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In-depth analysis and insights to inform your decision-making.

Shawn Driscoll
Portfolio Manager, Global Natural Resources Equity Strategy

Natural Resources

TAPPING GLOBAL RESEARCH TO EXPLOIT OPPORTUNITIES AMID A SECULAR COMMODITY DOWNTURN

EXECUTIVE SUMMARY

T. Rowe Price has invested in natural resource equities since 1969. T. Rowe Price invested USD $65 billion in global energy and other natural resource stocks as of December 31, 2017. It has developed the experience and resources to anticipate changing trends and exploit opportunities during challenging environments.

In this Price Perspective, Shawn Driscoll, portfolio manager of the USD $6.5 billion T. Rowe Price Global Natural Resources Equity Strategy (as of 12/31/2017), explains why he believes the commodity downcycle may last several more years, notwithstanding recent inflation concerns and the rally in energy and other commodity prices since the second half of 2017. He discusses how the firm's extensive experience and disciplined investment approach in natural resource stocks help uncover attractive opportunities and explains how this sector has historically provided investors with a hedge against inflation and important diversification benefits.

Q. T. Rowe Price is one of the oldest and largest investors in a wide array of natural resource sectors. What have you learned over the years in terms of how you approach resource investing?

As a team, we have invested through several commodity cycles and understand how different commodities perform depending on industry and macro trends. It helps to understand what has happened in prior cycles and why it's different this time—or not different. We have the commitment and resources to do extensive research. We spend a lot of time, for example, testing our assumptions about what the prices of commodities should be and how the cost curve might change.

We also have that continuity of research over five decades. Our analysts today have directly benefited from the experience and insights of those who managed the strategy before us, and from those who continue to support the strategy. Our analysts also benefit from T. Rowe Price's expansive global research platform, as the industries we invest in are global in scope. For example, our credit analysts provide valuable insights into energy and metals and mining companies. We encourage independent thinking and analysis. The result is a robust and disciplined process, resulting in better answers and higher conviction.

We are committed to our bottom-up stock selection process and our approach to buying and holding a diverse selection of fundamentally sound natural resource companies with solid balance sheets and talented management. We maintain a well-diversified portfolio across natural resource industries in an effort to achieve a more consistent return profile with lower volatility.

Investing in natural resources has historically provided an effective hedge against inflation—and deflation for that matter.

Q. Why should investors consider a natural resources strategy for part of their portfolio?

First, there are always opportunities to invest in quality companies benefiting from broader commodity trends, even in a depressed era for commodities. Investing in natural resources has historically provided an effective hedge against inflation—and deflation for that matter.

Historically, natural resource equity performance has run somewhat counter to overall equity performance, so the sector can provide diversification and help offset weak performance in overall global equities. Commodities can also provide currency diversification since they have a negative correlation with the dollar. When the dollar has strengthened, commodities have tended to really struggle, but when the dollar has weakened, commodities have tended to do extraordinarily well.

Even when natural resources lag the overall market, we believe attractive performance can still be achieved. We don't expect the energy sector to outperform broader equity markets for a sustained period, but there have been times like what we've seen recently where energy prices and stocks surged due to any number of catalysts. Even from 1986 to 1999, a challenging period for commodities, there were several significant price rallies. So it makes sense to keep some allocation to natural resources for their potential diversification benefits.

Q. U.S. crude oil prices fell from roughly USD $110 per barrel in June 2014 to about USD $26 per barrel in February 2016 and recently traded in the mid-USD $60s per barrel. Brent, the global oil benchmark, fell from USD $115 per barrel to USD $26 per barrel during that time and recently traded over USD $70 per barrel. What is your outlook for oil prices, given your expectations for continued productivity gains and lower production costs?

The rise in oil prices in recent months reflects strong global demand, production limits by the Organization of the Petroleum Exporting Countries (OPEC), political instability in the Middle East, weather-related supply disruptions in the U.S., and a weaker U.S. dollar. However, higher prices provide incentives for additional rigs to come online and increase production, pressuring prices.

