken, Eagle Ford, Niobrara, Permian, and other shale plays today would probably be associated with the yellow light—below the break-even price that makes new drilling profitable, but above the cash-flow negative price that warrants shutting-in of wells. Shutting-in of existing wells is likely to be uncommon but not unheard of at current prices (Wood Mackenzie estimates that $40 Brent—$6 below current prices—would turn 1.5 million barrels per day of production cash-flow negative, increasing shut-in activity).

Globally, if all new drilling and stimulative capital expenditures ceased, and producers

Figure 3. Projected Oil Production Over Time for a Mid-Tier Well in North Dakota's Bakken Shale Play
As of May 2013



continued to pump oil from existing wells, world oil production would decline by an estimated 9% per year[3] (with much faster declines in areas of unconventional production, like the Bakken shale illustrated in Figure 3, partially balanced by slower decline rates for conventional resources). Rather than being a tonic, though, a production decline of this magnitude would be catastrophic, causing extraordinary shortages. In 2009 amid global recessionary conditions, global oil consumption shrank by a meager 1%. An organic production decline that's sufficiently large to balance supply and demand is likely, but this will take time (perhaps several quarters).

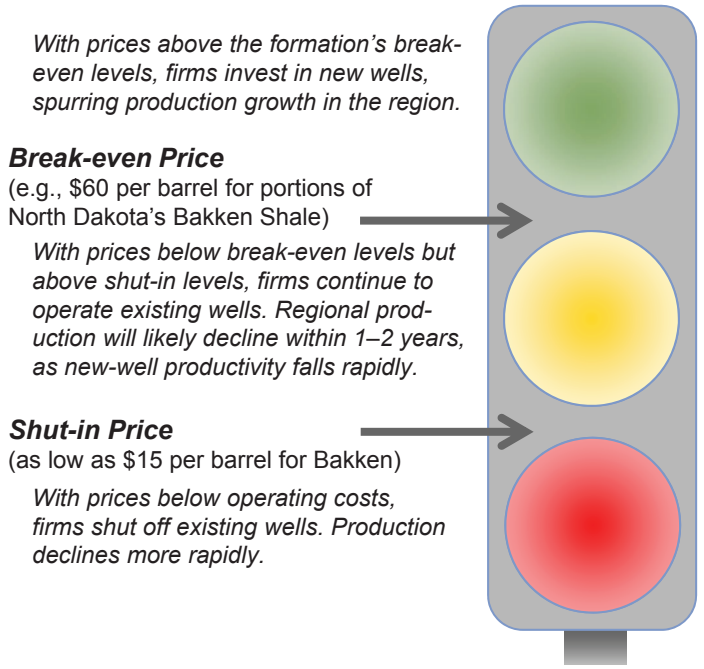
Moving from the Oil Patch to the Stock Exchange

While some investors have significant oil exposure via commodity futures, increasingly they have migrated toward natural resources equity managers,[4] which often hold 70% or more of their assets in energy stocks.[5]

How have plummeting oil prices impacted the fundamentals of energy firms and their share prices? Cheaper oil prices impact the value of reserves and the profitability of production for energy firms, and their share prices have taken a beating since the end of June (Figure 5).

[3] This is an estimate from the International Energy Agency's "World Energy Outlook 2013."
[4] We continue to advise an underweight to commodity futures; while commodities are now fairly valued, roll yields and cash collateral yields are still unattractive.
[5] The remainder is typically in mining stocks, and to a lesser extent fertilizer and paper-company stocks.

