جدوى للإستثمار
Jadwa Investment

January 2016

Quarterly Oil Market Update

Oil prices are going to be lower for longer

Summary

- The current period of low prices is set to remain throughout 2016, pulled down primarily as a result of persistently high oil supply. All-out competition between members of OPEC will be the main reason for continued oversupplied markets.

- Even as non-OPEC supply begins to slow during 2016 the additional supply coming on-line from a sanction free Iran will mean global oil markets will be looking at demand to lift prices out of the doldrums. But recently downward revised global economic growth forecasts by the IMF point to moderate yearly growth in oil demand.

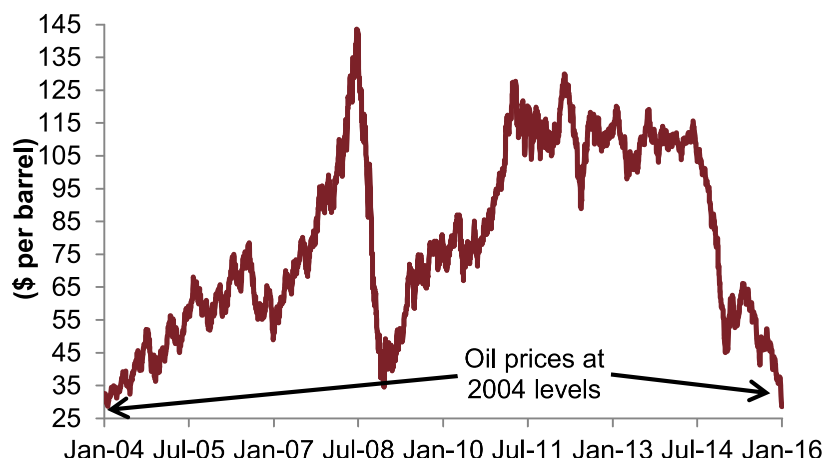
- We expect to see OPEC production rising by a further 500 tbpd by Q4 2016 year-on-year with most of the rises coming from increased Iranian supply.

- Since Saudi Arabia is currently the only major oil producer with spare oil production capacity it remains well equipped to hold off any attempts of encroachment on its market share.

- Moderate growth in global oil demand coupled with oversupply plus continued building of global commercial crude stocks has led us to cut our full year 2016 Brent forecast to $33 pb, from $47 pb previously, and 2017 forecast to $44 pb from 58 pb previously.

- The revision in oil prices have implications for our forecasts on the Kingdom's fiscal and external balances and total spending for 2016.

Figure 1: Brent crude oil prices have dropped to 12 year lows recently



Source: Thomson Reuters and Jadwa Investment

For comments and queries please contact:

Fahad M. Alturki
Chief Economist and Head of Research
falturki@jadwa.com

Asad Khan
Senior Economist
rkhan@jadwa.com

Rakan Alsheikh
Research Analyst
ralsheikh@jadwa.com

Head office:
Phone +966 11 279-1111
Fax +966 11 279-1571
P.O. Box 60677, Riyadh 11555
Kingdom of Saudi Arabia
www.jadwa.com

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Moderate oil demand

Recently downward revised global economic growth rates by the IMF points to moderate yearly growth in oil demand.

Oil prices in Q4 2015 were impacted by continued question marks over potential Chinese economic growth, the abandonment of even the notional idea of production quotas in the December OPEC meeting, expectations of an even stronger dollar and the anticipation of additional Iranian supply in an already oversupplied market. Brent oil prices slumped to an average $43 pb in the final quarter of 2015, compared to $50 pb in Q3 2015 (Figure 1) with the downward trend continuing into early 2016. We see oil prices being pressured throughout most of 2016 as a result of persistently high oil supply. All out competition between members of OPEC will be the main reason for continued oversupplied markets. Even as non-OPEC supply begins to slow during 2016 the additional supply coming on-line from Iran will mean global oil markets will be looking at demand to lift prices out of the doldrums. But recently downward revised global economic growth by the IMF points to moderate yearly growth in oil demand (Figure 2).

Lower gasoline prices in the US in 2016 will see a rise in imports of heavier crude types…

...but the affect on price will be limited the since lifting of the crude export ban will allow more light crude to international markets.