Moreover, while demand has been very strong recently, we've been in a global oversupply market for some time, driven by the surge in U.S. shale oil production and productivity. U.S. exploration and drilling have increased dramatically since mid-2016, and oil prices are above the level needed to incentivize drilling new wells.

While some market participants expect a return to even higher oil prices, we expect prices for U.S. crude, or West Texas Intermediate, will average from USD $40 to USD $50 per barrel over the long term. That ultimately depends on the degree to which technological innovation in shale continues to improve productivity and compress drilling breakeven costs. But when you look at a chart of real oil prices over the past century, prices above USD $40 per barrel (in 2014 dollars) are considered unusual.

Our outlook for oil prices in 2018 is subdued. We believe that estimates for U.S. production are too low. There are more than 7,000 drilled and uncompleted wells that are waiting to bring production online once temporary service bottlenecks have been resolved. Productivity continues to increase, and we expect the cost curve to continue falling. The extension of the OPEC cuts may help to keep prices from collapsing, but we do not believe the OPEC cut is bullish. The longer oil prices remain at recent levels, the more incentive it provides to increase supply, particularly North American shale.

While nominal prices below USD $40 per barrel are probably unsustainable for many producers, we believe that the all-in breakeven costs of the lowest-cost producers in the USD $50 per barrel range and falling, so the supply destruction needed for a sustained oil price recovery will not be easily achieved.

When oil prices are above the incentive price to produce, it is very easy to saturate the market. Supply comes on, demand decelerates, and the next thing you know, you are at USD $30 per barrel oil. It would not surprise me if that happens this year or in 2019. That's the future of oil, because of how much technology has changed and how quickly you can bring on low-cost supply.

We believe that the current scenario for oil/commodity prices resembles the 20-year bear cycle in the 1980s to1990s. Again, this is due in large part to the emergence of short-cycle, low-risk, non-OPEC production of North American shale. And we're only recovering less than 10% of the shale oil in place. We have a long way to go. The cost curve is also collapsing on a global scale with many new offshore projects becoming economical even at lower prices, such as the Johan Sverdrup oil field just off Norway, which is expected to start producing in 2019.

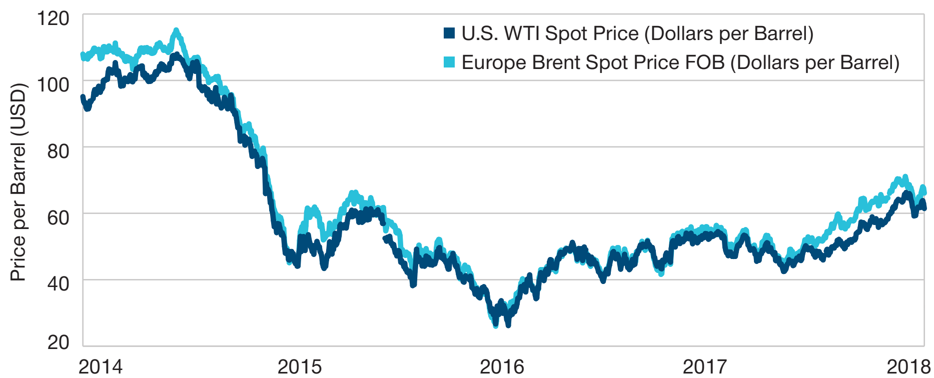
Q. In the 1980s oil bust, profit margins in the oil services industry fell below zero, and almost a third of publicly traded oil services and exploration and production companies went out of business. So far in this cycle, about 300 public and private energy companies in North America have filed for bankruptcy according to the law firm Haynes and Boone. Do you expect to see more?