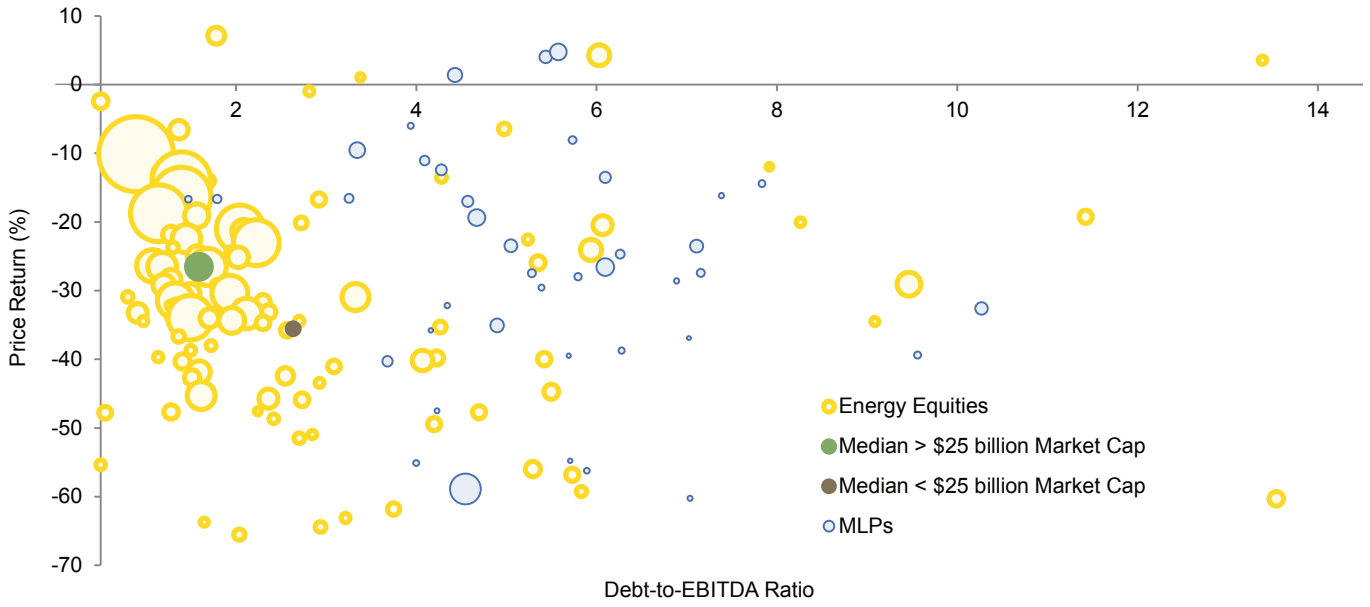
Figure 4. Potential Price Response for a Hypothetical Shale Formation



Smaller firms, which may be less diversified and have a higher cost of debt capital, have been disproportionately impacted. Of the traditional energy firms with a market capitalization greater than $25 billion, the median share-price decline has been 27%, versus 36% for smaller firms.

Most energy-related MLPs (shown in blue in Figure 5) have limited direct commodity exposure, but the handful of partnerships focused on exploration and production have faced declines of 50% or greater, and the broad Alerian MLP Price Index has fallen 17% since the end of June.

Figure 5. Price Return, Debt Coverage, and Market Cap for MLPs and Energy Equities
June 30, 2014 – January 12, 2015



Energy Fundamentals—Looking Wan, and Getting More So

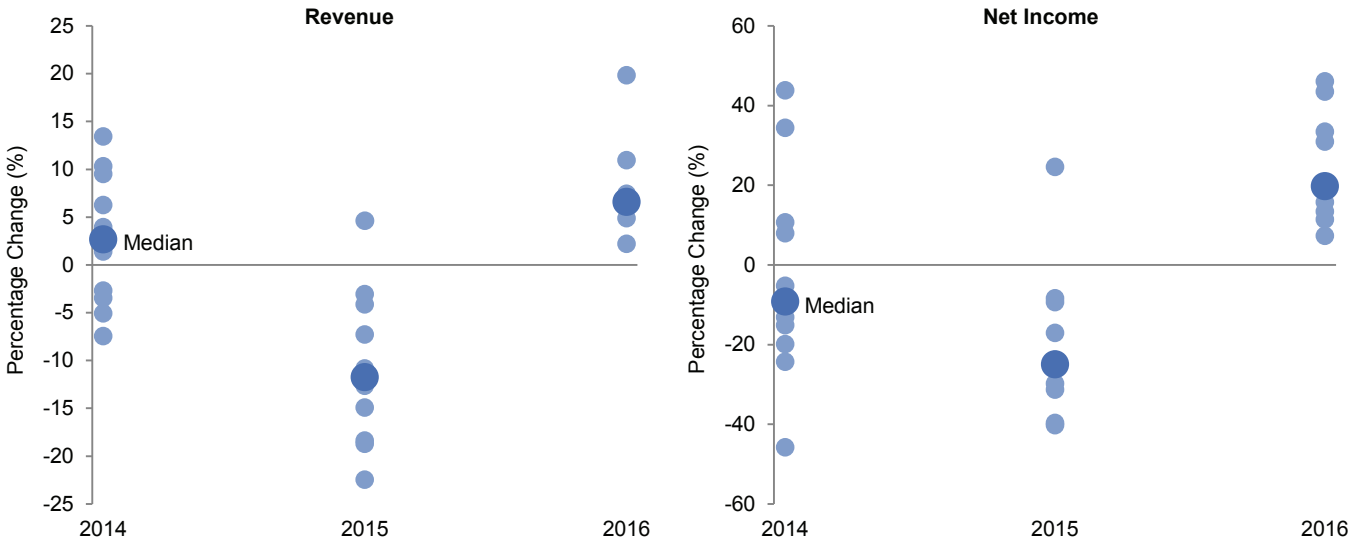
Commodity-price impacts on fundamentals will vary across firms. Some have high exposure to high-marginal-cost resources, while for others this is minimal. Some are more exposed to US natural gas, which has not fallen as sharply as oil (but which may be vulnerable once warmer weather spreads across the United States). Analysts are expecting the median energy giant to see essentially flat 2014 revenue and earnings,[6] with revenue and earnings falling a median 12% and 25% respectively this year (Figure 6).

