

OPEC

Monthly Oil Market Report

10 August 2016

Feature article:
Crude and product price movements

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Oil market highlights

Crude Oil Price Movements

The OPEC Reference Basket averaged \$42.68/b in July, representing the first decline in five months. Lower-than-expected demand, high refined product stocks, and rising crude supply were the factors behind the \$3.16 drop. ICE Brent ended down \$3.39 at \$46.53/b, while Nymex WTI fell \$4.05 to \$44.80/b. Speculators cut long positions further this month in all markets. The ICE Brent-WTI spread widened to \$1.75/b in Brent's favour during July.

World Economy

World economic growth remains unchanged at 3.0% for 2016 and 3.1% for 2017. Weak first half GDP growth in the US caused a downward revision in the 2016 growth forecast to 1.7%, while the 2017 forecast remains at 2.1%. The recently announced fiscal stimulus in Japan led to an upward revision in growth to 0.9% for both 2016 and 2017. The Euro-zone's forecast remains unchanged at 1.5% and 1.2%. Forecasts for China and India are also unchanged at 6.5% and 7.5% for 2016 and 6.1% and 7.2% for 2017. Both Brazil and Russia are forecast to rebound from two-year recessions in 2017 with growth of 0.4% and 0.7% respectively, after declines of 3.4% and 0.8% in 2016.

World Oil Demand

World oil demand growth in 2016 is expected to average 1.22 mb/d, some 30 tb/d higher than last month. For 2017, world oil demand is forecast to grow by 1.15 mb/d, unchanged from the previous report. While the OECD will contribute positively to oil demand growth adding some 0.10 mb/d, the bulk of the growth in 2017 will originate from the non-OECD with 1.05 mb/d.

World Oil Supply

Non-OPEC oil supply is expected to contract by 0.79 mb/d in 2016, following an upward revision of 90 tb/d since the previous report, driven by higher-than-expected output in 2Q16 in the US and UK. In 2017, non-OPEC supply is expected to decline by 0.15 mb/d, following a downward revision of 40 tb/d. OPEC NGL production is forecast to grow by 0.16 mb/d and 0.15 mb/d in 2016 and 2017, respectively. In July, OPEC production increased by 46 tb/d to average 33.11 mb/d, according to secondary sources.

Product Markets and Refining Operations

Product markets in the Atlantic Basin weakened during July, despite gasoline demand hitting record levels in the US during the peak of the driving season. The bearish sentiment was fueled by high gasoline inventories and slowing demand for middle distillates. This offset the vibrant recovery seen at the bottom of the barrel, which was supported by a tightening market and caused refinery margins to fall. In Asia, margins continued to decline due to oversupply at the top and middle of the barrel.

Tanker Market

Sentiment in the dirty tanker market was weak in July, mainly on the back of a high surplus of vessels in different areas. Dirty spot freight rates dropped 19% on average in July, m-o-m. Clean tanker freight rates declined on both sides of Suez as the demand for clean tonnage remained thin and market activity was limited. Global spot fixtures increased in July, and OPEC and Middle East sailings were higher than in the previous month.

Stock Movements

OECD total commercial stocks fell in June to stand at 3,045 mb, some 311 mb above the latest five-year average. Crude and product inventories showed a surplus of 175 mb and 136 mb, respectively. In terms of days of forward cover, OECD commercial stocks in June stood at 64.9 mb, around 6 days above the latest five-year average.

Balance of Supply and Demand

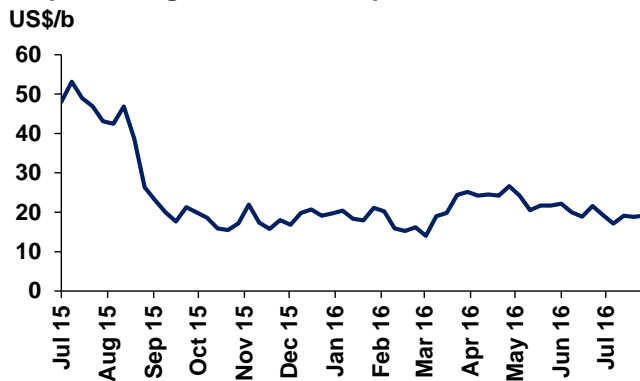
Demand for OPEC crude in 2016 is estimated at 31.9 mb/d, unchanged from last report and 1.9 mb/d higher than in the previous year. In 2017, demand for OPEC crude is forecast at 33.0 mb/d, in line with the previous report and 1.2 mb/d higher than in 2016.

Crude and product price movements

Oil prices are up more than 60% from the 12-year lows of around \$27/b hit by ICE Brent and the \$26/b recorded by Nymex WTI in January, even with the 7% slide in July. For five months, to the end of June, oil prices surged to the low \$50/b amid an easing global supply glut, strong consumption in several countries, declining production in many regions, some supply disruptions and a weaker US dollar. The return of a significant increase in speculative long positions betting on higher prices also supported the market.