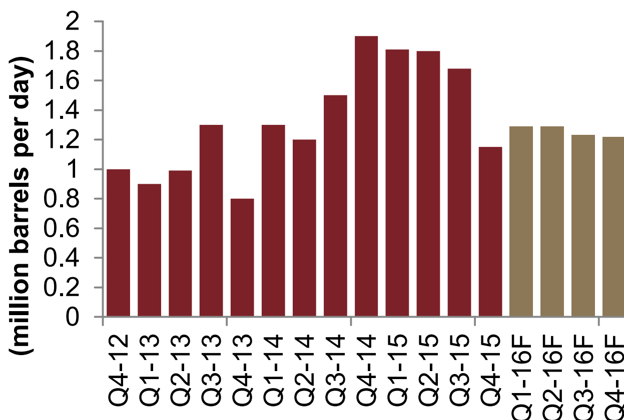
In the **US** (21 percent of global oil demand)**,** the sharp drop in benchmark crude West Texas Intermediate (WTI) since the middle of 2014, is stimulating demand. Lower prices are set to continue during 2016. According to the US's Energy Information Agency (EIA) gasoline prices are expected to reach a seven-year low of $1.90 per gallon in Q1 2016 and average $2.03 per gallon over 2016. Rising US oil demand and slowing US shale oil output (see Oil Supply section) will result in higher imports of heavy crude types during 2016 although the lifting of the US export ban will see more lighter crude types delivered to international markets, thereby limiting support for oil prices (Figure 3).

Europe will not provide a major boost to oil demand in 2016 due to structural factors.

Better economic performance and lower oil prices have not led to large rises in oil demand in **Europe** (14 percent of global oil demand). Q4 2015 oil demand remained subdued, growing by a modest 1.2 percent year-on-year. Europe will see similar levels of growth during Q1 2016 and for the rest of 2016. European oil demand is in a long-term downward trend due to structural factors such as a maturing economic base and rising fuel efficiency.

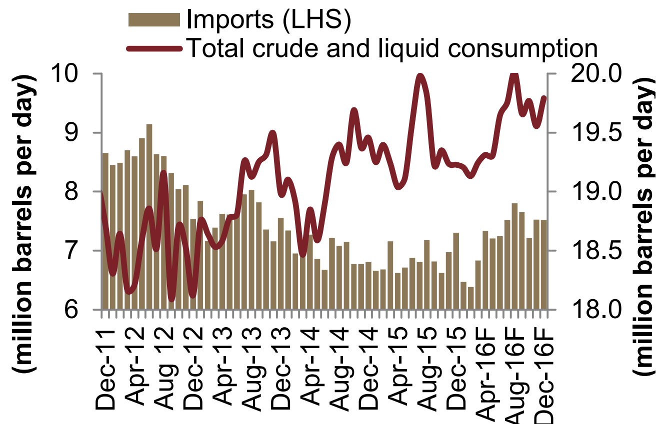
Concerns over future **Chinese** oil demand (12 percent of global oil

Figure 2: Moderate growth in global oil demand in 2016



Source: OPEC and Jadwa Investment

Figure 3: US liquid consumption and crude oil imports rising in 2016



Source: EIA and Jadwa Investment

Bearish outlook on future Chinese oil demand linked to weaker economic data is misleading…

...since a number of factors will keep demand steady in 2016…

...as demonstrated by record Chinese imports in December 2015 at 7.8 mbpd.

demand) have taken a more bearish outlook since the start of 2016 as a series of poor economic data releases provided further evidence that the economy may undershoot growth projections. Industrial data has been disappointing and the government has been forced to intervene in both the currency and financial markets to boost confidence. Although economic growth is likely to be weaker than forecasted, we do not see this adversely impacting oil demand in 2016. Latest data shows that oil imports grew by 9 percent year-on-year in Q4 2015 with total December imports at record highs of 7.8 mbpd (Figure 4). Chinese oil demand is set to ease in Q1 2016 due to seasonal factors related to new year festivities, but will not decline rapidly regardless of slower economic growth. China's demand for crude will be maintained by lower retail pump prices, rising vehicles sales, changes in the structure of China's industrial base and ongoing efforts to boost commercial crude stocks. China is expected to add around 120 million barrels of crude to storage capacity in 2016, the equivalent of 330 thousand barrel per day (tbpd) which should help keep demand growth up around 3 percent in 2016, year-on-year (Figure 5).

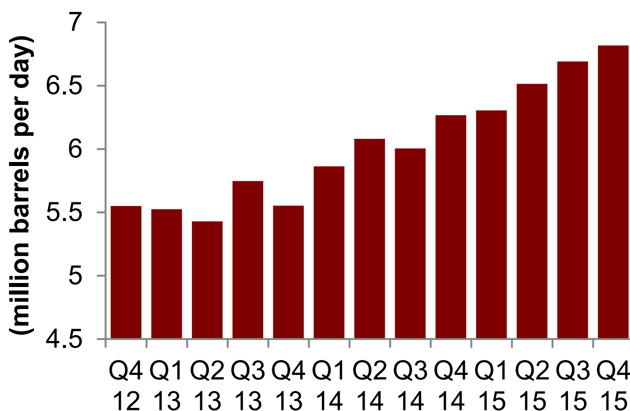
Three nuclear plant restarts in Q1 2016 plus anemic economic growth will add pressure to crude demand.

