



Baird Investment  
Management

## The Energy Sector

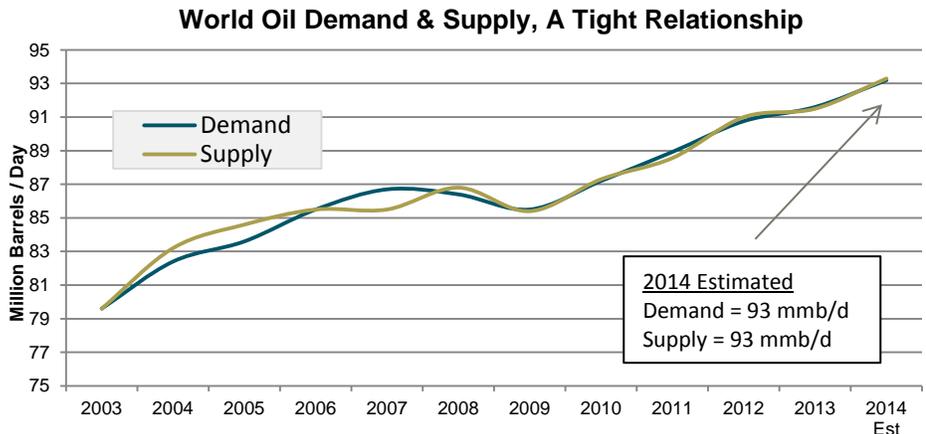
*A Secular Growth Story, Not Just a Cyclical Play*

By: Douglas Guffy, Senior Research Analyst

Historically, investing in oil and energy-related stocks has been a cyclical call. As the economy expands, oil prices rise; as it contracts, prices fall as is currently the situation. In lock-step sympathy with the U.S. economy, oil prices (West Texas Intermediate as a U.S.-centric proxy and Brent Crude as an international proxy) have historically fluctuated between \$20 per barrel and \$40 per barrel of oil. In the last ten years, however, oil prices (both domestic and international) have broken out of this historic range, driven increasingly higher by a consistently tight relationship in aggregate supply relative to aggregate demand. We see this relationship illustrated at the top of the following page, where the average spread is only 100,000 barrels of oil per day. Even during the Great Recession of 2008 excess supply increased to 400,000 barrels per day which is still a relatively small margin given that in 2014, supply and demand are estimated to be almost equal at approximately 93 million barrels a day. As a result, West Texas Intermediate and Brent fluctuate between \$50 per barrel and \$100 per barrel of oil.

Today oil prices are trending toward the lower end of the range based on various recent concerns. One of the latest concerns is the possibility of oversupply associated with growing United States production in conjunction with OPEC not moderating their production. Other concerns include the economic turmoil in the European Union and a slowing Chinese economy. Our long-term worldwide view, however, is that aggregate incremental demand may be greater than aggregate incremental supply; or, at least, the aggregate supply/demand relationship will remain a tight relationship for the foreseeable future as the trend has been for the last 10 years (see graph at the top of Page 2). Either way, we believe energy prices should trend higher long-term (economic cyclicity notwithstanding).

Given historical trends, we believe the long-term supply/demand relationship will remain tight for the foreseeable future as it has been historically.



Source: Cornerstone Analytics

### Strong Long-term Demand

Looking at demand for energy from the macro level, a key observation to note is the trend in economic growth rates from emerging nations relative to developed nations which we believe is sustainable long-term. For example, just ten years ago (as the table below highlights), the United States contributed 30% to world nominal GDP, the Euro Zone contributed 22%, and the block of nations to include Brazil, Russia, India, and China – an emerging economic nation-block – contributed 9% of the total. Today these nations contribute 22%, 17%, and 21%, respectively. Compounding this dynamic is the fact that other emerging nations like Mexico, Indonesia, South Korea, and Turkey continue to develop at accelerating rates.

#### World Nominal GDP

	2003	2013
<b>United States</b>	30%	22%
<b>Euro Zone</b>	22%	17%
<b>BRIC Nations</b> (Brazil, Russia, India, China)	9%	21%
<b>Other Emerging Nations</b> (Mexico, Indonesia, South Korea, Turkey)	5%	6%

Source: World Bank

To help put this observation in economic context, the collective size of Brazil, Russia, India, China, Mexico, Indonesia, South Korea, and Turkey are approximately 117% the current nominal GDP size of the United States. Yet, this emerging economic block is growing at a 5% weighted-average annual clip compared to the United States at roughly 2.5%. In other words, an economic block slightly larger than the United States is growing at twice the rate suggesting that a meaningful demand for oil will continue to increase and aggregate incremental demand may be greater than aggregate incremental supply.

### Stable Supply

When you look at the global supply forecast through 2015, it includes increased production from the United States and Saudi Arabia, and a concern is that Saudi Arabia

will not be able to keep up with this forecast. The Kingdom needs to produce at a record level to help meet current estimated demand. Never in its history has it produced at a *sustained* 10 million barrel level as estimated and shown in the below table.

