Iran’s Nuclear Ambitions: A Looming Crisis For the Oil Market

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Key Themes

• The oil market has entered a prolonged period of fundamental tightness, geopolitical risk, and oil price volatility
• OPEC (Saudi) spare capacity is and will likely remain low
• Therefore, market sensitivity to geopolitical disruptions is very high
• Iran’s nuclear crisis may come to a head this year and oil market participants are starting to price in conflict risk – LNG exports are also a concern
• Scenarios: (1) Iran concedes; (2) Iran prevails; and (3) conflict
• Iran’s pursuit of a nuclear weapons capability will lead to oil and LNG market turbulence, one way or the other
Absent Supply Control, Oil Prices are Prone to Booms and Busts

Crude Oil Prices
Nominal, Source: BP

1861-1944 US Average.
1945-1983 Arabian Light posted at Ras Tanura.
1984-2008 Brent dated.
“The Cure for High Oil Prices Is High Oil Prices”...?
Next Major Bullish Driver To Come On The Demand Side

*Consensus may be lowballing oil intensity of EM GDP growth*

- Historical experience of oil demand responding to price hikes **not** likely to repeat
- Consensus forecasts (DOE/EIA, IEA) assume an **unlikely** decline in per capita energy consumption
- But if per capita energy use increases, demand will be much higher (as much as 30% compared with consensus forecasts by 2030)

Figure 15. Per-capita oil demand 1971-2008, and projections to 2030 using DOE Reference Case assumptions for crude oil prices and income growth: DOE projections and Our Projections

World oil demand’s shift toward faster growing and less price-responsive products and regions, by Joyce M. Dargay and Dermot Gately, February 2010

China Is Scrambling to Build Stocks In a Tight Market

The US was lucky to fill stocks with oil freed up by demand-switching, recessions and non-OPEC supply surges

US Crude Inventory Changes 1950-2009

DOE/EIA, Annual Data

OPEC Spare Capacity As a Percentage of Total Demand

US and OECD filled stocks here when the market was loose

China and other emerging countries will fill here when the market is tight

Data: DOE/EIA
Current Status – Oil Market is Tight and Fearful

Non-OPEC supply growth disappoints....

...Inventories are low outside North America.

Regional OECD End-of-Month Industry Stocks (in days of forward demand and mill and barrel of total oil)

1 Days of forward demand are based on average demand over the next three months.
Sufficient Spare Capacity?

Barely, and Not If Disruption Risk Returns

Oil Disruptions, OPEC Spare Capacity, and Crude Prices
Prices: '72-'73 Arab Light, '74-present US Refiner Average Imported Crude Cost

Sources: The Rapidan Group, EIA

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The Rapidan Group - Geopolitical Event Risk Calendar/ Crude Oil – Mar ’12 through May ’12

Timing is approximate unless noted. Event probability denoted as follows: ^^^ high, ^^ moderate, ^low

March

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^^^ **Iraqi civil conflict/instability. Possible repeat of large (0.6-0.7 mb/d) but brief Rumaila bombing disruptions on Oct 7 and Dec 13

^^ Mar 2 Iranian parliamentary elections

^^ Libya: Restart of production and exports discounted; now infighting, instability, and downward revisions threaten reported production levels

^^ Nigeria: Worsening unrest in north could trigger reprisals in oil-producing south; strike risk low but MEND violence may pick up

April

^^^^ Mar 30 Pres. Obama’s Iran/supply adequacy decision

^^^^ April 1 Several Iranian term crude contracts expire

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May

^^ End-April EIA supply/price adequacy report

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^^ End-May EU review of sanctions

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^^ Sudan – Ongoing dispute between North and South risks becoming military conflict. ~350 kb/d of South crude production currently disrupted.

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^^ Mar 5 IAEA report and board meeting on Iran / PM Netanyahu in DC

^^^ End-March IAEA report and board meeting on Iran / PM Netanyahu in DC

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^^ Syrian elections have shown Islamist parties consolidating power, with Muslim Brotherhood demanding military cede power

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^^ P5+1/Iran talks could resume

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^^ SPR use likely even absent a major disruption if Brent and/or pump prices continue rising above macro pain threshold levels.

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This month’s key changes: P5+1 talks restart and possible SPR use new short term bearish drivers.
Spare Capacity Not Enough For Peacetime, Much Less Additional Disruptions

OPEC Spare Capacity and Selected Oil Production and Flows

Source: Rapidan Group, March 2012 IEA and EIA monthly reports, and press reports

OPEC Spare Capacity Estimates

Historical and Potential Oil Disruptions

Gross Peak Oil Supply Loss

Sources: IEA, EIA and Rapidan

Threatened Disruptions
(excluding Natural Gas Liquids)

IEA Total: 2.75
IEA Effective: 2.69
EIA: 2.69
Rapidan Group: 1.6
Low Estimate: 0.50

Southern Iraq: 1.7
Iran's Exports: 2.5

Millions of barrels per day (mb/d)

Historical and Potential Oil Disruptions

Gross Peak Oil Supply Loss

Sources: IEA, EIA and Rapidan

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Strategic Stocks Are Available
Recently US SPR drawdown rates have come under scrutiny

US Strategic Stocks

IEA Strategic Stocks

Strategic Petroleum Reserve Oil Drawdown Capability

- Max Sustained Drawdown: 4.4 Million B/D for 90 Days
- Site Sustained Drawdown: 90% of Inventory at Max Rate
- Full Drawdown of Inventory in 180 Days

IEA, 2010
**Scenarios**

1. Iran freezes enrichment to enable negotiations to begin and stop the drift toward conflict – crude oil prices drop by about $5-10 per barrel as risk premium exits.

2. Conflict – Tensions escalate into overt military conflict - (See next page)

3. Iran achieves a hardened breakout capability or nuclear weapon
   
   No major impact on oil prices in 2012 but worst case for oil price stability afterward

Stable Cold War “Containment” paradigm unlikely to work with Iran and the Persian Gulf Region

- Cold War was very violent and nearly catastrophic in first decades – in Iran/Israel’s case this initially violent/uncertain phase would play out in the confined but energy-critical Middle East.
- Containment requires credible deterrence, testing/demonstration of capabilities – how will oil and LNG prices respond to Israeli, Iranian, Saudi, and other nuclear tests?
- Cold War: bilateral; secure, conservative regimes, risk-averse; 70 years of ideological hostility. Iran: Poly-nuclear Middle East; insecure and reckless regimes; religious/ethnic conflict spanning millennia.

**Conclusion:** Nuclear, hostile Iran + tight oil market = prolonged and high disruption risk and turbulent oil and LNG prices.
Iran-Related Conflict: Short Term Oil Price Impacts

Other crude price estimates
• Bank of America – loss of Iran’s 2.5 mb/d = $140 WTI crude.
• IMF – loss of 1.5 mb/d Iranian supply = initial price of $120-$130 WTI crude (Brent about $10 higher)

LNG
• 33% of global LNG flows through Strait of Hormuz
• Damage to Qatar’s Ras Laffan production complex a risk
• Ras Laffan vulnerable to Iranian missiles; repairs could take years
• Most immediate impact on spot cargoes (19% of supply)
• Impact worst in winter, when gas demand peaks

Source: The Short-Term Impact On The Oil Market Of A Possible Military Conflict With Iran - November 2011 Update, The Rapidan Group

(We are in the process of updating this study)