While these earnings hits might seem rather mild in comparison with the fall in oil prices, investors should bear in mind that the rout will likely cause costs to fall as well, through things like price concessions by increasingly desperate oil-services firms. Additionally, energy firms will make substantial cuts to their workforces and capital expenditures. As of January 11, Goldman Sachs had recorded nearly $5 billion of announced cuts to capital expenditures by US energy firms followed by the bank, even before earnings season gears up; on January 13, Canadian energy firm Suncor announced 1,000 job eliminations and $840 million of capex reductions. Of the 22 US firms tracked by Goldman that offered early capex guidance, weighted average capex budgets are down by 16%.

While Figure 6 details consensus expectations for the largest energy firms, history may also be

[6] Many firms will begin reporting fourth quarter results in February.

Figure 6. Top-Ten Energy Company Consensus Estimates
As of January 3, 2014



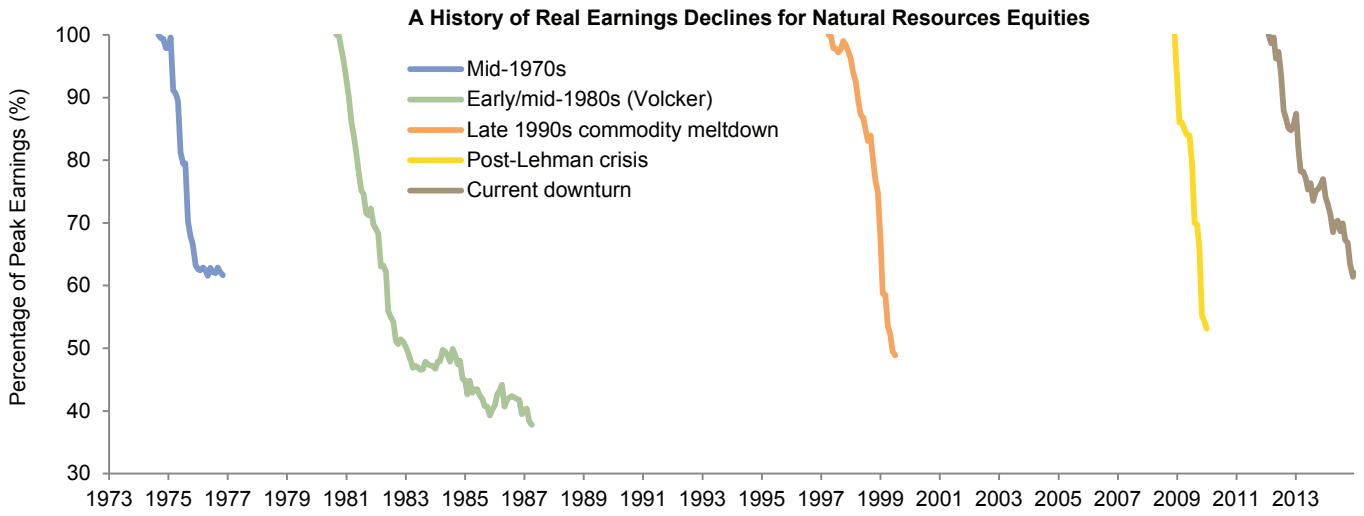
a guide. The past four cycles saw earnings for a broad index of global natural resources stocks decline by an average of about 50% from peak to trough (Figure 7). While consensus expectations for the median major peg 2015 declines at only about 25%, investors must bear in mind that the current earnings decline (shown in brown on Figure 7) started several years ago and has *already* seen a 35% fall from peak earnings on an index basis, so consensus analyst estimates are broadly consistent with the historical level of peak-to-trough earnings declines.

Investors should also not be surprised to see "shareholder value" initiatives get trimmed or perhaps slashed. Even with $100 oil, many firms were not generating sufficient free cash flow to support their dividend and share-buyback largesse. Some may borrow to do so, if they are particularly optimistic that current prices will be short-lived, but many will curtail these payouts instead. A handful of production-focused MLPs have already announced substantial distribution cuts.

Mega-cap energy firms (the largest ten of which have a median debt-to-EBITDA ratio below 1x) seem unlikely to face substantial balance sheet problems,[7] but smaller firms will not be exempt. For a firm operating in a high-cost basin with too much debt, prolonged low oil prices could eventually imperil the company; prices of energy-related high-yield debt have declined 18% since the end of June (yields have increased to 9.7% today from just 5.0% on June 30), and bonds issued by some producers are trading at

[7] Although we would certainly not rule out substantial credit-rating downgrades if prices remain low for a long period and majors resist dividend cuts.