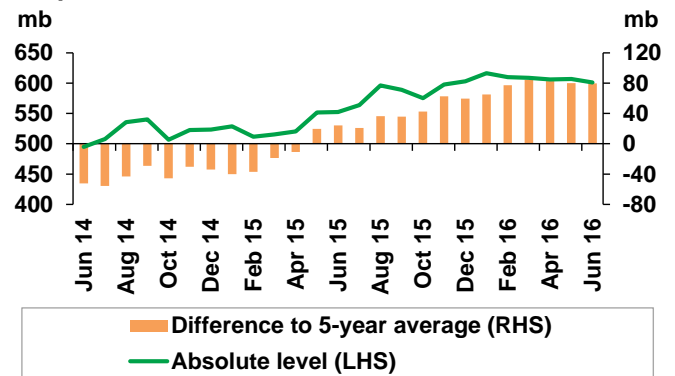
This rally faded amid concerns that the supply overhang in crude, and particularly refined products, would pressure prices, delaying a long-anticipated rebalancing in the market. Additionally, the outcome of the UK referendum and uncertainties regarding the timing of the UK's exit from the European Union impacted sentiment in the broader financial markets, including for crude oil.

Graph 1: US gasoline crack spread vs. WTI



Source: OPEC Secretariat.

Graph 2: OECD middle distillate stocks



Source: OPEC Secretariat.

Despite the fall seen in crude prices, refining margins have been weakening during the last month due to high product inventories, which were caused by the lower-than-expected increase in demand. There are lingering concerns that the US and European refiners could cut runs in response to a declining gasoline crack in both regions in a period when summer driving and margins should have been at their highest during the year (**Graph 1**). This has been the major factor contributing to the downward pressure on crude prices in recent weeks.

Meanwhile, regarding the transatlantic Brent-WTI spread, even with the slight widening in July, the year-to-date average of the spread shrunk to around \$1.50/b from an average of near \$5/b in 2015, amid declining US production and despite some outages in light sweet crude. The significant narrowing of the Brent-WTI spread made it possible for a comeback of West African crude to the US market, as observed in higher US crude imports, which have been above 8 mb/d recently.

With the end of the driving season in 3Q16, gasoline demand could see a seasonal downward correction. Meanwhile, the supply side could also continue exerting pressure on middle distillates as inventories remain high worldwide, especially in OECD countries, which are currently around 80 mb higher than the latest five-year average (**Graph 2**).

At the same time, the higher growth anticipated for some of the major oil consuming economies is expected to lead to higher oil consumption in coming months, particularly with the onset of the winter season in the Northern Hemisphere. Furthermore, with the expected increase in demand, the ongoing contango in the Brent, WTI and Dubai markets should continue to narrow. This would reduce the economic incentive to store crude, which has already begun to help ease some of the overhang, which would contribute to the expected rebalancing of the market.

Crude Oil Price Movements

After a significant recovery, the OPEC Reference Basket (ORB) fell nearly 7% in July. This is amid lower-than-predicted demand, high refined product stocks during the peak summer driving season and rising crude supply, which have all significantly exerted pressure over the month. Bearish speculative activities also weighed on oil prices. The ORB slipped \$3.16 to average \$42.68/b in July, and declined by 32.6% y-o-y.

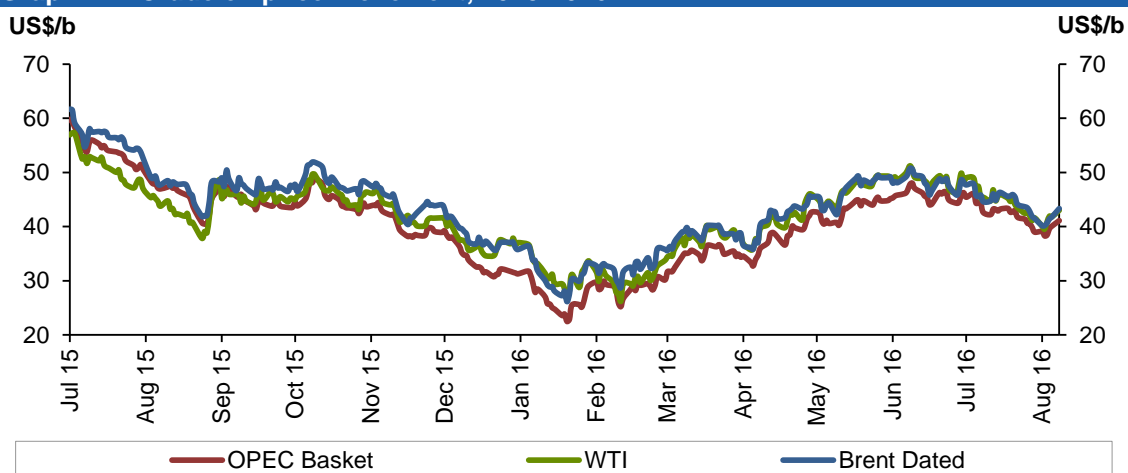
Amid rising concerns that a global excess of crude and refined products would pressure markets, delaying a long-anticipated rebalancing of the market, international crude futures fell on both sides of the Atlantic in July. Oil prices have also been through a turbulent period since UK voters opted to leave the EU. ICE Brent ended down \$3.39 at \$46.53/b, dropping around 29% on the year. Nymex WTI plunged \$4.05 to \$44.80/b, slipping by about 24% y-t-d. Speculators were once again bearish in all markets. The Brent-WTI, or transatlantic, spread widened to \$1.75/b in Brent's favour during the month, discouraging US imports of West African crudes and other Brent-related grades, while also encouraging some US crude exports.

OPEC Reference Basket

After a significant recovery for five consecutive months from its lowest value in years, the ORB slipped nearly 7% in July, falling against a backdrop of less-than-anticipated demand, high stocks, particularly of refined products, and rising supply. Hedge funds have also turned more negative, contributing to further pressure on oil prices.

