

## Playing ‘What If?’ with Oil Prices and a Potential Strike on Iranian Nuclear Facilities

There has been a lot of market chatter over the past few weeks regarding a potential Israeli strike on Iranian facilities. The market’s focus on the region has been heightened by the latest International Atomic Energy Agency (IAEA) report on Iranian nuclear activities. All of this could have significant and direct implications for the oil market and secondary implications for the global economy, depending on which scenario actually plays out. Further, given the heightened level of geopolitical instability around the globe, the conclusions we can draw by evaluating this particular situation may be useful when assessing the danger of other potential or realized supply disruptions. Although we cannot (and will not) predict whether an attack is imminent, or even likely, it is important to analyze the potential outcomes to prepare portfolios for tail risk events.



**Greg E. Sharenow**

Executive Vice President  
Portfolio Manager

Today, markets are much more vulnerable to significant price spikes stemming from a new supply disruption than they were during the 1990/1991 Iraqi Invasion of Kuwait or even 1980 Iran-Iraq War. Due to significant production outages and relatively strong non-OECD demand leading to sharp draws on inventories this past year, the market also has significantly less “cushion” than it did earlier this year when the Libyan conflict began. Therefore, any event could pose a formidable risk to the global economy (e.g. a real supply disruption scenario would require higher prices to lower demand in order to balance the market). This could come at a time when the global economy, or at least the developed world, is facing fiscal headwinds and limits on monetary policy.

---

## Excess Capacity Nearly Exhausted

The sad fact is that the market is running at extremely high capacity utilization. Core OPEC countries (Saudi Arabia, Kuwait and UAE) are producing at their highest level in decades. Saudi Arabia is the lone producer with any real excess capacity, most of which is untested. Inventories currently are low, falling below the five-year average for the first time since 2008, and have been drawing quickly. Most of the “excess” stocks in the commercial data are in the U.S. mid-continent and are not available for consumption as they went to fill base storage in tanks and to fill pipelines. Commercial inventories would be even lower if not for the OECD’s release of 35 million barrels of strategic reserves this summer. This limited current excess capacity differs greatly from prior supply shocks when a combination of OPEC producers, particularly Saudi Arabia, stepped in to replace most of the lost output.

Iran currently produces 4.0 million barrels per day (b/d) and exports 2.3 million b/d of total hydrocarbons. This is roughly twice the amount Libya exported before it halted production and exports this past spring. Further, the scale of oil demand loss needed to match a loss in exports from Iran is roughly comparable to the peak loss in demand realized during the depths of 2008/2009 recession. Note, peak loss in output in the 1990/1991 Iraqi invasion of Kuwait was roughly 4.5 million b/d and the peak loss of output from the Iran/Iraq War was also roughly 4.5 million b/d. We estimate that the loss of Libyan oil added roughly \$20 per barrel to prices over the past six months.

We doubt that other OPEC members will be able to replace lost Iranian exports and we are concerned that they are at risk for lower, not higher, output. While Saudi Arabia will likely respond by boosting output, we estimate excess capacity is unlikely to be much higher than 1.5 million barrels per day. The big problem is that Saudi Arabia has limited export capability to the Red Sea and relies on the perilous Strait of Hormuz for most of its crude oil exports. A total of 16 million barrels of oil exports through the Strait of Hormuz each day, in addition to liquefied natural gas (LNG) exports from Qatar. While the U.S. military presence should keep the Straits open (gulp), the market will initially be very afraid of larger losses. The new Abu Dhabi Crude Oil Pipeline (ADCOP) project to go into service shortly will only relieve a fraction of the bottleneck should one develop.

Further, any threat of problems might lead insurers to remove coverage or greatly increase costs for tankers heading into the Arabian Gulf, which would grind a significant portion of exports to a halt until the risks are truly reduced. Iraqi and Iranian export terminals are also fairly close to one another, creating risk to an additional 1.7 million b/d of exports. Lastly, Iran’s allies pose an additional threat to onshore output throughout the MENA

region. The point here is not to project these as likely events, but rather to talk about the calculus the market will go through if they occur.