Figure 7. A Portrait of Five Earnings Collapses
January 31, 1973 – January 15, 2015



distressed levels. While capex cuts and falling costs will allow most firms to emerge on the other end of this downturn, some defaults are inevitable, and many of the active managers we follow are paying increasingly close attention to the balance sheet leverage and cost structures of their portfolio companies. Opportunistic managers are also actively watching these trends, with an eye toward eventually taking advantage of distressed balance sheets and cost structures.

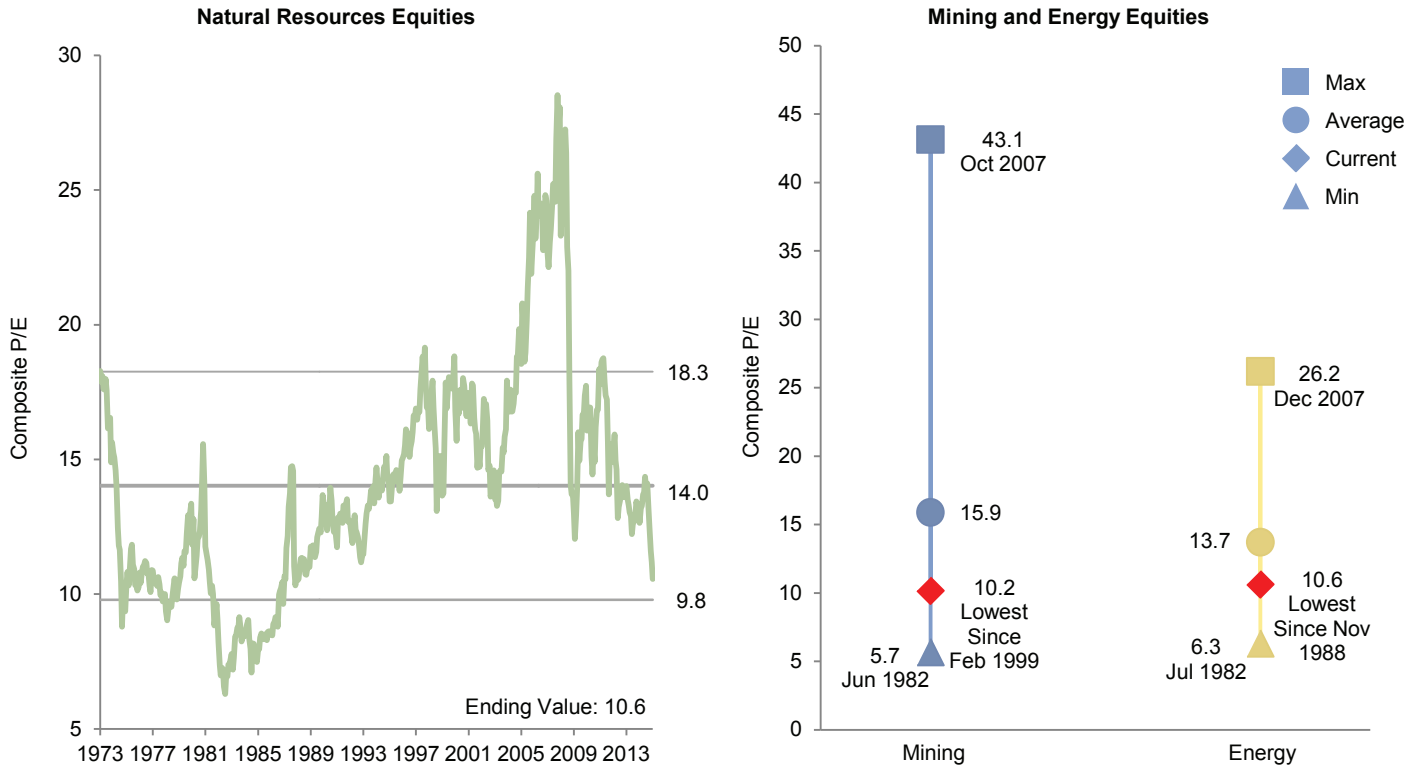
Ugly Oil Prices Bring Attractive Valuations for Natural Resources Stocks

At the end of November, we considered natural resources equities to be at the cheap end of fair value. Today, they are clearly within under-valued territory, and have drifted further down since year-end to just 10.6 times composite normalized earnings as of mid-January, nearly 1 standard deviation below their average level over the past four decades (Figure 8).