The ORB price declined over the month, as pressure from an excess of crude and oil products mounted worldwide. Slower economic growth and high inventories of crude and refined oil products have driven the value of the ORB to almost 7.9% below its 2016 high reached in the previous month. Rising stockpiles of gasoline, despite the peak summer driving season in the US, have added to the worries. Nevertheless, the ORB remained up more than 60% from the 12-year low seen at the beginning of the year.

Graph 1.1: Crude oil price movement, 2015-2016



Sources: Argus Media, OPEC Secretariat and Platts.

The recovery faded after prices above \$45/b enticed US oil drillers to return to the well pad. Drillers added 33 rigs in July, the most in a month since April 2014. Cheap crude has led

Crude Oil Price Movements

refiners to produce more refined products worldwide, adding to the oversupplied market. The overhang of gasoline in storage amid what should have been a top seasonal demand period put downward pressure on crude and refined product prices.

On a monthly basis, the ORB decreased \$3.16 to \$42.68/b, on average, down 6.9%. Compared to the previous year, the ORB value declined by 32.3%, or \$17.78, to \$37.20/b.

Table 1.1: OPEC Reference Basket and selected crudes, US\$/b

| Basket | Jun 16 | Jul 16 | Change | Year-to-date | |
|----------------------|--------------|--------------|--------------|--------------|--------------|
| | | | Jul/Jun | 2015 | 2016 |
| Basket | 45.84 | 42.68 | -3.16 | 54.98 | 37.20 |
| Arab Light | 46.28 | 43.14 | -3.14 | 55.27 | 37.42 |
| Basrah Light | 44.63 | 41.37 | -3.26 | 53.26 | 35.84 |
| Bonny Light | 48.48 | 45.30 | -3.18 | 58.37 | 40.61 |
| Es Sider | 47.28 | 44.00 | -3.28 | 56.62 | 39.61 |
| Girassol | 48.30 | 45.09 | -3.21 | 58.49 | 40.41 |
| Iran Heavy | 44.68 | 41.59 | -3.09 | 54.28 | 35.74 |
| Kuwait Export | 44.50 | 41.37 | -3.13 | 53.62 | 35.50 |
| Qatar Marine | 46.37 | 43.53 | -2.84 | 56.31 | 37.98 |
| Merey | 38.22 | 36.71 | -1.51 | 47.53 | 29.54 |
| Minas | 51.56 | 41.84 | -9.72 | 55.66 | 39.49 |
| Murban | 49.28 | 46.54 | -2.74 | 59.20 | 41.73 |
| Oriente | 44.03 | 40.72 | -3.31 | 50.05 | 34.70 |
| Rabi Light | 47.15 | 44.03 | -3.12 | 58.37 | 39.58 |
| Sahara Blend | 48.98 | 45.30 | -3.68 | 57.84 | 41.32 |
| Other Crudes | | | | | |
| Brent | 48.28 | 45.00 | -3.28 | 57.71 | 40.61 |
| Dubai | 46.25 | 42.64 | -3.61 | 56.61 | 37.80 |
| Isthmus | 47.51 | 45.07 | -2.44 | 55.98 | 38.64 |
| LLS | 50.60 | 46.65 | -3.95 | 57.47 | 42.11 |
| Mars | 45.29 | 41.44 | -3.85 | 53.80 | 36.94 |
| Urals | 46.60 | 43.76 | -2.84 | 57.47 | 39.02 |
| WTI | 48.74 | 44.90 | -3.84 | 52.93 | 40.27 |
| Differentials | | | | | |
| Brent/WTI | -0.46 | 0.10 | 0.56 | 4.77 | 0.34 |
| Brent/LLS | -2.32 | -1.65 | 0.67 | 0.23 | -1.51 |
| Brent/Dubai | 2.03 | 2.36 | 0.33 | 1.10 | 2.81 |

Note: As of January 2016, Argus data is being used.

Sources: Argus Media, Direct Communication, OPEC Secretariat and Platts.

In line with the main global oil benchmarks, all **ORB component values** dropped over the month. WTI, Dated Brent and Dubai spot prices plunged by \$3.84, \$3.28 and \$3.61, respectively, weighing on the values of all ORB components, despite improving price differentials in key regions.

The Middle East spot component grades Murban and Qatar Marine, fell on average by \$2.74, or 5.6%, to \$46.54/b, while multi-destination grades, Arab Light, Basrah Light, Iran Heavy and Kuwait Export, decreased by \$3.16, or 7%, to \$41.87/b. For the Latin American ORB components, Venezuelan Merey was down \$1.51, or 4%, at \$36.71/b, while Oriente slid \$3.31, or 7.5%, to \$40.72/b. Values of West and North African light sweet Basket components – Saharan Blend, Es Sider, Girassol, Bonny Light and Gabon's Rabi – decreased by \$3.29, or 6.9%, to average \$44.74/b. Indonesian Minas was down the most by \$9.72, or 18.9%, at \$41.84/b, from above \$50/b in the previous month.

On 9 August, the ORB was down at \$41.08/b, \$1.60/b below the July average.