Preliminary Q4 2015 data shows that the restart of two nuclear reactors (in H2 2015) and sluggish economic growth combined to pull crude oil demand down by 3 percent year-on-year in **Japan** (4 percent of global oil demand). Currently, Japan has idled 41 nuclear reactors, out of a total of 43, since September 2013, when the country implemented strict nuclear safety requirements after the Fukushima accident. Prior to this, nuclear contributed to around a third of the electricity mix. Three additional nuclear plants could restart in Q1 2016 and this, coupled with anemic economic growth, will add further downward pressure to crude demand in Q1 2016 and the rest of 2016.

We see continued strong economic performance driving oil demand growth in India in Q1 2016 and beyond.

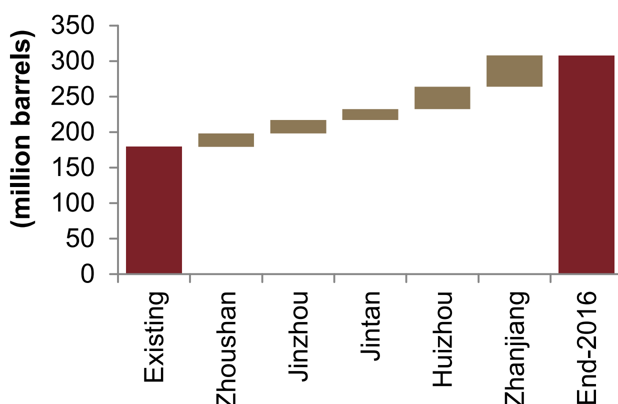
The drop in oil prices has acted as a economic windfall for **India** (4 percent of global oil demand) spurring a 4 percent rise in demand in Q4 2015 year-on-year. According to the Indian Ministry of Petroleum, the country is expected to cut crude import expenditure by 39 percent, or $44 billion, year-on-year, in the fiscal year to March 2016. Strong growth in GDP (at 7+ percent) and rising car sales will help lift oil demand growth in Q1 2016. Demand during 2016 will be sustained by strong industrial output, rising petrochemical feedstock

Figure 4: Chinese oil imports up to record levels in December 2015



Source: Thomson Reuters and Jadwa Investment

Figure 5: Chinese crude storage capacity additions during 2016



Source: Energy Intelligence and Jadwa Investment

demand and further stockpiling of strategic crude. This will cement India's position as the third largest global importer of crude oil, at near 4.1 mbpd, in 2016.

Saudi Arabia's total consumption is expected to average 2.8 mbpd in 2015.

Saudi Arabia's (3 percent of global oil demand) total crude consumption is expected to average 2.8 mbpd in Q4 2015 up 5 percent compared to the same period last year. The rise in oil demand is largely a result of the start up of the 400 tbpd Yasref refinery which came online earlier in 2015. Latest data shows that year-to-November 2015 crude demand was also at 2.8 mbpd, up 8 percent year-on-year, and slightly below our forecasted 2.9 mbpd for the full year 2015. We expect lower consumption in line with seasonal demand during cooler months in Q1 2016. Looking further ahead in 2016, whilst demand for crude will increase as three new crude oil-powered electricity plants come online, higher domestic energy prices (Figure 6) and increases in gas output (Figure 7) will help keep consumption flat year-on-year. The Hasbah and Arabiyah gas fields will produce non-associated gas processed by the Wasit plant. According to Saudi Aramco, the Wasit gas plant will add around 1.75 billion cubic feet of sales gas per day (bcf/d), which we expect will replace the use of more expensive industry diesel and crude oil in generating electricity.

Higher domestic energy prices and increases in gas output will keep consumption flat year-on-year in 2016.

Heavily over-supplied oil markets

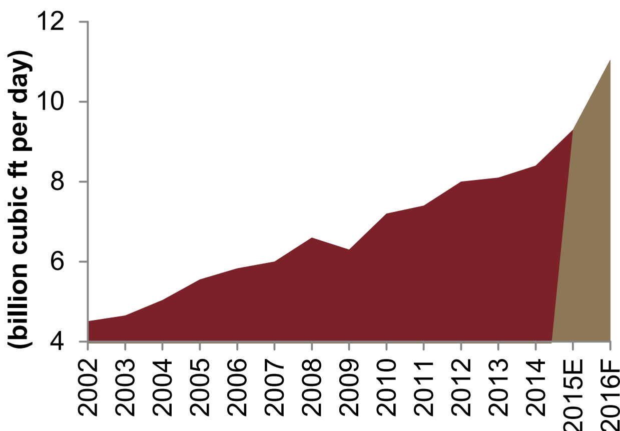
Non-OPEC supply declined in Q4 2015 year-on-year but OPEC rises more than compensated for the fall.