We're probably not out of the woods, but near term it's hard to push companies into bankruptcy with oil at around USD $60 per barrel. A lot of balance sheets have been cleaned up, and some of the companies that went bankrupt are back with clean balance sheets. But we expect prices will go a lot lower, which may result in more bankruptcies. There is so much hidden leverage in the business that a company can build up debt very quickly in a lower-price environment.

Q. Energy and other commodity stocks significantly lagged the broader markets in the past five years as commodity prices collapsed. In 2017, energy stocks significantly underperformed worldwide, while materials stocks were among the best performers. Energy also significantly lagged the broader market in the first quarter of 2018. What is your longer-term commodities outlook?

FIGURE 1: Oil Prices Rebounding After Steep Decline

As of February 28, 2018



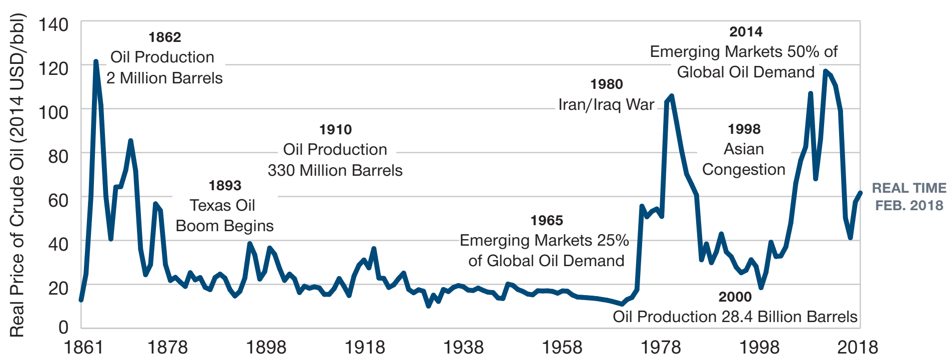
Past performance cannot guarantee future results.

Source: Strategas Securities, LLC.

Note: West Texas Intermediate (WTI) reflects the U.S. price for oil, and Brent crude reflects the global oil price. Both declined sharply from 2014 to mid-2016 before staging a recovery.

FIGURE 2: The Real Price of Oil Since 1861

As of February 28, 2018



Past performance cannot guarantee future results.

Sources: BP Statistical Review, Ned Davis Research, and data analysis by T. Rowe Price.

We believe that the commodity supercycle that started in 2000 ended in 2011 and we are still in the initial years of a secular downcycle, driven by a long-term imbalance between global supply and demand. Synchronized global growth and a moderately weaker U.S. dollar boosted prices for oil and some other commodities in 2017. However, we believe the market has begun to realize the long-term disruptive impact of U.S. shale production volumes. As a result, we anticipate a low-price environment over the long term, disrupted by relatively brief periods of outperformance within a secular downcycle.

Commodity cycles historically lasted from 15 to 20 years, and the shortest down cycle was the 13-year period in the 1920s preceding the Great Depression, based on analysis done by Ned Davis Research. Within those periods, you can have short-term trading rallies due to cyclical dislocations. But that doesn't change the longer-term fundamental outlook. A lot of capital and technological innovation have been brought to bear in energy production, so the gains in productivity keep deflating the cost curve for oil production. We don't see that ending soon.

Oil fundamentals and market prices are suffering a fate similar to that experienced in the 1980s. In the late 1970s and 1980s, the oil supply picture changed with increased production from new offshore sources. In the 1980s, oil prices fell from USD $40 per barrel to USD $10 per barrel in only six years and did not stage a sustained recovery until the 2000s based on FactSet data. During those two decades, the cost to find, drill, and produce wells declined by more than half.

Fast-forward to 2006, when the "shale era" of horizontal drilling and hydraulic fracturing really got underway. Since then, productivity (measured by gross barrels produced per rig) has improved at an exceptional rate—about 51% annually in the major U.S. shale regions, according to the Energy Information Administration. New shale formations—such as those in North Dakota, Texas, and New Mexico—now account for a significant amount of incremental global supply annually.