The oil futures market

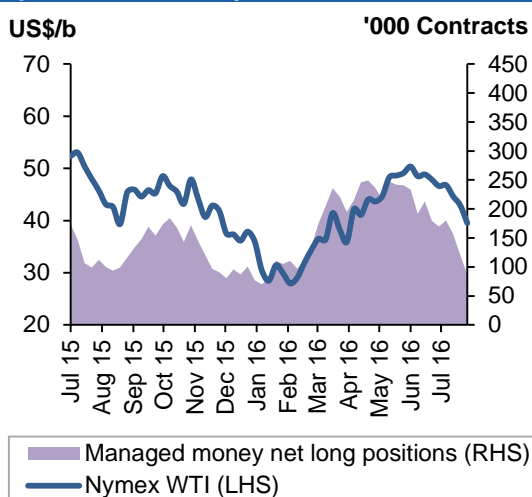
Oil futures fell for the first time since January on pressure from an excess of crude and refined products, particularly in the US and Europe. Slower-than-expected end-user demand, as well as refinery buying also weighed on the market, amid rising concerns that a global excess of crude and refined products would delay a long-anticipated rebalancing of the market.

The oil complex was pressured by lingering concerns that US and European refiners could slash runs, decreasing crude demand, in response to a declining gasoline crack in both regions in a period when summer driving and margins should have been at their highest during the year. Moreover, oil prices have been through a turbulent period since UK voters opted to leave the EU. Right after the results became apparent, oil sold off alongside all other risk assets. This was then followed by a rebound that took prices almost all the way back to the starting point, only to fall again, this time through the lows set in the aftermath of the Brexit decision. The support from some supply outages and draws in US crude inventories were offset by the deterioration in the refined product markets and the bearish consequences of the rising dollar. Furthermore, hedge funds were liquidating their former record bullish positions in crude futures and options, putting downward pressure on oil prices.

ICE Brent ended July down by \$3.39, or 6.8%, at \$46.53/b on a monthly average basis, while Nymex WTI plunged by \$4.05, or 8.3%, to \$44.80/b. Compared to the same period last year, ICE Brent lost \$17.15, or 29.1%, at \$41.81/b, while Nymex WTI declined by \$12.67, or 23.9%, to \$40.28/b y-t-d.

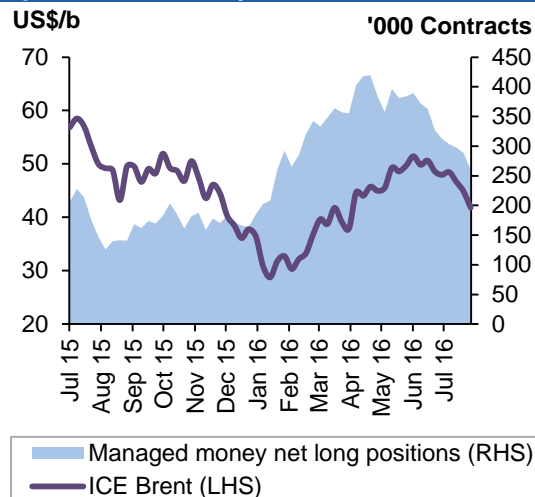
On 9 August, ICE Brent stood at \$44.98/b and Nymex WTI at \$42.77/b.

Graph 1.2: Nymex WTI price vs. Speculative activity, 2015-2016



Sources: CFTC and CME Group.

Graph 1.3: ICE Brent price vs. Speculative activity, 2015-2016



Source: IntercontinentalExchange.

As oil prices fell, **speculators** cut their bullish bets on higher oil prices significantly over July, turning very bearish. Relative to the end of the previous month, speculators reduced net long positions in ICE Brent futures and options by 74,229 contracts, or 20%, to 288,536 lots, by the last week in July, exchange data from ICE showed.

Crude Oil Price Movements

Similarly, **money managers** decreased net long US crude futures and options positions by 58,874 lots, or a hefty 33%, to 120,556 contracts, the US Commodity Futures Trading Commission (CFTC) reported. Meanwhile, the total futures and options open interest volume in the two exchanges decreased by 1.9%, or 99,438 contracts, since the end of June to 5.21 million contracts at the end of July.

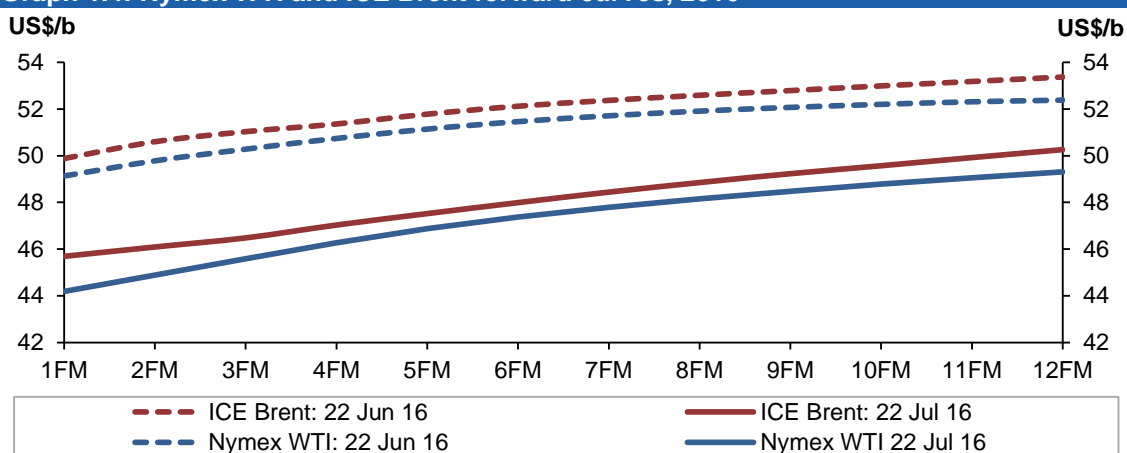
During July, the daily average **traded volume** for Nymex WTI contracts decreased by 2,932 lots, down 0.3% to 942,073 contracts, while that of ICE Brent was 41,228 contracts higher, up by 5.7%, at 765,613 lots. The daily aggregate traded volume for both crude oil futures markets increased by 38,296 lots to about 1.71 million futures contracts, equivalent to around 1.7 billion b/d. The total traded volume in Nymex WTI dropped near 10% to 18.84 million contracts due to holidays, while ICE Brent increased to 16.08 million lots.