Valuations according to this metric are lower today than they have been on a monthly basis since the 1987 US stock market crash, even lower on a monthly basis than they dipped in 2009 after Lehman's collapse. A fair question would be, after a decade-long commodity boom, is our normalized earnings proxy inflated today, compared to where it stood in early 2009?[8] Perhaps, but not dramatically so: normalized earnings are about 33% higher today than they were in February 2009. Adjusting earnings down to match the historical average decline over the

[8] Our normalized earnings series is a blend of ROE-adjusted trailing earnings, trend-line earnings, and "Shiller" earnings (which calculate the inflation-adjusted average earnings over the past ten years). The series shown in Figure 8 is a composite: 80% is Datastream's Oil & Gas Index and 20% is Datastream's Mining Index: both series include both developed markets–and emerging markets–listed companies, and both date to 1973.

Figure 8. Composite Normalized Price-Earnings Ratios
January 31, 1973 – January 15, 2015



four prior largest earnings contractions since 1973 increases the price-earnings P/E multiple to 14. So in the worst case scenario, the market could be fairly valued rather than cheap.

As is the case for other asset classes, over a long time horizon, cheap starting valuations tend to be associated with decent subsequent returns for natural resources equities (Figure 9). However, investors with a short time horizon or limited tolerance for further declines are unlikely to reap the eventual benefits of today's appealing valuations. Over short time horizons, these correlations between valuations and returns are effectively meaningless. And momentum and volatility are tilted against investors (Figure 10).

Further, many firms will find their profitability challenged if prices fall further or remain at today's levels. Some will default on their debts (reflected by distressed-level yields that are fairly common across the energy sector within high-yield debt indexes). Earnings results over the next few quarters could be an eye-opener (and a catalyst for further volatility).

Natural resources have likely fallen below most investors' target levels, and rebalancing back to targets is sensible, provided investors have a

Figure 9. Natural Resources Equities: Valuations and Subsequent Returns
In US$ Terms

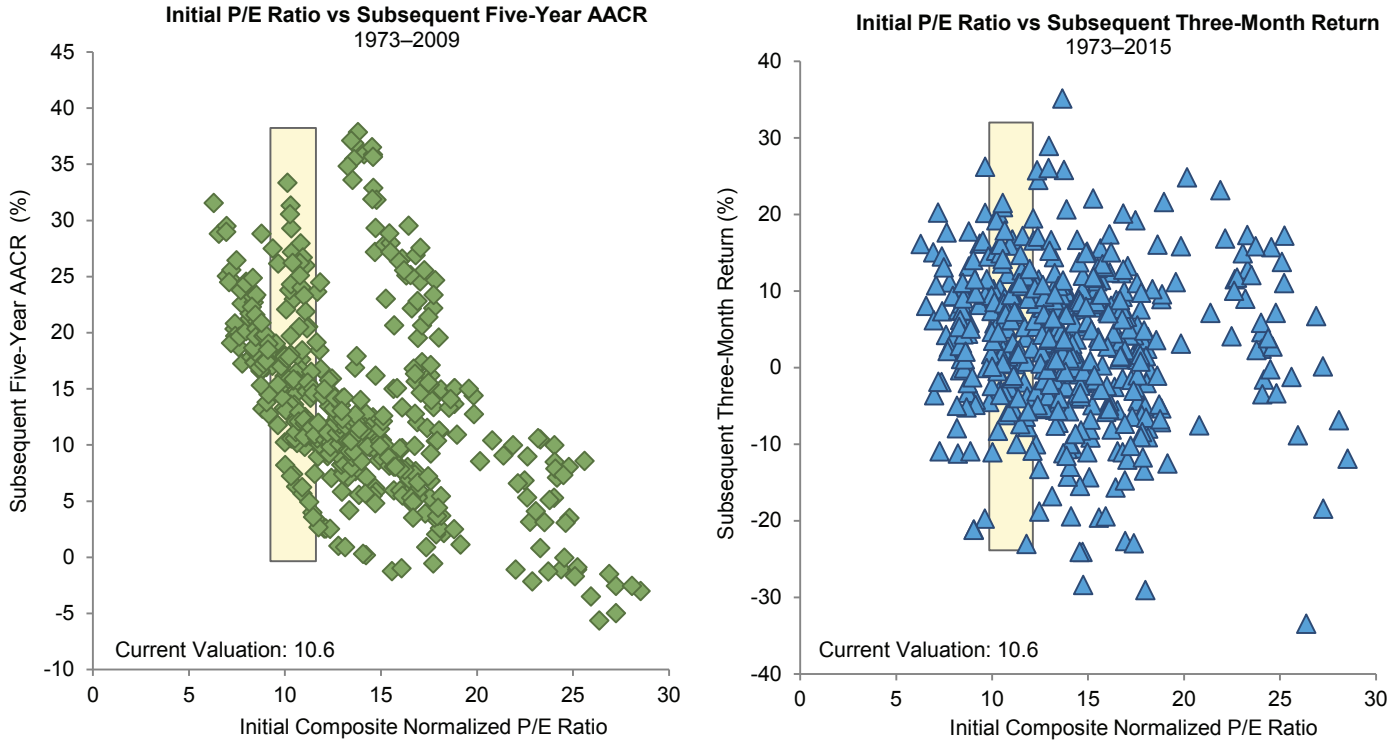
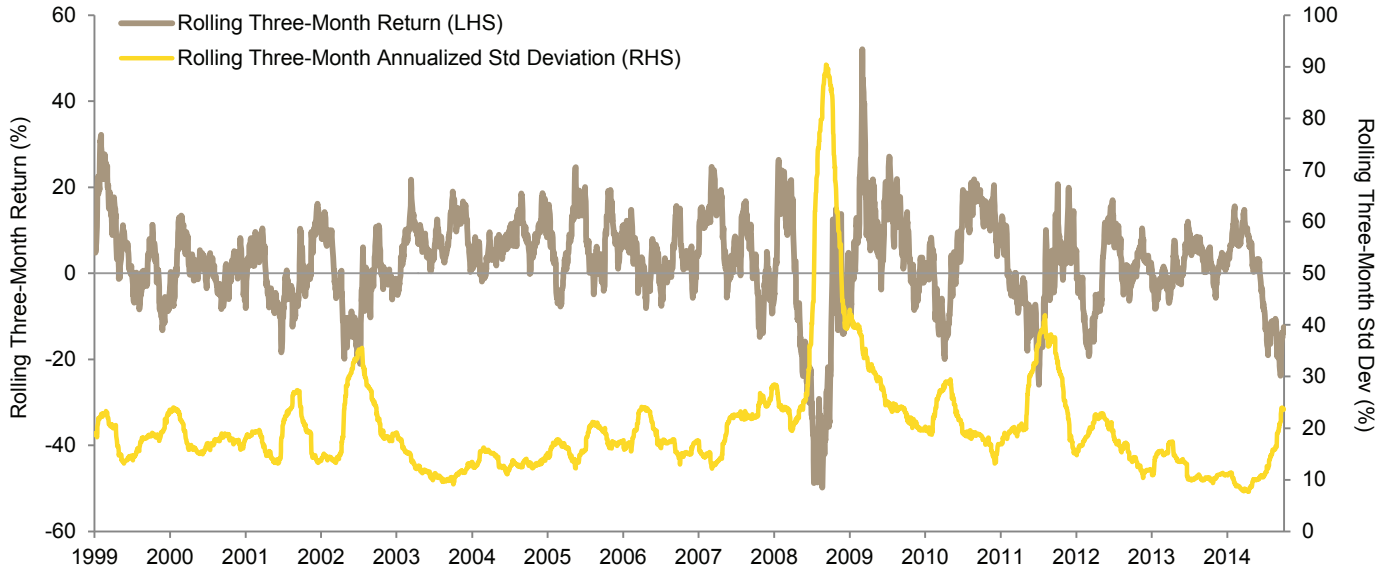