In fact, the United States now rivals Saudi Arabia and Russia as a leader in total global oil/liquids production. While OPEC accounts for about 43% of total global oil production, the U.S. has provided over 60% of incremental global oil supply since 2008 through 2016, based on research by BP Statistical Review and T. Rowe Price as of the end of 2016. We saw similar shale development in U.S. natural gas before that. We expect U.S. oil production will continue to surprise investors and that the oil cost curve will continue to deflate. Our internal research shows that U.S. shale exploration and drilling costs are already down more than 30% from their peak. So we may be in a chronic oversupply condition for years.

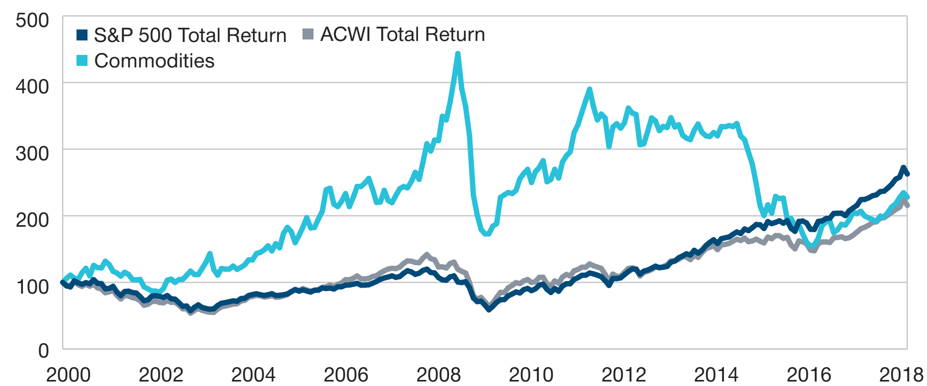
Q. Where do you see opportunities when navigating through a secular commodity bear market?

Overall, we have a modestly defensive posture with a focus on long-term growth and high quality through healthy balance sheets and low costs. Although our

Even when natural resources lag the overall market, we believe attractive performance can still be achieved.

FIGURE 3: **Commodity Supercycle Ended in 2011, Causing Severe Underperformance for Natural Resources**

Total Return Indexed to 100 as of December 31, 1999, to February 28, 2018



Past performance cannot guarantee future results.

Source: Strategas Research Partners.

Note: Chart reflects performance of S&P 500 Index, the MSCI All Country World Index (ACWI), and the S&P Goldman Sachs Commodity Index since 2000.

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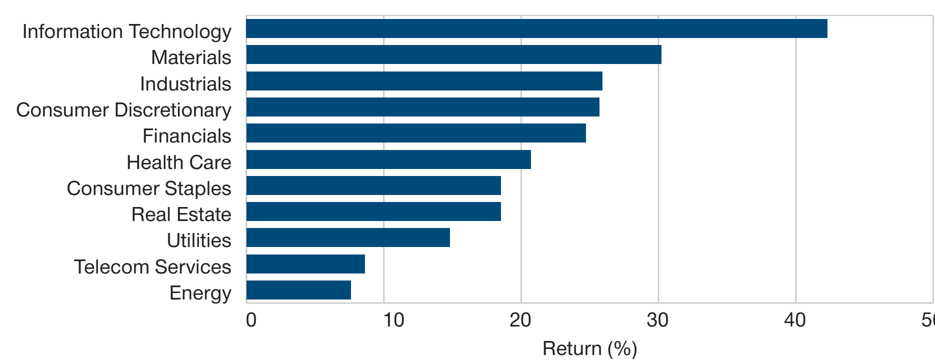
FIGURE 4: **Energy Sector Trailing Global Equity Performance in 2017**

MSCI All Country World Index Sector Performance

December 31, 2016, to December 31, 2017



Past performance cannot guarantee future results.