## Strategic Reserves Could Offer One Major Offset

The International Energy Agency (IEA) has 1.5 billion barrels of oil in strategic reserves, built up following prior supply shocks. Non-OECD consumers (mainly China) have another 150 million barrels. This is a non-trivial amount of oil and we would expect the IEA to immediately spring into action should output actually be lost, and to verbally assure the market that the supplies are available should disruption occur. Any stock release will slow price increases, but will likely also lead to more back-end buying, over time, as stocks will be replenished. Relying on IEA is no panacea; it will simply serve as a buffer.

## Duration and Severity of Disruption Matters

Given low spare production capacity and reliance on strategic stocks, the duration and severity of any disruption would be an important determinant to the path of oil prices. It is conceivable that no output would be lost at all because it is in Iran’s interest to still receive oil revenue. The timing of the price hike would also depend on the extent the market was surprised, should an attack occur. For the 2003 U.S. Invasion of Iraq, prices rallied before the invasion and peaked shortly after the war began as the invasion was so well publicized and retreated once the market was assured that Saddam Hussein did not set Iraq’s wells on fire like he did in Kuwait a decade earlier. It was not until a few months later when Chinese oil demand accelerated did oil prices begin a steady upward trend that lasted for over a year.

Below we outline four hypothetical scenarios for output and prices that could materialize if Israel attacks Iran’s nuclear sites. Again, we emphasize that we are not predicting the likelihood of Israel’s action or inaction in any way.

- *Scenario 1:* Exports minimally effected. Concerns would drive initial price response. IEA would likely make statements about willingness to meet any shortfall in supplies. Oil could spike initially to \$130 to \$140 per barrel and then settle in a higher range, around \$120 to \$125, in relatively short order as a premium (mostly a risk premium) becomes embedding into the market, at least for a while. The timing of the spike would depend on how much the market is taken by surprise and whether or not the strike is priced in ahead of time.
- *Scenario 2:* Iranian exports cut off for one month. IEA would likely swing into action and Saudi Arabia could begin to offer more oil into market. In this case, we would expect prices could reach previous all-time highs of \$145/bbl or even higher depending on issues with shipping. The IEA and Saudi Arabia can meet

---

market needs, but the increase in uncertainty and the loss of spare capacity would affect pricing. In this case, after a few months, we would expect prices could fall back to \$130 to \$135/bbl range.

- *Scenario 3:* Iranian exports are lost for half a year. This is where the potential outcomes get quite dicey. We think oil prices could probably rally and average \$150 for the six months, with notable spikes above that level. The IEA would likely release oil steadily, but consumption will need to take a hit from prices and slower economic activity. Once Iranian crude oil returns to the market and the environment stabilizes, oil would likely return to around \$110/bbl or even lower depending on global strength at the time.
- *Scenario 4:* Greater loss of production from around the region, either through subsequent Iranian response or due to lack of ability to move oil through Straits of Hormuz. This is the Armageddon scenario in which oil prices could soar, significantly constraining global growth. Forecasting prices in the prior scenarios is dangerous enough. So, we won't even begin to forecast a cap or target price in this final Doomsday scenario.

### **Takeaway: Be Prepared with Active Portfolio Management**

Whenever the global economy is in a fragile state, as it is today, geopolitical concerns such as the possibility of a strike on Iran's nuclear facilities become much more exaggerated. Although we cannot (and will not) predict whether an attack is imminent, or even likely, our experience and research tells us that any major disruption in the supply of oil from Iran could have either subtle or profound global repercussions – especially as excess capacity is virtually exhausted and we doubt that other OPEC nations would be able to compensate for a reduction in Iranian oil production.

Of course, the severity of any impact on the global economy would depend on several factors, including possible intervention by the IEA, the duration of the supply disruption, and the degree to which any attack takes the market by surprise. Therefore, we continue to monitor the situation closely and look to PIMCO's worldwide research and intellectual capabilities to help investors better prepare their portfolios to withstand any of the scenarios that may eventually materialize. In light of these possible spikes in oil prices, investors should evaluate how their portfolios might be affected by a sudden or sharp burst of inflation.

## Biography

Mr. Sharenow is an executive vice president in the Newport Beach office and a portfolio manager focusing on real assets. Prior to joining PIMCO in 2011, he was an energy trader at Hess Energy Trading, Goldman Sachs, and DE Shaw. Mr. Sharenow was previously senior energy economist at Goldman Sachs. He has 12 years of investment and financial services experience and holds bachelor's degrees in mathematical methods in the social sciences and in economics from Northwestern University.