**Saudi Arabia Oil Supply**  
(Million barrels/day)

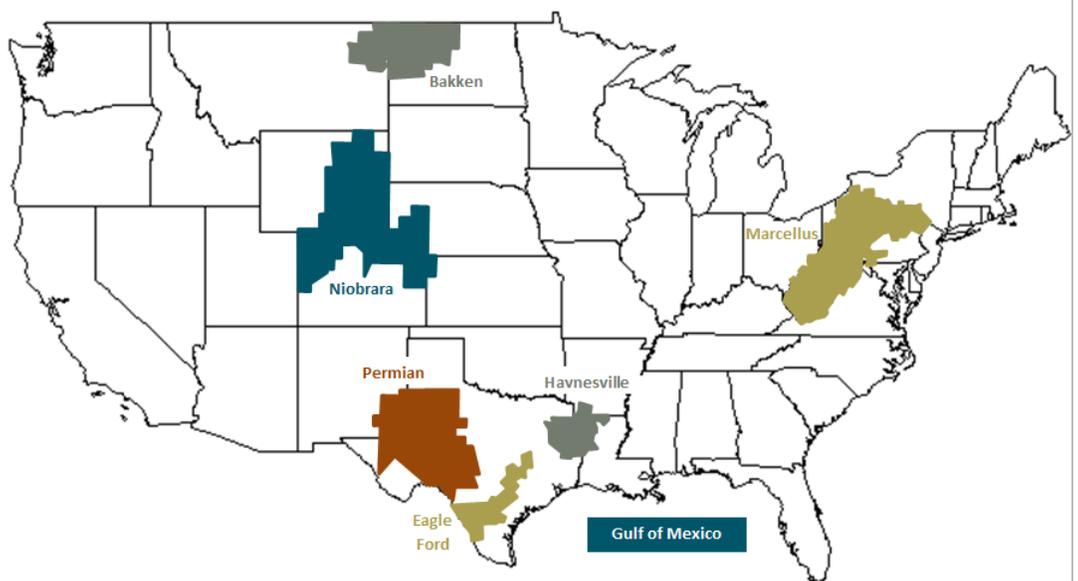
1Q	2Q	3Q	4Q	2013	1Q	2Q	3QE	4QE	2014E	1QE	2QE	3QE	4QE	2015E
9.2	9.5	10.1	9.8	9.7	9.7	9.7	10.0	10.5	10.0	10.2	10.4	10.6	10.6	10.6

Source: Cornerstone Analytics

It is possible that the other nations in the region could step up their pace of production. Yet, with the current turmoil in the Middle East, we believe this is unlikely. Even in a scenario with less fighting and a return to more normal economic conditions, lost maintenance and production schedules will take time to resume. As mentioned, this supply model already takes into consideration increased production from the United States. With the United States finding and developing more oil, we still anticipate a tight supply and demand relationship easily through 2015.

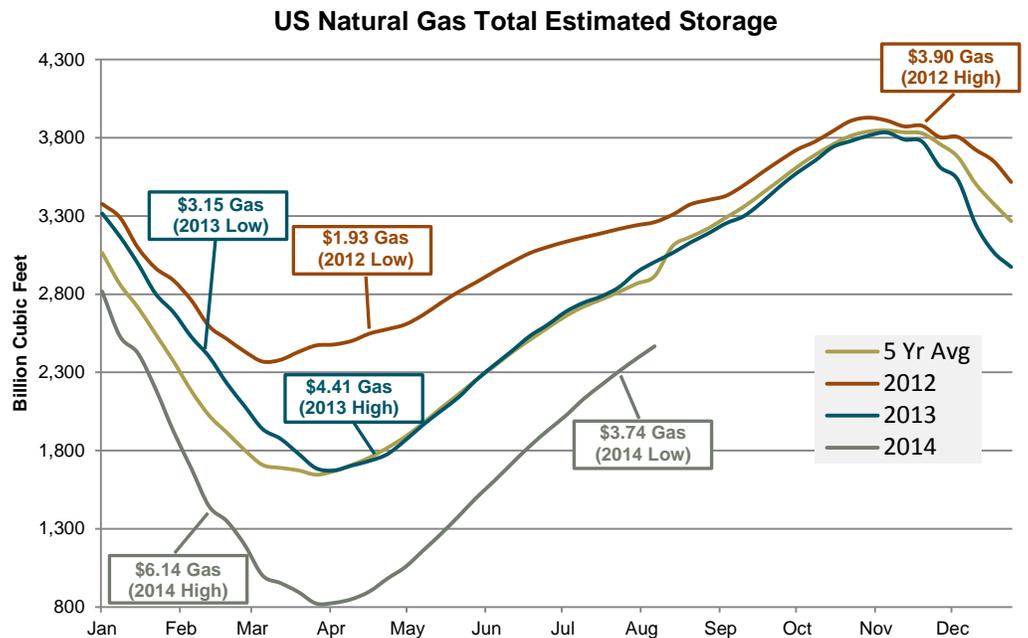
**Energy Commodity Production Opportunity in the United States**

In North America, the United States is once again recognized as a rich resource nation. There are seven noteworthy resource plays. On the oil side, there is the Bakken in North Dakota, the Niobrara in the Colorado region, the Permian and Eagle Ford in Texas and the Gulf of Mexico. On the gas side, we have the Marcellus in the Pennsylvania and West Virginia region and the Haynesville and Fayetteville shale play in the Arkansas and Louisiana regions. The size of these fields leads many energy pundits to the chorus that “the U.S. can be energy independent once again.” We tend to agree, noting that production forecasts from these fields will run for several decades.