Figure 10. Rolling Three-Month Return and Volatility of MSCI World Natural Resources Index
January 1, 1999 – December 31, 2014 • US Dollar



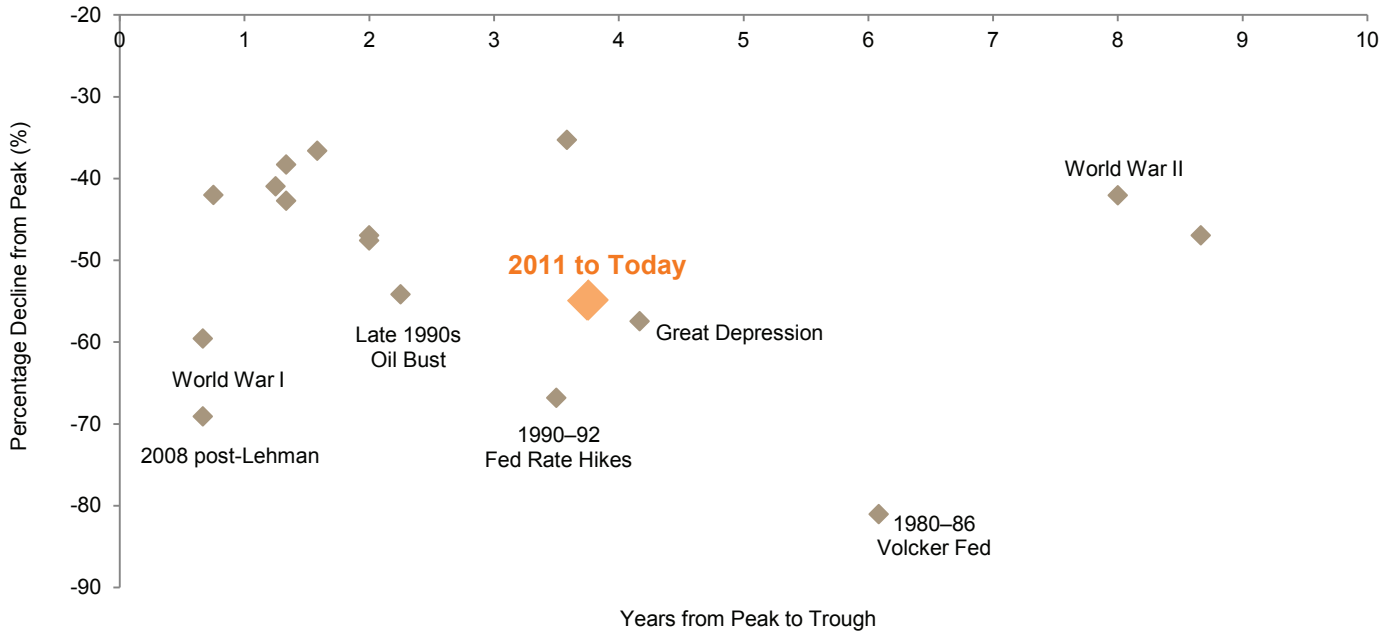
long-term time horizon and stomach for volatility. Patience is also a good attribute. In 1981, valuations fell below today's level; they then remained below 10.4 *until 1987*. Prior declines in real oil prices have varied quite a bit in their duration, from some cycles like 1920 and 2008 that felt like ripping off a Band-Aid, to others (such as the Great Depression, World War II, and the Volcker years of the early 1980s) that felt more like a protracted illness (Figure 11).