OPEC data shows that non-OPEC supply dropped by 530 tbpd in Q4 2015 year-on-year but this was more than compensated by OPEC supplies, which increased by 2.3 mbpd, over the same period. Further declines are expected in non-OPEC supply in Q1 2016, by around 320 tbpd, with declines in every subsequent quarter after, resulting in an annual decline of 500 tbpd in 2016. Amongst the largest non-OPEC players, both the US and Russia will see year-on-year declines in production.

US shale oil will see declines in production in Q1 and subsequent quarters in 2016...

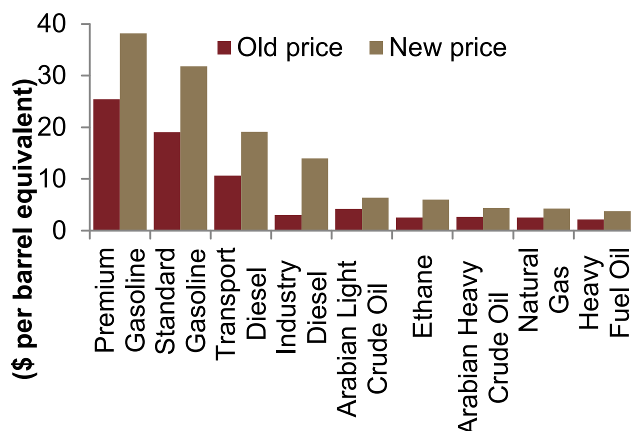
US shale oil maintained growth in Q4 2015, albeit at a narrow 1 percent year-on-year despite further falls in oil prices, as cost-cutting measures and hedging allowed production rises. Total US oil production growth in 2015 slowed to 8 percent year-on-year, compared to an average growth of 16 percent between 2012-14.

Figure 6: Saudi sales gas production expected to rise in 2016



Source: Saudi Aramco and Jadwa Investment

Figure 7: Saudi domestic energy price increases 2016



Source: Saudi Press Agency and Jadwa Investment

The EIA estimates that US production will decline by 4 percent year-on-year in Q1 2016.

According to latest EIA estimates, US production will decline in Q1 2016, dropping by 4 percent year-on-year. Production declines will continue throughout 2016 as a combination of lower oil prices, expiring oil hedges and tighter lending conditions (please see Jadwa's *Shale Oil report* published in October 2015 for more information) push US production down by 7 percent to a total of 8.8 mbpd in 2016 (Figure 8) but with risks of larger declines than forecasted (Figure 9).

Russian crude oil production will decline but to a lesser extent.

Preliminary data for Q4 2015 points to Russian oil output reaching a new post-Soviet record of 10.7 mbpd with year-on-year growth up by 1.4 percent. We expect Russian crude oil exports and production to remain at elevated levels, year-on-year, in the first quarter of 2016. The combination of international sanctions preventing Russian oil companies' access to international finance and limited incentives to producers, due to higher crude export duty tax, is likely to slow production growth in 2016.

We expect to see OPEC production up by around 500 tbpd by Q4 2016 year-on-year with most of the rises coming from increased Iranian supply...

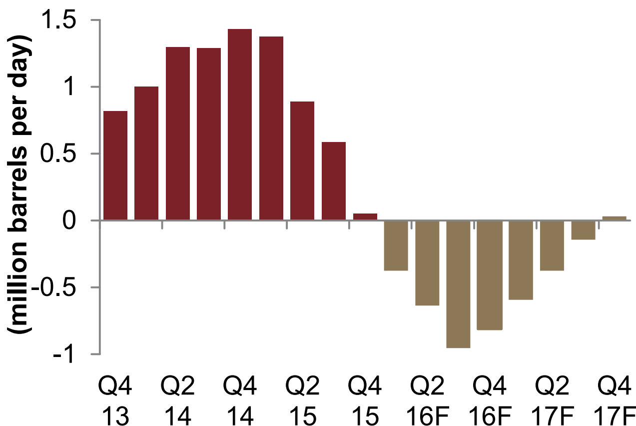
...although a number of other OPEC member countries ability to sustain production at current levels is being tested.