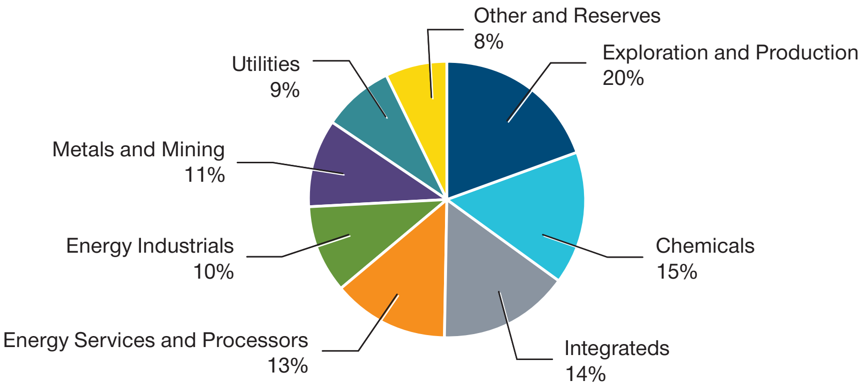
Sources: FactSet and Strategas Securities, LLC.

opportunity set has narrowed, we still find opportunities in select areas:

- Major integrated oil producers with strong financial and operating leverage.
- Refiners poised for healthy margins as crude oil inventories grow and product inventories remain stable. Commodities-related companies benefited from low input costs

FIGURE 5: **T. Rowe Price Global Natural Resources Equity Representative Portfolio, Sector Snapshot**

As of March 31, 2018



Source: T. Rowe Price.

FIGURE 6: **T. Rowe Price Global Natural Resources Equity Representative Portfolio**

Top 10 Holdings as of March 31, 2018

1.	Total	4.8%
2.	EOG Resources	2.9%
3.	Air Products & Chemicals	2.7%
4.	Occidental Petroleum	2.5%
5.	ExxonMobil	2.5%
6.	TransCanada	2.2%
7.	Concho Resources	2.1%
8.	Andeavor	2.0%
9.	Vulcan Materials	1.7%
10.	Atmos Energy	1.7%

These holdings accounted for 25.2% of the total portfolio assets.

The representative portfolio is an account we believe most closely reflects current portfolio management style for the strategy. Performance is not a consideration in the selection of the representative portfolio. The characteristics of the representative portfolio shown may differ from those of other accounts in the strategy. Information regarding the representative portfolio and the other accounts in the strategy is available upon request.

The specific securities identified and described above do not necessarily represent securities purchased, sold or recommended for clients in the strategy. This information is not intended to be a recommendation to take any particular investment action and is subject to change. No assumptions should be made that the securities identified and discussed above were or will be profitable.

and high end market demand, including the specialty chemical and packaging industries. Diversified and specialty chemical producers, which benefited from lower energy prices, were among the biggest performers in our strategy in 2017.

- Regulated utilities that can maintain durable growth in a low-rate environment, with an emphasis on delivering cheap natural gas.
- Companies with limited financial leverage and no hidden counterparty risk.
- Energy exploration and production companies with strong balance sheets that can reduce costs and maintain growth, particularly select North American shale producers with operations in the Permian Basin.
- Specific areas of the utilities, chemicals, and metals industries with exposure to electric vehicles.

Even if the near-term environment presents challenges, we believe the market will reward our disciplined and consistent investment approach over time.

Key Risks—The following risks are materially relevant to the strategy highlighted in this material: Transactions in securities of foreign currencies may be subject to fluctuations of exchange rates which may affect the value of an investment. The strategy is subject to the volatility inherent in equity investing, and its value may fluctuate more than a strategy investing in income-oriented securities. The strategy is subject to sector concentration risk and is more susceptible to developments affecting those sectors than a strategy with a broader mandate.

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T. Rowe Price focuses on delivering investment management excellence that investors can rely on—now and over the long term.

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