PACIFIC FUNDS
Manager Insight Series

Below is the latest commentary from Pacific Life Fund Advisors, the investment advisor to the Pacific Funds.

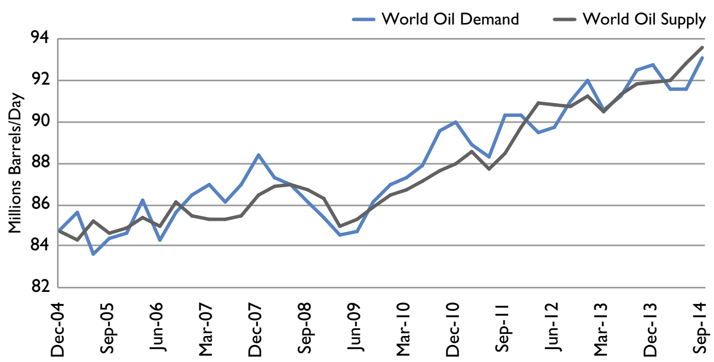
The Ripple Effect of the Oil Plunge

Oil's rapid drop in the fourth quarter of 2014, which erased more than 40% of the future contract's value[1], took nearly everyone by surprise. The reasons, ramifications, and duration of the plunge have been dominating debates between investors and are sure to play a key role in policy decisions of central bankers in the year ahead. In this article, we will cover what may have led to the collapse of oil prices, what the possible impact on global economies and asset classes may be, and hypothesize as to when oil prices may begin to recover.

A Game of Chicken

Explanations of plummeting oil prices have included some colorful conjecture. Venezuelan President Nicolás Maduro remarked that Western nations, led by the U.S., are seeking "to destroy Russia as well as Venezuela, to try to re-colonize and destroy our revolution, and cause economic collapse."[3] Others believe that Saudi Arabia's refusal to cut production on November 27, 2014 was their attempt to starve U.S. shale producers before they become an even greater danger to the Organization of the Petroleum Exporting Countries' (OPEC) weakening hold on energy markets. While there may be some validity to these theories, we believe that rather than an oil war, producers are engaged in a game of chicken—with nobody willing to reign in rising production that is outpacing global demand.

Figure 1: Total Global Oil Supply and Demand



Source: International Energy Agency, September 2014.

"Whoever controls oil controls much more than oil."
– John McCain, June 2008[2]

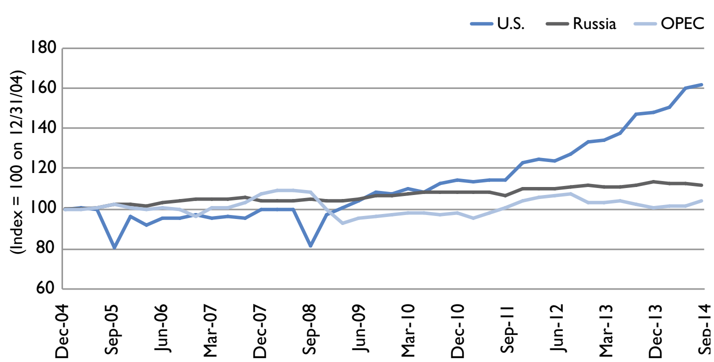
Key Takeaways

- The plunge in oil prices is shaping up to be one of the key themes for both investors and policymakers as we head into 2015.
- The shale revolution in the U.S. has created an overabundance of supply.
- Major oil producers are either unwilling or unable to cut production.
- The impact of lower oil prices should be generally positive for global equities and countries that are net energy importers, but it poses a risk to energy exporters as well as high-yield and inflation-linked debt.
- The economic "invisible hand" will eventually force oil supply and demand to meet at a new equilibrium price.

[1]Bloomberg.
[2]"McCain's Energy and Climate Speech." The New York Times, 6/1/08, accessed 1/5/15, NYTimes.com.
[3]"Maduro: Venezuelan Oil Is Trading at USD 48 per Barrel." EL UNIVERSAL. El Universal, 29 Dec. 2014. Web. 05 Jan. 2015.

There are several reasons why growth in demand for oil has been decelerating, from China's economic slowdown to a lower reliance on fossil fuels among developed nations. However, momentum on the supply side of the equation has steadily been increasing. For this, the U.S. is indeed responsible. The reason for this expansion isn't rooted in a conspiracy theory, but rather in rapid advancements of hydraulic fracturing technology that have reduced well drilling start-up costs and improved extraction efficiency. This motivated numerous independent operators to jump into the fracking fray. These smaller producers have no incentive to scale back; doing so would hurt their profits while having no meaningful impact on oil prices. Moreover, for many domestic shale operators, the break-even cost of production is around $42[4] (per barrel), which means they are still profitable, albeit much less so than earlier in 2014.

Figure 2: Growth in Oil Supply



Source: Bloomberg, U.S. Department of Energy, September 2014.

Most other producers have far higher break-even levels, but they are either unwilling or unable to pump the brakes. Russia needs all the revenue it can get given the downward spiral of its economy and its ongoing conflict with Ukraine that has resulted in sanctions, which curtail Russia's access to capital markets. Furthermore, turning off Siberian wells is impractical during the dead of winter.

Saudi Arabia has historically been the "swing producer"—cutting its output to boost global oil prices. However, given its declining market share and abundant cash reserves to fall back on, Saudi Arabia no longer wants to be the martyr, especially as its actions would equally benefit members of the cartel and non-OPEC producers. "Whether [oil] goes down to $20 a barrel is irrelevant,"[5] said the Saudi oil minister in December 2014—reaffirming their decision to let someone else take the hit this time around. And thus, this game of chicken continues for the time being.