Total oil output from OPEC was up by 5 percent in Q4 2015, year-on-year, as a result of large increases from Iraq (up 22 percent) and Iran (up 10 percent), which pushed the organization's quarterly average to 32.5 mbpd. OPEC production in December 2015 was 2 mbpd higher than the November 2014 total, when it switched to defending market share from its previous policy of cutting output to maintaining prices. We expect to see OPEC production rising by 500 tbpd by Q4 2016 year-on-year with most of the rises coming from increased Iranian supply (Figure 10). Nevertheless, a number of OPEC member countries are facing acute financial pain which could negatively impact their ability to sustain production at current levels, presenting downside risks to our forecast.

Nigerian production could be affected by reform in the petroleum sector…

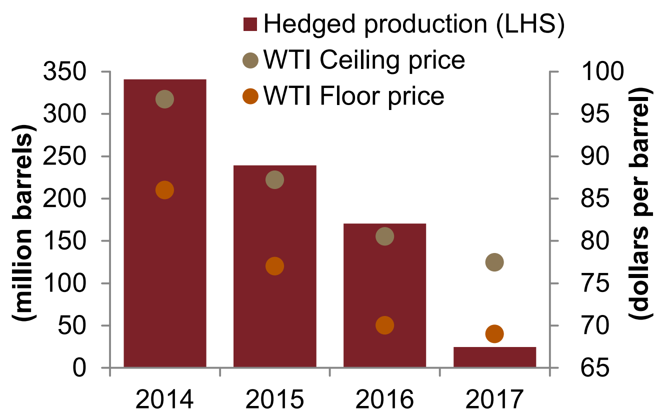
Nigeria's economy has been adversely affected by lower oil revenues and a weaker Naira currency which has affected economic growth forecasts. In addition, the new President, who took office in May 2015, pledged to reform the oil sector including renegotiating 20 year old crude oil production sharing agreements with major oil companies. He also pledged to eradicate corruption in the energy sector. These developments have resulted in delays in parliamentary approval for new oil projects and investment in existing ones. Lower oil prices have also impacted the finances of **Venezuela,** with a majority of government revenues being diverted to social spending

Figure 8: US production expected to decline in 2016 and 2017



Source: EIA and Jadwa Investment

Figure 9: Hedged production and prices at 30 US listed E&P companies



Source: Thomson Reuters, Public Filings and Jadwa Investment
Note: 2014 based on Q2 2014 data, other years from Q2 2015 data

...whilst a 64 percent decline in oil export revenue for Venezuela will leave very little for oil investment.

as the country is in the midst of a economic emergency. To underline the extent of the problem the IMF is predicting a staggering 720 percent inflation in 2016. Oil export revenue is expected to drop by 64 percent in 2016, compared to two years ago, to $27 billion. Since oil revenue is a major source of government revenue, very little cash will be left for capital expenditure for the national oil company Petroleos de Venezuela (PDVSA).

Although Iraqi crude production was up a substantial 22 percent, year-on-year, in Q4 2015…

...additional production rises during Q1 2016 and in 2016 will be more difficult to achieve as peak capacity is reached.

Although **Iraqi** crude production was up a substantial 22 percent, year-on-year, in Q4 2015, to 3.8 mbpd, we see additional production rises during Q1 2016 and in 2016 being more difficult to achieve. Upstream investment since 2009 has culminated in Iraqi crude production capacity reaching 4.5 mbpd, but this is significantly below targeted capacity of 10 mbpd outlined in its 10 year strategic plan back in 2008. The country's fiscal situation has deteriorated since 2013 due to lower oil prices, higher military spending, and costs associated with civil conflict. Although all efforts will be made to pump crude oil production to full capacity going forward, we do not see Iraqi production consistently reaching 4.5 mbpd. Continued fighting in the northern part of the country, infrastructure constraints in the south, and a delicate political resolution between the central government and the Kurdish Regional Government (KRG) will keep production around 4 mbpd during Q1 2016 and beyond.

Iran's crude output increased by 10 percent year-on-year in Q4 2015, to 3.3 mbpd, prior to lifting of sanctions.

Iran's crude output increased by 10 percent year-on-year in Q4 2015, to 3.3 mbpd, prior to lifting of sanctions, which took effect in mid-January 2016. The overall impact of additional Iranian supply will be negative for oil prices. We expect incremental growth in supply throughout 2016 totaling an additional 500 tbpd by Q4 2016, year-on-year (see Box 1).