A protracted decline in oil prices would likely be considerably more damaging to energy stocks than a sharp decline and fast, snap-back rebound. Valuations that appear depressed today could certainly cheapen further, and they could stay cheap for many years. However, an extended period of oil oversupply may be less likely today than during prior cycles, given the influence of shale, because shale well production declines much more quickly than conventional wells.[9]

While market moves since June have been somewhat indiscriminate, investors seeking to overweight natural resources equities via active managers should remember that approaches vary widely. Investors that are confident that oil prices will stage a "V-" shaped recovery should favor managers with exposure to small firms that may be levered to commodity prices. Investors that believe prices could remain

[9] Shale represents a small component of global production, but marginal changes in supply and demand can be meaningful. Libya's surprise production increase last summer, totaling less than 1% of global supply, was a key initial catalyst of the current oil-price decline.

Figure 11. Real Oil Price Declines Since 1900
January 31, 1900 – December 31, 2014



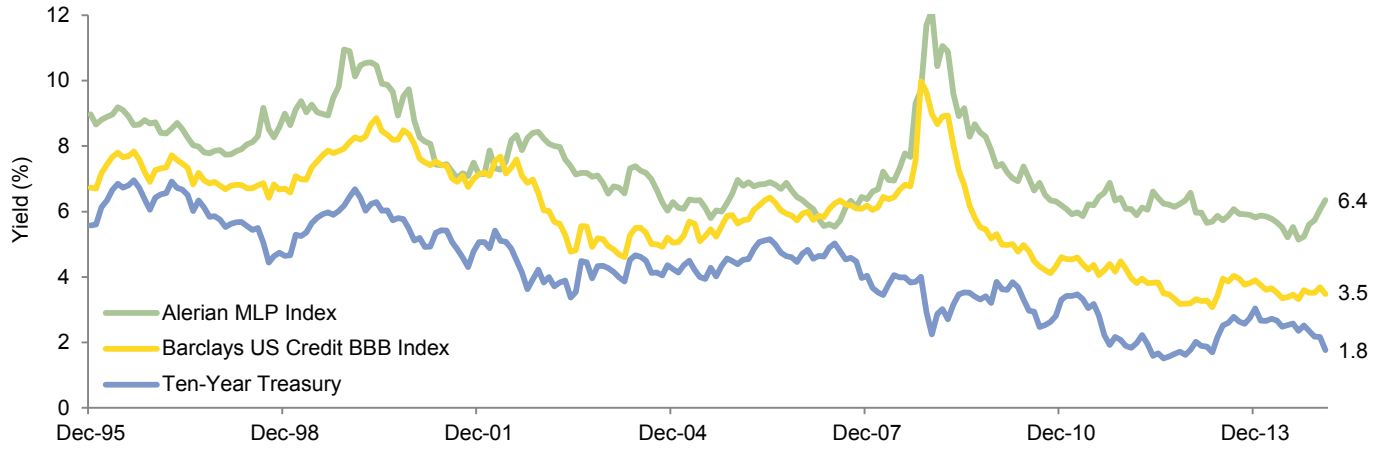
low for a protracted period should seek out managers with portfolios of high-quality firms with pristine balance sheets and access to low-cost production (these firms should be *relatively* more defensive).