The futures market structure

With the return of the supply glut in the US and Asia, as it spilled over from refined products to crude, the **Dubai** market structure flipped back into contango while the **WTI** contango weakened further. Dubai crude was also pressured from a significant narrowing of the Brent-Dubai spread, which made alternative crudes more attractive compared to Dubai-related crudes. Despite the overhang of unsold North Sea light sweet cargoes and worsening refining margins, **Brent** managed to strengthen its structure slightly amid supply disruptions of West African crudes.

In the WTI market, the front month 64¢/b discount to the second month increased to 73¢/b, while that of Dubai also deteriorated, dropping from an 18¢/b premium to a 72¢/b discount. The Brent market structure narrowed from a 60¢/b contango to 55¢/b.

Graph 1.4: Nymex WTI and ICE Brent forward curves, 2016



Note: FM = future month.

Sources: CME Group and Intercontinental Exchange.

The **Brent-WTI spread** widened to \$1.75/b in Brent's favour during July, disincentivizing US imports of WAF crudes and other Brent-related grades, while also incentivizing some exports of US crude. The relative strength in Brent, which has also been reflected in narrower contango spreads, drew support from the Nigerian outages as well as Tengiz field maintenance, which is likely to cut the CPC Blend supply. Meanwhile, on the WTI side, the market has had to contend with the full return of Canadian barrels as well as an uptick in US drilling activity and somewhat disappointing refinery runs. The prompt-month ICE Brent-WTI spread averaged \$1.07/b in June, widening to \$1.74/b in July.

Table 1.2: Nymex WTI and ICE Brent forward curves, US\$/b

| Nymex WTI | | | | | | |
|---------------|--------------|--------------|--------------|--------------|--------------|-----------------|
| | <u>1FM</u> | <u>2FM</u> | <u>3FM</u> | <u>6FM</u> | <u>12FM</u> | <u>12FM-1FM</u> |
| 22 Jun 16 | 49.13 | 49.78 | 50.28 | 51.46 | 52.38 | 3.25 |
| 22 Jul 16 | 44.19 | 44.88 | 45.59 | 47.37 | 49.31 | 5.12 |
| Change | -4.94 | -4.90 | -4.69 | -4.09 | -3.07 | 1.87 |
| ICE Brent | | | | | | |
| | <u>1FM</u> | <u>2FM</u> | <u>3FM</u> | <u>6FM</u> | <u>12FM</u> | <u>12FM-1FM</u> |
| 22 Jun 16 | 49.88 | 50.60 | 51.03 | 52.12 | 53.37 | 3.49 |
| 22 Jul 16 | 45.69 | 46.09 | 46.48 | 47.99 | 50.26 | 4.57 |
| Change | -4.19 | -4.51 | -4.55 | -4.13 | -3.11 | 1.08 |

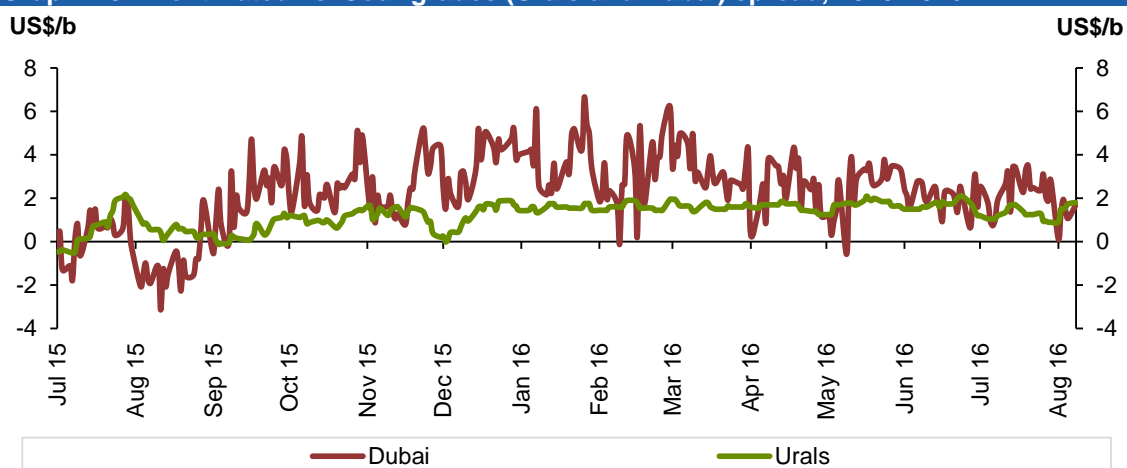
Note: FM = future month.

Sources: CME Group and Intercontinental Exchange.

The light sweet/medium sour crude spread

The sweet/sour differentials narrowed further in the US Gulf Coast (USGC) and Europe, while in Asia, they widened significantly amid the narrower Brent/Dubai spread.