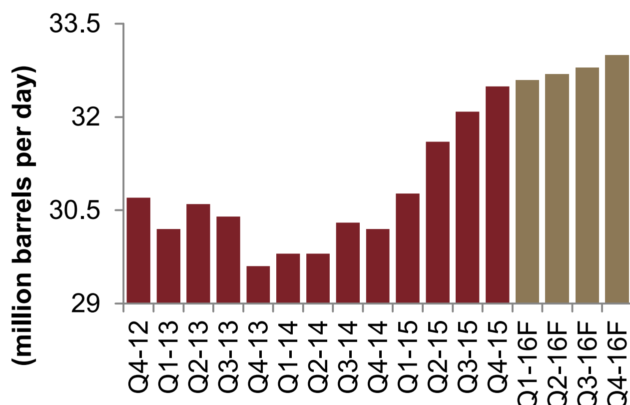
We expect to see additional crude of around 500 tbpd by Q4 2016…

...with a more steeper impact on prices if actual production is larger than anticipated.

Box 1: Iran oil production

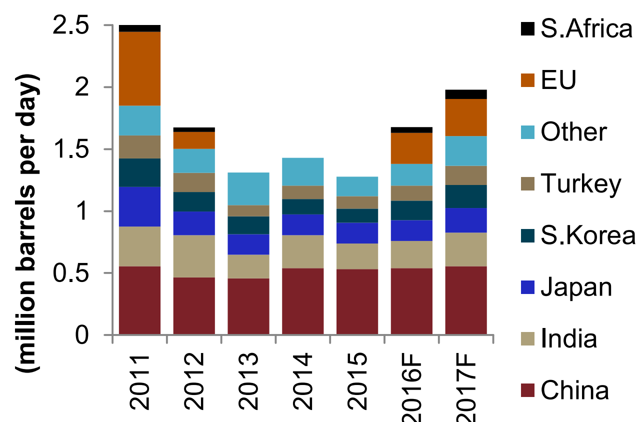
Iran produced 3.2 mbpd in 2015, of which 1.3 mbpd was exported. According to EIA estimates, Iranian crude production is expected to increase to around 3.3 mbpd in 2016, with a variation of 250 tbpd either up or down. The EIA also forecasts that production will rise to 3.7 mbpd in 2017, same as Iran's pre-sanction output, with an additional 200 tbpd possible due to new oil fields developed in partnership with Chinese oil companies. We assume Iran's production will be at the higher end of EIA estimates as continued

Figure 10: OPEC supplies to increase in 2016 due to increased Iranian output*



Source: OPEC and Jadwa Investment
*Note: Excludes Indonesia

Figure 11: Majority of additional Iranian exports would target the European market



Source: EIA, Energy Intelligence and Jadwa Investment

Most of the additional output between 2016-17 is likely to be exported…

...with the EU targeted as a key market.

competition amongst global producers for market share and the need for additional government revenue will mean there is an upside risk to production. We therefore expect additional output of 750 tbpd between 2016-17, most of which will be exported. Some will flow to current buyers such as China, India, Japan and South Korea but considering the largest drop in crude exports after sanctions was to the European Union (EU), most of the exports will attempted to be shipped back there. It was reported that many large European companies such as Shell, Total and Eni had put provisional agreements into place with the National Iran Oil Company (NIOC) to import 200 tbpd for customers immediately after lifting of sanctions. Iran's pre-sanction EU exports totaled 600 tbpd (Figure 11).

The likelihood of Iran flooding the market with its oil stocks is limited.

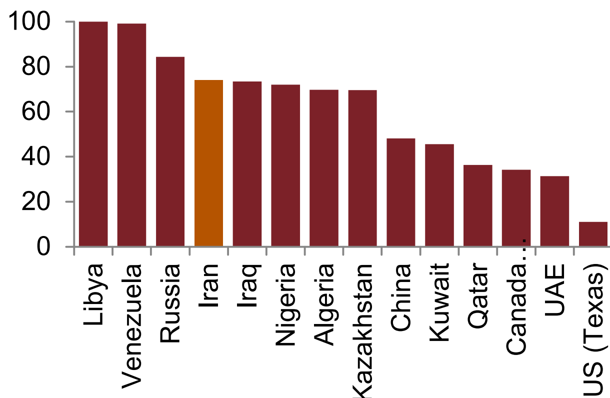
Iran has ambitions of increasing crude oil capacity by roughly 1 mbpd by 2020 to a total of 5 mbpd…

...but attracting investment will be difficult due to some US sanctions remaining in place…

….and high barriers to investment.