Energy MLPs: Shelter in the Storm?

Although most MLPs are oriented toward midstream activity and are not particularly commodity-price sensitive, the broad Alerian MLP Index has not been spared in this energy rout, as mentioned earlier. The 17% price decline since the end of June has improved valuations, which were fairly rich during the summer. At year-end, the Alerian index offered a 6.1% tax-advantaged yield, and recent price declines have boosted the estimated yield to a solid 6.4% as of January 15. We view this yield level as offering fair value, particularly in an environment where ten-year Treasury and muni bonds yield less than 2% (Figure 12).

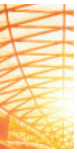
However, today's chunky MLP yields are far from risk-free. MLP balance sheets are not pristine, and the revenue streams of some partnerships could suffer in a protracted commodity decline. Even for midstream partnerships with revenue based on the volume of hydrocarbons transported through their pipelines, a sustained oil price decline of this magnitude could prove problematic. The value of MLP assets that exist to move oil from high-cost shale basins could fall sharply if those basins became uneconomic and activity withered. Some MLPs are protected by contract guarantees, but those would not be sufficient bulwarks in the event that producer bankruptcies spiked. We see MLPs as offering a lower risk profile than broad natural resources equities, but that is of course a low bar.

Figure 12. MLP Yields and Bond Yields
December 31, 1995 – January 15, 2015



Conclusion

The current bear market in energy prices is dangerous to energy producers and their investors, but may offer long-term return opportunities to investors that truly have a stomach for volatility. Current oil prices appear sufficiently low as to encourage production declines over time as drilling activity wanes, even absent shutting-in of existing wells. The time required to move from production growth to production decline may be shorter than past cycles, because of the very rapid depletion rates of today's high-horsepower shale production in the United States. Natural resources equity valuations are nearly 1 standard deviation below long-term averages, and MLP yields have bumped back up to about 6.4%. Investors that can tolerate further sharp price declines should rebalance back to target allocations, recognizing that valuations may continue to decline and could take several years to rebound. ■



Contributors

Sean McLaughlin, Managing Director
Ramin Sobhany, Investment Associate

Exhibit Notes

Oil Production from Key US Regions
Source: US Department of Energy - Energy Information Administration.
Notes: Production data for months following October 2014 represent EIA estimates or forecasts. Primary US state locations for selected shale formations are included in parentheses; shale formations do not follow state borders and portions of the resource may extend outside the named states. The primary locations for the four grouped shale formations are as follows: Marcellus: NY/PA; Haynesville: AR/LA/TX; Niobrara: CO/WY; and Utica: OH.

Crude Oil Futures Curves as of June 2014 and as of January 2015
Source: Bloomberg L.P.

Projected Oil Production Over Time for a Mid-Tier Well in North Dakota's Bakken Shale Play
Source: US Department of Energy - Energy Information Administration, via John Kemp.
Notes: Represents estimated decline rate for a well in the middle 70% of the production distribution, for a core North Dakota sector of the Bakken Shale. The hypothetical well pumps at a pace of 504 bbls/day in the inital month of production and 46 bbls/day after five years.

Potential Price Response for a Hypothetical Shale Formation
Source: Cambridge Associates LLC.

Price Return, Debt Coverage, and Market Cap for MLPs and Energy Equities
Sources: Alerian, Bloomberg L.P., and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.
Notes: Bubble size reflects relative market capitalization. Top and bottom 5% of returns excluded from data set.

Top-Ten Energy Company Consensus Estimates
Source: Bloomberg L.P.
Note: Data are consensus expectations from Bloomberg.

A Portrait of Five Earnings Collapses
Source: Thomson Reuters Datastream.
Notes: Natural resources equities are composed of 80% Datastream World Oil & Gas Index and 20% Datastream World Mining. Selection criteria for time periods is a real earnings peak-to-trough decline of 35% or more.

Composite Normalized Price-Earnings Ratios
Sources: Cambridge Associates LLC and Thomson Reuters Datastream.
Note: Natural resources equities are composed of 80% Datastream World Oil & Gas Index and 20% Datastream World Mining.

Natural Resources Equities: Valuations and Subsequent Returns
Source: Thomson Reuters Datastream.
Note: Data for 2015 are through January 15.

Rolling Three-Month Return and Volatility of MSCI World Natural Resources Index
Source: MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

Real Oil Price Declines Since 1900
Sources: Bloomberg L.P. and Thomson Reuters Datastream.
Notes: Data are monthly. All declines greater than 35% are shown, and decline from peak represents the difference between the lowest and highest real prices associated with that cycle.

MLP Yields and Bond Yields
Sources: Alerian, Barclays, and Thomson Reuters Datastream.
Note: MLP yield for January 2015 is a mid-month estimate.