A Gift or a Curse? The Effects of Lower Oil Prices

Some impacts of lower oil prices are fairly intuitive. For example, industries that rely on oil or one of its derivatives as an input, like airlines and shippers, stand to gain through margin expansion. Conversely, drilling and exploration firms have seen their margins go from a geyser to a trickle.

Speaking more broadly, at the asset class level, world equities should benefit from less expensive oil. Energy firms make up approximately 8% of the MSCI World Index, while the Consumer and Industrial sectors (both of which could profit from lower oil prices) represent a combined 33% of the index.

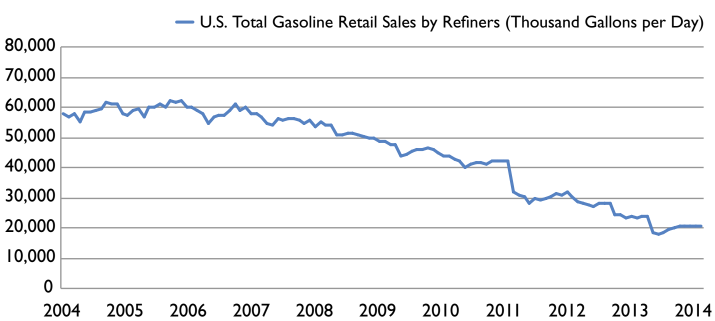
The outlook is less optimistic for fixed-income securities. In particular, domestic high-yield bonds have a significant exposure to the Energy sector because many of the independent energy firms mentioned earlier issued debt to raise financing required for their capital-intensive shale projects. As 7% of that debt is scheduled to mature over the next few years, default risk is elevated as long as issuers' margins remain tight due to lower oil prices.

Treasury Inflation-Protected Securities (TIPS) are also highly sensitive to oil price fluctuations since gasoline prices are a major contributor to the Consumer Price Index (CPI), which is used to adjust the principal (and thus the dollar coupon payout) of TIPS. In its November 2014 CPI report, the Bureau of Labor Statistics noted that gasoline prices were "the main cause of the decrease in the seasonally adjusted all items index."[6]

[4] "Oil Market Report: 14 November 2014." *IEA*. International Energy Agency, 14 Nov. 2014. Web. 05 Jan. 2015.
[5] "OPEC Will Not Cut Output Even at $20 a Barrel: Saudi." *Yahoo! News*. Yahoo!, 23 Dec. 2014. Web. 05 Jan. 2015.
[6] U.S. Department Of Labor. Ed. Malik Crawford, Jonathan Church, and Bradley Akin. "CPI Detailed Report: Data for November 2014." *Bureau of Labor Statistics*. U.S. Department of Labor, 17 Dec. 2014. Web. 5 Jan. 2015.

Broadening our focus even more to the country level, lower oil prices may either grease or throw a wrench in the wheels of each nation's economic recovery. For the U.S., the overall impact is somewhat ambiguous. The aforementioned lower gasoline prices at the pump should promote increased discretionary spending, which would boost economic growth. A caveat to this theory is that U.S. consumers have been aggressively reducing their fossil fuel dependence, and thus their disposable income may not get as big of a bump from lower gasoline prices. A clearer winner is Japan, a significant importer of crude oil and exporter of autos. Additionally, both the Japanese and European central banks may see the deflationary impact of falling oil prices as another impetus to ramp up their stimulus measures, which would give further steam to their respective economic recoveries.

Figure 3: Reduction in Domestic Gasoline Demand



Source: U.S. Energy Information Administration, released January 2, 2015.

The impact to emerging market (EM) nations is largely a question of whether they are net oil importers or exporters. Much like Japan, Asian EM economies are net importers and may therefore benefit from lower oil prices. However, the outlook is grim for energy producers, with Russia being the most visible victim given that oil is its biggest export. Russia's finance minister expects the country's economy to contract 4% in 2015 and its cash reserves to be depleted within three years if oil stays below $60 per barrel.[7] Latin American exporters, such as Mexico, Venezuela, and Colombia, may also see their economies take a significant hit if oil prices don't recover early this year.

Self-Correcting Economics of Oil

The economic "invisible hand" is a powerful force in correcting supply-and-demand imbalances, and it is often the only one that can effectively mitigate issues that span multiple nations. Lower fuel prices can tempt consumers with elastic demand curves. For example, an airline may increase its flight count and a freight company may put more trucks on the road. We would expect the effect of lower oil prices to have the opposite impact on energy producers.

We believe lower oil prices should reduce capital expenditures for energy firms, especially with the previously mentioned debts coming due, leading to a stall in the supply growth that has been accelerating over the past few years. Additionally, smaller producers without the financial resources of Saudi Arabia, and whose break-even price is far above current levels, will likely be forced to cease production. Thus, with suppliers scaling back while consumer demand continues to rise, oil prices should be pushed up to new equilibrium levels.

In a world that is becoming ever more interdependent, investors should be aware of how a change in one factor, such as lower oil prices, can have profound ripple effects on global economies, companies, and their securities. To help lessen the impact of these ripples on a portfolio, investors should consider employing a strategy of diversification. It can help reduce volatility so that your portfolio can better withstand the rapidly shifting tides of various market regimes.

[7]Tanas, Olga, Andrey Biryukov, and Anna Andrianova. "Russia May Burn Wealth Funds in 3 Years Without Cuts." *Bloomberg.com.* Bloomberg, 27 Dec. 2014. Web. 05 Jan. 2015.

The **MSCI World Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. The MSCI World Index consists of the following 23 developed market country indexes: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

The **Consumer Price Index (CPI)** is a measure of the average change over time in the prices paid by consumers for a market basket of consumer goods and services as determined by the U.S. Bureau of Labor Statistics.

Treasury Inflation Protected Securities (TIPS) are treasury securities that are indexed to inflation in order to protect investors from the negative effects of inflation.

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