In **Europe**, the Urals medium-sour crude discount to light-sweet North Sea Brent decreased again in July, whereas the Dated Brent-Med Urals spread narrowed to about \$1.25/b from \$1.70/b in June. The Mediterranean sour crude market remained relatively buoyant compared with the regional sweet crude market, which has been harder hit by the fall in cracks for distillates and clean products in general. Despite additional supplies from the Middle East, Urals crude price differentials strengthened on keen buying interest and a quite tight loading plan, particularly during the first half of the loading month, due to maintenance on a pipeline.

Graph 1.5: Brent Dated vs. Sour grades (Urals and Dubai) spread, 2015-2016

Sources: Argus Media, OPEC Secretariat and Platts.

In **Asia**, the light sweet Tapis premium over medium sour Dubai reversed course this month to increase by around \$1 to \$4.30/b. The strength in Dubai prompt prices has narrowed its price gap with Brent to the smallest since November. The narrower spread supports demand for Asia-Pacific crude which is mostly priced off Dated Brent. Meanwhile, Middle East sour crudes stayed mostly depressed over the month on ample supply and as weak margins for naphtha and gasoline weighed on lighter grades. The lower Brent premium over Dubai also weighed on Middle East grades amid concerns that it will lead to an increased arbitrage flow of crudes priced on Brent.

Crude Oil Price Movements

In the **US Gulf Coast**, the Light Louisiana Sweet (LLS) premium over medium sour Mars slipped slightly in July to \$5.20/b, down by 10¢. Mars was supported somewhat by USGC pipeline work that will reduce Mars production. Tighter supplies of alternative sour Colombian Vasconia and Iraqi Basra grades also lifted Mars. Falling crude flows through the TransCanada Keystone pipeline system provided some further backing.

Commodity Markets

Decreases in average energy commodity prices in July were led by falling crude oil, while natural gas and coal prices advanced. In the group of non-energy commodities, agricultural prices declined on expectation of ample supplies, while base metals were supported by manufacturing expansion in China. Average gold prices increased on expectations of lower interest rates in the US in the aftermath of the Brexit referendum.

Trends in selected commodity markets

Specific commodity group developments continued to drive average prices in July. Receding supply concerns on improved weather in the US were behind broad-based retreats in food prices over the month. Meanwhile, metals were supported by the expansion of the manufacturing sector in China, as shown by the July PMI reading of 50.6, up from 48.6 in June, and the continuing expansion – albeit at a slower pace – of the sector in the US and the Euro-zone, where PMIs were at 52.6 and 52.0 in July, respectively, versus 53.2 and 52.8 in the previous month. Average gold prices showed a steep jump in the aftermath of the Brexit referendum results, as market expectations for interest rate hikes by the US Federal Reserve during the year were diminished.

Agricultural prices declined during the month, as improving weather conditions in the US for corn and soy growers supported current expectations of another bumper crop. In addition, reports by the US Department of Agriculture showing larger planted acreage than previously estimated for US corn, wheat and soybeans, and larger stocks at the beginning of June versus a year ago - corn, wheat and soybeans stocks were up by 6%, 30% and 39% y-o-y respectively, put significant pressure on prices. Meanwhile, coffee prices advanced on the impact of a transport strike in Colombia and potential crop damage in Brazil due to frost. In the raw materials group, cotton prices jumped on diminished expectations for the crop in India.

Base metal prices advanced, supported by an expansion in manufacturing activity in China, the US and the Eurozone. Further support to metal prices was provided by continuing recovery in the property market of China, where prices of newly constructed residential buildings increased in 55 of the 70 largest cities, and in 57 of them, prices are already higher than a year ago, according to data for the month of June from the National Bureau of Statistics. Nickel prices jumped by close to 15% due to the suspension of the operation of seven nickel mines on environmental grounds by the new government of the Philippines, while further review of other mining operations is expected. Exports from the Philippines to China have been used as a substitute for Indonesian nickel ore exports that were banned in order to promote the construction of smelting facilities in the country. Meanwhile, iron ore and steel prices advanced. World steel output was stable y-o-y in June, but China continues to increase output by 1.7% y-o-y, which now accounts for more than half of global output, according to the World Steel Association.

Energy prices decreased on average in July, due to a drop in crude oil prices by around 8%. However, natural gas and coal prices advanced during the month. In Europe, news of extension of the outage in the main storage facility of the UK – around 70% of the UK storage capacity, supported winter hub prices. Total inventories in the EU-28 member countries were at around 60% of storage capacity at the end of the month versus 61% the previous year, as reported by Gas Infrastructure Europe. Meanwhile, in the US, prices jumped as warmer-than-average summer weather

Commodity Markets

spurred higher cooling demand, while output remained flat, which has translated into significantly smaller-than-average additions to underground storage, and the consequent reduction in the current surplus.

