

# Don't Put All Your Eggs in One Barrel

**Mark D. Carlson, CFA**

Senior Investment Strategist  
FlexShares Exchange Traded Funds

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**BALANCED APPROACH TO ENERGY EXPOSURE DURING OIL MARKET TURMOIL**

Within a few short years of Edwin Drake's first oil well in the small town of Titusville, Pennsylvania in 1859, both commodities and natural resources became key components of the overall global economy. Consequently, investors now typically allocate meaningful portfolio exposure to energy investments to achieve investment goals such as capital appreciation or inflation hedging.

Within natural resources, the energy sector often plays a principal role in the direction of market movements. This occurs through both direct investments tied to the production and distribution of crude oil/natural gas, and through indirect energy investments in areas such as farming, transportation, heating/cooling and manufacturing. In comparison to concentrated energy exposure, investors may be able to achieve those same goals, while limiting risk, with a more targeted approach through a diversified basket of natural resource equities. With the energy markets having recently gone through a severe price decline, now is a good time to review the performance of various investment options with significant energy allocations.

**OUTSIZED INFLUENCE FOR RELATIVELY MODEST INPUT**

Many investors would be surprised to learn that direct energy-related sector contributions to U.S. GDP from 2005-2013 has averaged only 4.0% (source: Bureau of Economic Analysis). Moreover, from an equity investment standpoint, energy-related equities comprised 8.3% of the S&P 500's total market capitalization (source: S&P Dow Jones Indices LLP, as of January 30, 2015). Yet, while there exist many different ways for gaining energy exposure (e.g., physical ownership, futures contracts and natural resource equities), investors' experiences can vary widely based on unique economic and market considerations, as well as the structure of the investment products.

To evaluate the range of investment options related to energy, we began with an analysis of West Texas Intermediate (WTI) oil price movement using data from month-end September 2011 through January 2015. **Table 1** on page 2 presents this period, which covers sustained periods of both rising and falling crude oil prices in addition to one period of minimal price movement. The most recent period, from July 2014 to January 2015, was the most volatile intermittent period in the analysis. This increased price volatility followed a sustained period of price stability and coincided with the end of the Federal Reserve's quantitative easing purchases of Treasuries and mortgage-backed securities. The increase in WTI price volatility amplifies some of the issues and challenges surrounding energy exposure within investors' portfolios.

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**TABLE 1: WTI PRICE MOVEMENTS**

	WTI +/- %	Trading Days
<b>Total Period</b>		
09/30/2011 - 01/31/2015	- 39.1%	837
<b>Rising Price Periods</b>		
09/30/2011 - 02/29/2012	+ 35.19%	103
06/30/2012 - 09/30/2012	+ 8.51%	62
10/31/2012 - 02/28/2013	+ 6.74%	81
02/28/2013 - 09/30/2013	+ 11.17%	148
<b>Falling Price Periods</b>		
02/29/2012 - 06/30/2012	-20.7%	85
09/30/2012 - 10/31/2012	-6.5%	20
09/30/2013 - 01/31/2014	-4.7%	85
07/31/2014 - 01/31/2015	-50.9%	126
<b>Stable Prices</b>		
01/31/2014 - 07/31/2014	+ 0.7%	125

Source: Bloomberg Finance LP

### INVESTMENT ALTERNATIVES

Next we compared the daily return correlations from September 30, 2011 to January 31, 2015 of WTI versus two futures-based commodity indexes and two natural resource-based equity indexes. DTI Managed Futures Index and the S&P 500 index are included as points of reference (see Appendix for index descriptions). In addition, in order to test correlations during extreme price movement environments, the time periods with the greatest price increases and declines of WTI (September 30, 2011 – February 29, 2012 and July 31, 2014 – January 31, 2015, respectively) are also included.

**TABLE 2: CORRELATIONS TO WTI**

	9/30/2011 - 1/31/2015	9/30/2011 - 2/29/2012	7/31/2014 - 1/31/2015	DESCRIPTION
<b>Bloomberg Commodity Index</b>	0.653	0.798	0.511	Futures - Nearest Contract
<b>DBIQ Optimum Yield Commodity Index</b>	0.822	0.810	0.842	Futures - Roll Optimized
<b>DTI Managed Futures Index</b>	0.007	- 0.386	- 0.113	Futures - Managed
<b>Morningstar Global Upstream Natural Resources Index</b>	0.514	0.670	0.502	Natl Resource Equities
<b>MSCI US IMI Energy Index</b>	0.602	0.710	0.550	Energy Equities
<b>S&amp;P 500 Index</b>	0.370	0.593	0.130	S&P 500

Source: Bloomberg Finance LP

The data shows that energy and natural resource-based equity indexes also exhibit positive and typically higher correlations to WTI versus broad large-cap equities and the managed futures strategy.