Past performance is not a guarantee or a reliable indicator of future results. All investments contain risk and may lose value. Commodities contain heightened risk including market, political, regulatory, and natural conditions, and may not be suitable for all investors.

This material contains the current opinions of the author but not necessarily those of PIMCO and such opinions are subject to change without notice. This material has been distributed for informational purposes only. Forecasts, estimates, and certain information contained herein are based upon proprietary research and should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed.

PIMCO provides services only to qualified institutions and investors. This is not an offer to any person in any jurisdiction where unlawful or unauthorized. | **Pacific Investment Management Company LLC**, 840 Newport Center Drive, Newport Beach, CA 92660 is regulated by the United States Securities and Exchange Commission. | **PIMCO Europe Ltd** (Company No. 2604517), PIMCO Europe, Ltd. Munich Branch (Company No. 157591) and PIMCO Europe, Ltd. Amsterdam Branch (Company No. 24319743) are authorised and regulated by the Financial Services Authority (25 The North Colonnade, Canary Wharf, London E14 5HS) in the UK. The Munich Branch is additionally regulated by the BaFin in accordance with Section 53b of the German Banking Act. The Amsterdam Branch is additionally regulated by the AFM. PIMCO Europe Ltd services and products are available only to professional clients as defined in the Financial Services Authority's Handbook and are not available to individual investors, who should not rely on this communication. | **PIMCO Asia Pte Ltd** (501 Orchard Road #08-03, Wheelock Place, Singapore 238880, Registration No. 199804652K) is regulated by the Monetary Authority of Singapore as a holder of a capital markets services licence and an exempt financial adviser. PIMCO Asia Pte Ltd services and products are available only to accredited investors, expert investors and institutional investors as defined in the Securities and Futures Act. | **PIMCO Asia Limited** (24th Floor, Units 2402, 2403 & 2405 Nine Queen's Road Central, Hong Kong) is licensed by the Securities and Futures Commission for Types 1, 4 and 9 regulated activities under the Securities and Futures Ordinance ("SFO"). PIMCO Asia Limited services and products are available only to professional investors as defined in the SFO. | **PIMCO Australia Pty Ltd** (Level 19, 363 George Street, Sydney, NSW 2000, Australia), AFSL 246862 and ABN 54084280508, offers services to wholesale clients as defined in the Corporations Act 2001. | PIMCO Japan Ltd's (Toranomon Towers Office 18F, 4-1-28, Toranomon, Minato-ku, Tokyo, Japan 105-0001) Financial Instruments Business Registration Number is Director of Kanto Local Finance Bureau (Financial Instruments Firm) No.382. **PIMCO Japan Ltd** is a member of Japan Securities Investment Advisers Association and Investment Trusts Association. Investment management products and services offered by PIMCO Japan Ltd are offered only to persons within its respective jurisdiction, and are not available to persons where provision of such products or services is unauthorized. The value of assets fluctuate based upon prices of securities in the portfolio, market conditions, interest rates, and credit risk, among others. Investments in foreign currency denominated assets will be affected by foreign exchange rates. All profits and losses incur to the investor. There is no guarantee that the principal amount of the investment will be preserved, or that a certain return will be realized; the investment could suffer a loss. The fee charged will vary depending on the investment trust acquired or the investment advisory agreement entered into; these materials do not set forth specific fee amounts or their calculation methodologies. | PIMCO Canada Corp. (120 Adelaide Street West, Suite 1901, Toronto, Ontario, Canada M5H 1T1) services and products may only be available in certain provinces or territories of Canada and only through dealers authorized for that purpose. | No part of this publication may be reproduced in any form, or referred to in any other publication, without express written permission. © 2011, PIMCO.

---

**Newport Beach Headquarters**  
840 Newport Center Drive  
Newport Beach, CA 92660  
+1 949.720.6000

---

**Amsterdam**

---

**Hong Kong**

---

**London**

---

**Munich**

---

**New York**

---

**Singapore**

---

**Sydney**

---

**Tokyo**

---

**Toronto**

---

**Zurich**

[pimco.com](http://pimco.com)

**P I M C O**