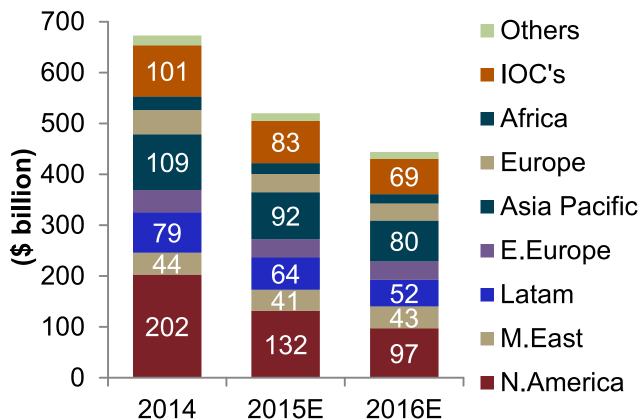
As Iran comes back on-line, global competition will intensify. Iran claims to have 30-40 million barrels of oil in storage and has suggested that these could be released immediately. The likelihood of Iran flooding the market with its oil stocks is limited since not only does it need higher oil prices for its fiscal breakeven, around $130 per barrel (pb), it also desperately needs to attract international investment in its energy sector which will be more difficult to do at prices that are lower than current levels. Iran has ambitions of increasing crude oil capacity by roughly 1 mbpd by 2020 to a total of 5 mbpd, but this will require large levels of investment, with industry estimates putting total energy infrastructure investment at $200 billion over the next four years. Attracting investment will be made more difficult by the fact that not all sanctions have been lifted. Whilst the US has lifted sanctions on non-US entities, US entities are still excluded from doing business with Iran. Also, according to the Global Petroleum Survey conducted by Fraser Institute, Iran is amongst the least attractive countries, out of 14 of the largest oil reserve holding countries globally, for investment in oil and gas exploration and production (E&P). Only Libya, Venezuela and Russia scored worse (Figure 12). In the context of squeezed global E&P capital expenditure budgets, as a consequence of lower oil prices, international oil companies (IOC's) may choose to avoid longer term projects in Iran due to higher barriers to investment (Figure 13). As a result, beyond the initial stages of sanctions being lifted, we see major challenges for the Iranian oil sector in not only achieving larger output capacity but also in dealing with crude production decline rates at existing fields and technical challenges due to underinvestment in the past.

Figure 12: Global barriers to investment in oil & gas E&P*



Source: The Fraser Institute and Jadwa Investment
*Note: Highest barrier to investment = 100

Figure 13: Global E&P industry capex trending downwards



Source: Barclays and Jadwa Investment

Saudi Arabian crude production was up 5 percent year-on-year, averaging 10.2 mbpd.

OPEC data shows that **Saudi Arabian** crude production was up 5 percent in Q4 2015 year-on-year, averaging 10.2 mbpd. Crude production also averaged 10.2 mbpd in 2015 as whole, slightly above our forecasted 10.1 mbpd. Latest data available shows that year-to-November exports were up 4 percent year-on-year, at 7.4mbpd, below ten year highs of 7.54 mbpd recorded in 2012. In the crude export markets of US, Asia and Europe intense competition for market share has taken place amongst the likes of Canada, Russia, Nigeria and Iraq. This competition will become even more intense in 2016 but we see Saudi Arabia's global reputation as a reliable oil supplier with its extensive export infrastructure making it well equipped to hold off any attempts of encroachment on its market share. In fact, since Saudi Arabia is currently the only major oil producer with spare oil capacity it can move into 'new' markets with relative ease, as demonstrated by the commencement of oil exports to Poland for first time ever in 2015. As such, while we expect 2016 Saudi production to remain unchanged, year-on-year, at 10.2 mbpd in 2016, the risk of further competition amongst non-OPEC and OPEC producers could push Saudi production higher.

We expect 2016 Saudi production to remain unchanged, year-on-year, at 10.2 mbpd.

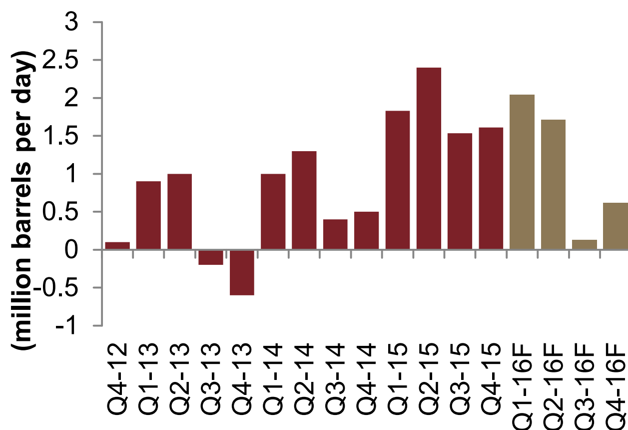
Depressed oil prices

Global oil surpluses will remain around 2 mbpd in H1 2016, but will trend downwards in H2 2016.