The closest correlation to the price movements of any commodity or natural resource would be through direct ownership of the physical assets. Precious metals historically are the primary commodities or natural resources that are both economically and functionally feasible to own, hence investors' utilization of futures and energy-focused equities.

As expected, the two futures-based strategies had high correlations to the WTI price movement. The data shows that energy and natural resource-based equity indexes also exhibit positive and typically higher correlations to WTI versus the broad large-cap equities and the managed futures strategies. All indexes have meaningful allocations to either energy futures or energy-related equities: roughly 32% for the Bloomberg Commodity Index; 49.5% for the DBIQ Optimum Yield Commodity Index; 30% for the Morningstar Global Upstream Natural Resources Index; and 100% for the MSCI US IMI Energy Index (source: company websites as of January 2015). **Table 3** presents total return data for the group while **Table 4** provides Sharpe Ratios for the appropriate indexes.

**TABLE 3: TOTAL RETURNS**

	9/30/2011 – 1/31/2015*	9/30/2011 – 2/29/2012	7/31/2014 – 1/31/2015	DESCRIPTION
<b>WTI</b>	- 13.8%	35.2%	-50.9%	Spot
<b>Bloomberg Commodity Index</b>	- 9.4%	5.6%	- 21.2%	Futures - Nearest Contract
<b>DBIQ Optimum Yield Commodity Index</b>	- 9.6%	13.5%	- 29.4%	Futures - Roll Optimized
<b>DTI Managed Futures Index</b>	- 0.6%	- 6.5%	5.8%	Futures - Managed
<b>Morningstar Global Upstream Natural Resources Index</b>	1.8%	20.9%	- 15.7%	Natl Resource Equities
<b>MSCI US IMI Energy Index</b>	8.9%	28.5%	- 21.7%	Energy Equities
<b>S&amp;P 500 Index</b>	21.1%	21.9%	4.4%	S&P 500

\*annualized  
Source: Bloomberg Finance LP

Returns data demonstrates that, despite significant allocations to energy, the futures-based indexes underperformed in all three time periods on a total-return basis. The Sharpe Ratios confirm that the same is true on a risk-adjusted basis. The lower total returns and Sharpe Ratios for the futures indexes highlight the challenges of investing in futures, such as the impact of the shape of the futures contract curve (contango and backwardation), roll yield and collateral yield. Without the structural issues of futures investing, the equities-based indexes' returns more closely tracked WTI price performance during significant periods of price swings. Additionally, correlations and returns for the Morningstar index indicate that a diversified natural resources equity strategy may provide less variability of returns with comparable correlations versus energy-heavy investment strategies. During the most recent period in which WTI prices fell more than 50%, of the profiled indexes having greater than 0.5 correlations, the Morningstar index produced the best total return and second-highest Sharpe Ratio.

A diversified natural resources-focused index, like Morningstar Global Upstream Natural Resources Index, with allocations to energy companies as well as agriculture, metals, timber and water may reduce single-industry and company risk.

**TABLE 4: SHARPE RATIOS**

	9/30/2011 – 1/31/2015	9/30/2011 – 2/29/2012	7/31/2014 – 1/31/2015
<b>Bloomberg Commodity Index</b>	- 12.4	5.6	- 25.9
<b>DBIQ Optimum Yield Commodity Index</b>	- 11.7	12.2	- 30.2
<b>Morningstar Global Upstream Natural Resources Index</b>	2.0	13.1	- 19.2
<b>MSCI US IMI Energy Index</b>	7.1	15.0	- 13.3

Source: Bloomberg Finance LP, FlexShares

**EQUITY-BASED ENERGY INVESTMENT POSITIONING**

This analysis demonstrates why it is important for investors to examine concentration risk when considering their energy strategies. A diversified natural resources strategy carries the potential to generate comparable returns to an energy strategy. An energy-focused strategy will generally have higher concentration in fewer securities and, consequently, be more exposed to individual energy companies. As of January 2015, the MSCI index had more than 33% exposure concentrated in only two equities (source: company website as of January 2015). This level of concentration can raise issues concerning company management and single security risks as it relates to performance, both of which can be addressed through an index designed with diversification and balance in mind.