### Natural Gas – The Other Natural Resource

We are becoming more bullish on natural gas. The Energy Information Agency (EIA) reports in its 2014 Annual Energy Outlook that the United States is expected to become a net exporter of natural gas before 2020. We expect increasing global use of natural gas to be reported in subsequent years as industrial and electrical uses develop. As with oil, the key observation for natural gas relates to the relationship in incremental demand relative to incremental supply. On the supply side, in the graph at the top of the next page, we see the levels of estimated U.S. natural gas storage. Of note is the pattern of lower lows and lower highs in the seasonal build of storage, indicating a greater draw in demand relative to the increased build in supply. Also shown on this graph are the high and low gas prices for each calendar year. We also see this relationship at work in the seasonal price pattern in natural gas prices where, in this observation, the pattern is one of higher highs and higher lows. We believe this is developing due to the amount of dedicated dry gas rigs that are no longer in gas-only production.



Source: US Department of Energy

The Baker Hughes North American Rotary Rig Count Report cites a gross gas rig count of 913 rigs in January of 2011. Today, the rig count is roughly 330 rigs, falling 64% from its high. We believe these two patterns are early developmental signs of gas substituting for liquid production – admittedly a long term effect. Our expectation is for these seasonal patterns to continue to develop with natural gas prices inching ever higher.

## Our Mid Cap Fund

---

We search for high quality companies for investment into our energy sector theme.

---

We are always in search for high quality energy companies for investment into our energy sector theme. To name a few, Whiting Petroleum Corporation is involved in oil and natural gas exploitation, acquisition and exploration activities. The company focuses on lower risk, long-lived oil and natural gas properties located primarily in the Bakken region. Whiting's recent announcement to acquire Kodiak Oil & Gas makes the combined company one of the largest plays in the Bakken. In the oil services sector, Oceaneering International, Inc. is a global provider of engineered services and products to the offshore oil and gas industry. The company offers services and products in remotely operated vehicles, mobile offshore production systems, engineering and product management, manned diving and other deep water applications. Oceaneering also serves the defense and aerospace industries.

In natural gas Southwestern Energy Company is an independent energy company primarily focused on natural gas exploration, development and production (E&P) within the United States, most notably in the Marcellus Shale. The Company's operations also include natural gas gathering, transmission, and marketing, as well as natural gas distribution. Lastly, Trinity Industries, Inc. manufactures transportation, construction, and industrial products. The Company's products include tank and freight railcars, inland hopper and tank barges, highway guardrail and safety products, ready-mix concrete, and other products. Trinity also leases railcars and other products. The Company should continue to benefit as more U.S. crude oil is shipped by rail car.

*Investors should consider the investment objectives, risks, charges and expenses of the fund carefully before investing. This and other information can be found in the prospectus or summary prospectus. A prospectus or summary prospectus may be obtained by visiting [bairdfunds.com](http://bairdfunds.com) or calling 800-444-9102. Please read the prospectus or summary prospectus carefully before you invest or send money.*

*The Baird Mid Cap Fund focuses on growth style stocks and therefore the performance of the Fund will typically be more volatile than the performance of funds that focus on types of stocks that a broader investment style. The fund may invest up to 15% of its total assets in U.S. dollar denominated foreign securities and ADRs. Foreign investments involve additional risks such as currency rate fluctuations and the potential for political and economic instability, and different and sometimes less strict financial reporting standards and regulation.*

This is not a complete analysis of every material fact regarding any company, industry or security.

The opinions expressed here reflect our judgment at this date and are subject to change.

Investments in the energy sector expose an investor to potentially high volatility and are generally only suitable for investors with a high tolerance for risk.

[Click here](#) for information on the fund's holdings.

The mention of specific securities is not intended as a recommendation or offer for a particular security. Baird makes a market in the securities of Whiting Petroleum Corporation, Oceaneering International and Southwestern Energy Company. Robert W. Baird & Co. and/or its affiliates expect to receive or intend to seek investment banking related compensation from the companies mentioned.

©2015 Robert W. Baird & Co. Incorporated. Member SIPC.

Robert W. Baird & Co. 777 East Wisconsin Avenue, Milwaukee, Wisconsin 53202. 800-RW-BAIRD. [rwbaird.com](http://rwbaird.com)  
First Use: 01/2015.