Table 2.1: Commodity price data

| Commodity | Unit | Monthly averages | | | % Change | Year-to-date | |
|--|----------|------------------|----------|----------|----------|--------------|----------|
| | | May 16 | Jun 16 | Jul 16 | Jul/Jun | 2015 | 2016 |
| <i>World Bank commodity price indices (2010 = 100)</i> | | | | | | | |
| Energy | | 56.6 | 59.4 | 56.6 | -4.8 | 71.0 | 50.4 |
| Coal, Australia | \$/mt | 51.5 | 53.2 | 63.1 | 18.6 | 60.0 | 53.0 |
| Crude oil, average | \$/bbl | 45.9 | 47.7 | 44.1 | -7.5 | 55.8 | 39.5 |
| Natural gas, US | \$/mmbtu | 1.9 | 2.6 | 2.8 | 8.6 | 2.8 | 2.2 |
| Non-energy | | 80.8 | 82.6 | 82.2 | -0.5 | 85.4 | 79.1 |
| Agriculture | | 91.1 | 93.9 | 92.0 | -2.1 | 91.5 | 88.4 |
| Food | | 94.9 | 98.9 | 95.9 | -3.0 | 93.8 | 91.5 |
| Soybean meal | \$/mt | 434.0 | 467.0 | 443.0 | -5.1 | 411.9 | 383.3 |
| Soybean oil | \$/mt | 791.0 | 798.0 | 789.0 | -1.1 | 771.0 | 774.3 |
| Soybeans | \$/mt | 422.0 | 457.0 | 434.0 | -5.0 | 402.9 | 402.4 |
| Grains | | 87.3 | 90.3 | 83.6 | -7.4 | 92.4 | 85.7 |
| Maize | \$/mt | 169.0 | 179.9 | 161.8 | -10.1 | 172.5 | 165.0 |
| Wheat, US, HRW | \$/mt | 171.8 | 173.0 | 151.6 | -12.4 | 223.2 | 179.3 |
| Sugar, world | \$/kg | 0.4 | 0.4 | 0.4 | 0.8 | 0.3 | 0.4 |
| Base Metal | | 65.1 | 66.0 | 69.1 | 4.8 | 78.7 | 65.5 |
| Aluminum | \$/mt | 1,550.6 | 1,593.5 | 1,629.1 | 2.2 | 1,765.3 | 1,555.4 |
| Copper | \$/mt | 4,694.5 | 4,642.0 | 4,864.9 | 4.8 | 5,875.2 | 4,728.3 |
| Iron ore, cfr spot | \$/dmtu | 55.0 | 52.0 | 57.0 | 9.6 | 59.4 | 52.9 |
| Lead | \$/mt | 1,707.8 | 1,712.8 | 1,834.8 | 7.1 | 1,860.1 | 1,743.1 |
| Nickel | \$/mt | 8,660.4 | 8,928.4 | 10,262.9 | 14.9 | 13,394.2 | 8,893.4 |
| Tin | \$/mt | 16,707.0 | 16,966.7 | 17,826.2 | 5.1 | 16,707.3 | 16,406.9 |
| Zinc | \$/mt | 1,869.0 | 2,026.2 | 2,183.3 | 7.8 | 2,116.7 | 1,852.2 |
| Precious Metals | | 98.1 | 99.3 | 105.9 | 6.6 | 93.6 | 96.0 |
| Gold | \$/toz | 1,261.0 | 1,276.4 | 1,336.7 | 4.7 | 1,194.8 | 1,237.0 |
| Silver | \$/toz | 16.9 | 17.29 | 19.99 | 15.7 | 16.4 | 16.5 |

Source: World Bank, Commodity price data.

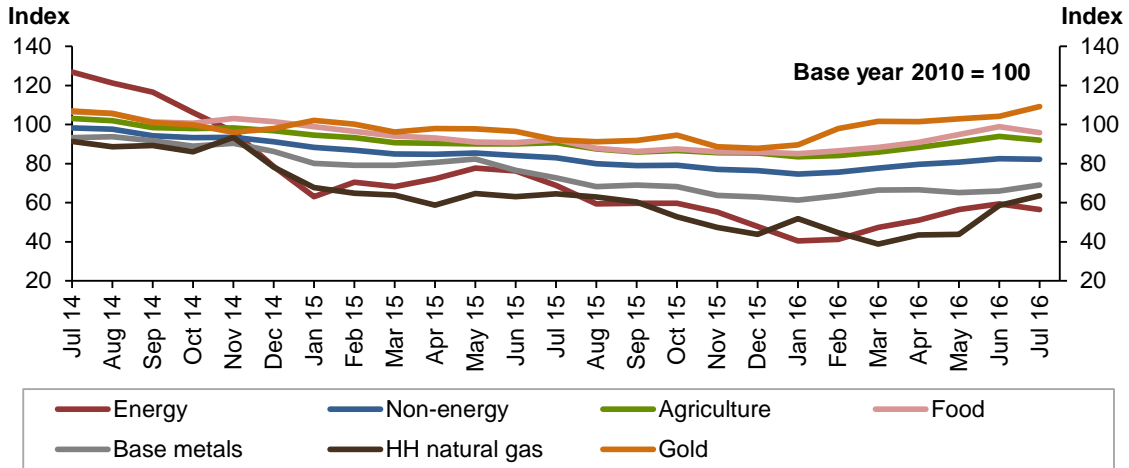
Average **energy prices** in June decreased by 4.8% m-o-m, mainly driven by a 7.5% decrease in average crude oil prices. Natural gas prices increased in the US by 8.6% m-o-m, while average prices in Europe increased by 9.2%.

Agricultural prices decreased by 2.1%, mainly due to a decline in average food prices by 3.0%, and raw materials by 1.4%, while beverage prices increased by 1.5%. Wheat and maize led the decreases in food prices, down by 12.4% and 10.1%, respectively.

Average **base metal prices** advanced by 4.8%, with increases among all group components. Nickel prices jumped by 14.9%, while aluminum and copper prices advanced by 2.2% and 4.8%, respectively. Average iron ore prices advanced by 9.6%.