A diversified natural resources-focused index, like Morningstar Global Upstream Natural Resources Index, with allocations to energy companies as well as agriculture, metals, timber and water may reduce single-industry and company risk. While energy’s direct impact on the macro economy may not match widely held investor perceptions, its indirect impact is felt across a broad spectrum of goods and industries. As demonstrated, correlation and returns data from the recent period of energy price weakness indicates that a diversified and balanced index of natural resource equities may allow investors to achieve correlated returns to the movement of energy prices without exposing their portfolios to energy sector or company specific risk.

**ENERGY EXPOSURE WITH THE BENEFITS OF DIVERSIFICATION**

In addition to normal supply/demand and geopolitical factors, the recent increase in crude oil price volatility may indicate an overall trend toward a return of increased asset price volatility. This may be in response to the Federal Reserve’s moves to withdraw market intervention activities such as quantitative easing and the potential end of zero-interest-rate policies. As a result, we believe investors seeking a long-term, strategic allocation to energy would be wise to consider alternatives to concentrated energy exposure. Many of the investment benefits of energy may be achievable through investing in a diversified selection of natural resources equities, which could provide reasonably correlated returns to energy price movements while potentially limiting return volatility. Balanced exposure to natural resources can provide all the energy-related exposure investors normally require in their portfolios. With the prospect of possible increased asset price volatility, investors may be well served by putting their assets into a collection of natural resources versus putting all their “eggs” into a barrel of oil.

## APPENDIX

**Backwardation** – The price of a commodity for future delivery is lower than the spot price, the price of a commodity today.

**Bloomberg Commodity Index** – The index is made up of 22 exchange-traded futures on physical commodities and currently represents 20 commodities, which are weighted to account for economic significance and market liquidity. The index rebalances annually, weighted 2/3 by trading volume and 1/3 by world production, and weight caps are applied at the commodity sector and group levels.

**Collateral Yield** – Collateral yield is the return earned on the collateral posted to satisfy margin requirements on futures contracts.

**Contango** – Contango occurs in a market when futures prices for a commodity are greater than the current spot price.

**Correlation** - A statistical technique used to measure and describe the strength and direction of the relationship between two variables, such as the investment returns of securities or asset classes.

**DBIQ Optimum Yield Commodity Index** – Employs a rule-based approach when it rolls from one futures contract to another for each commodity in the index. Rather than select the new future based on a predefined schedule (e.g., monthly), the index rolls to that future (from the list of tradable futures that expire in the next 13 months), which generates the maximum implied roll yield. The index aims to maximize the potential roll benefits in backward-dated markets and minimize the loss from rolling down the curve in contango markets. The selected index future contract is rolled to a new contract when the existing contract is close to expiry. The index represents 14 commodities drawn from the energy, precious metals, industrial metals and agriculture sectors.

**DTI Managed Futures Index** – Long/short strategy holding 24 commodity and financial futures contracts grouped into 18 sectors, with 50% exposure to commodity futures and 50% exposure to financial futures.

**Morningstar Global Upstream Natural Resources Index** – Measures the performance of stocks issued by companies that have significant business operations in the ownership, management or production of natural resources in energy, agriculture, precious/industrial metals, timber and water resource sectors as determined by Morningstar.

**MSCI U.S. IMI Energy Index** – Designed to capture the large-, mid- and small-cap segments of the U.S. energy equity universe as classified in the energy sector as per the Global Industry Classification Standard (GICS®).

**Roll Yield** – The yield that a futures investor will capture when a futures contract converges to the spot price; in a backward-dated futures market, the price rolls up to the spot price, so the roll yield is positive, whereas when the market is in contango the price rolls down to the spot price, so the roll yield is negative.

**Sharpe Ratio** – The average return earned in excess of the risk-free rate per unit of volatility or total risk. A portfolio engaging in “zero risk” investment, such as the purchase of U.S. Treasury Bills, has a Sharpe ratio of exactly zero. Generally, the greater the value of the Sharpe ratio, the more attractive the risk-adjusted return.

**S&P 500 Index** – A capitalization-weighted index of 500 stocks as determined by Standard & Poor’s. An investor cannot invest directly in an index.



*There are risks involved with investing, including possible loss of principal. The natural resources sector can be significantly affected by events relating to U.S. and foreign political and economic developments and environmental and other government regulations, as well as other factors including commodity price volatility, technological developments and natural or man-made disasters. Declines in the demand for, or prices of, natural resources would generally be expected to contribute to a decline in an investment. Such declines may occur quickly and without warning and may negatively impact an investment. Companies engaged in commodities-related industries, such as natural resources, are especially affected by fluctuations in the value of those commodities (which may be due to market events or regulatory developments) and these companies may lack the resources and the broad business lines to weather market downturns. This risk is exacerbated for those natural resources companies that own the underlying commodity.*

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