The combination of higher OPEC output and subdued global demand will mean the surplus in global oil balances will remain around 2 mbpd in H1 2016 but trend downwards in H2 2016, to around 600 tbpd (Figure 14). In the background, not only does the glut in global oil markets continue to add to record OECD commercial crude stocks, currently at 300 million barrels more than the long term average, but a stronger dollar will continue to erode purchasing power of oil importers. The US dollar is expected to continue strengthening throughout 2016 as central banks in Europe, Japan, and possibly China, pursue monetary easing policies while the US Federal Reserves continues with interest rate tightening. All of this means we see no support for oil prices, which leads us to cut our full year 2016 Brent forecast to $33 pb, from $47 pb previously, and 2017 forecast to $44 pb from $58 pb previously. (See Box 2 for implications on the Saudi economy).

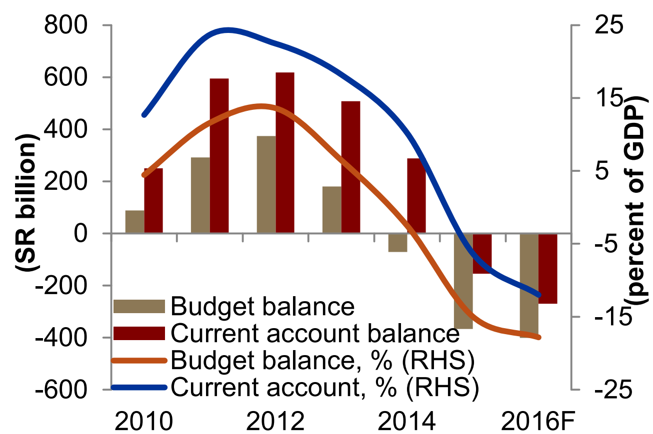
But moderate demand and excess supply, rising oil stocks and a strong dollar have led us to revise our Brent oil price forecast downwards.

Figure 14: Global oil balances to remain in surplus during 2016



Source: OPEC and Jadwa Investment

Figure 15: Saudi budget and external balances



Source: MOF, SAMA, and Jadwa Investment

We revised down our forecast for the kingdom's fiscal and external balances for 2016.

The fiscal deficit is now expected to reach SR402 billion, up from our previous forecast of SR313 billion.

Imbedded in our new forecast is a sharper reduction in total spending to SR890 billion.

We revised down our forecast for non-oil private sector growth from 2.8 percent to 2.6 percent.

We expect the 2016 current account to post a wider deficit, and therefore revised it up from $40 billion to $72 billion.

We expect inflation to rise to 3.9 percent, up from our earlier forecast of 2.5 percent…

… mainly owing to the recent increase to domestic energy and water prices.

Box 2: Implications on the Saudi economy

Lower for longer oil prices will have a direct implication over the kingdom's current account and fiscal budget (Figure 15). We have therefore revised down our forecast for the kingdom's fiscal and external balances for 2016. The fiscal deficit is now expected to reach SR402 billion (17.8 percent of GDP), up from SR313 billion forecasted previously. Imbedded in our new forecast is a sharper reduction in total government spending to SR890 billion, down from our earlier forecast of SR922 billion. This reduction in spending will likely be achieved by a stronger implementation of initiatives specified in the budget announcement, which included proposed reforms to improve budgetary procedures, and reviews to existing government projects. While we now forecast spending to be lower for 2016, our forecast of a steeper decline in total revenue (from SR609 billion to SR488 billion) will mean that the deficit will widen in 2016.

The lower spending by the government will cause the non-oil private sector to post a slower growth than previously anticipated. We therefore expect growth in non-oil private sector activity to slow down to 2.6 percent, compared to our previous forecast of 2.8 percent. However, we maintain our view that overall GDP will expand by 1.9 percent in 2016.

We have revised down our forecast for the 2016 current account deficit from $40 billion (6.3 percent of GDP), to $72 billion (12 percent of GDP). As a result of the decline in prices, we think 2016 oil export revenues will fall to their lowest levels since 2003 to reach $101 billion. We expect both non-oil exports and imports to rise marginally compared to their 2015 levels. Meanwhile, the deficit in the services account will shrink as a result of lower expected demand for services during 2016.

We have also revised our forecast for inflation to 3.9 percent, up from 2.5 percent previously. The recent increase to energy and water prices will likely put pressure on prices of multiple components of the headline index, including the housing, electricity, and water, and the transport components.

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