In the group of **precious metals**, gold prices advanced strongly by 4.7% on lower-than-expected interest rates in the US, while silver prices jumped by 15.7%.

Graph 2.1: Major commodity price indices

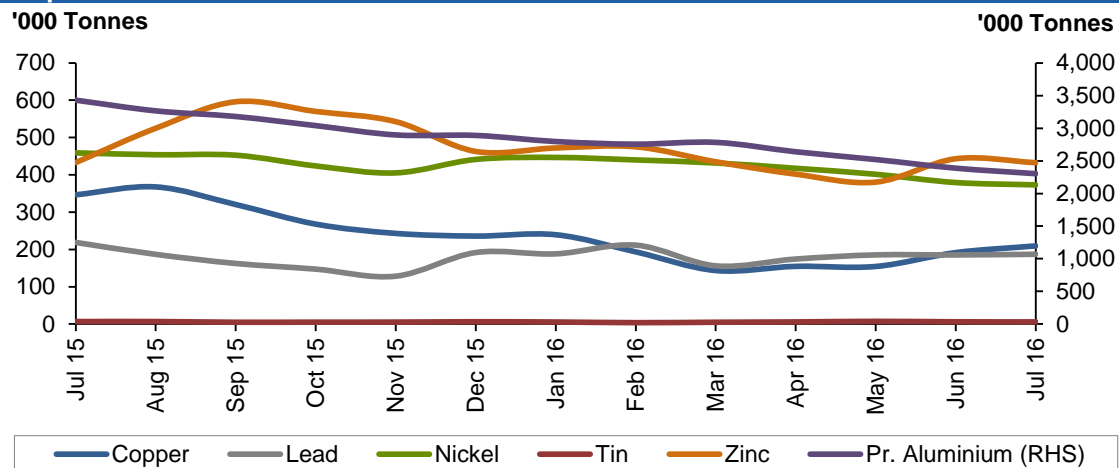


Source: World Bank, Commodity price data.

In July, the **Henry Hub natural gas index** increased. The average price was up 22¢, or 8.6%, to \$2.79 per million British thermal units (mmbtu) after trading at an average of \$2.57/mmbtu the previous month.

The US Energy Information Administration (EIA) said utilities withdrew 6 billion cubic feet (bcf) of **gas from storage** during the week ending 29 July. This was below analyst expectations of an increase around 2 bcf and was the first withdrawal during summer since 2006. Total working gas in storage stood at 3,288 bcf, or 13.4%, higher than at the same time the previous year and 16.4% higher than the previous five-year average. The EIA noted that temperatures during the reported week were higher than normal throughout the lower 48 states.

Graph 2.2: Inventories at the LME



Sources: London Metal Exchange and Thomson Reuters.

Investment flows into commodities

Open interest volume (OIV) decreased in July for select US commodity markets such as agriculture, crude oil, natural gas, copper, and livestock, while it increased for precious metals. Meanwhile, monthly average speculative net length positions increased for precious metals, natural gas and copper, while they declined for crude oil, agriculture and livestock.

Table 2.2: CFTC data on non-commercial positions, '000 contracts

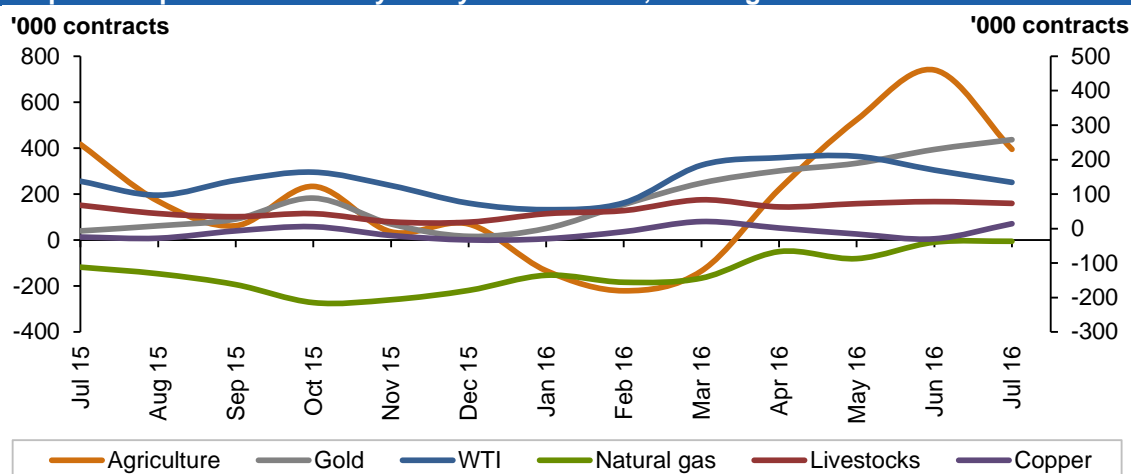
| | Open interest | | Net length | | | |
|-----------------|---------------|--------------|--------------|-----------|------------|-----------|
| | Jun 16 | Jul 16 | Jun 16 | % OIV | Jul 16 | % OIV |
| Crude oil | 1,742 | 1,721 | 170 | 10 | 134 | 8 |
| Natural gas | 1,066 | 1,012 | -40 | -4 | -37 | -4 |
| Agriculture | 5,175 | 4,915 | 740 | 14 | 395 | 8 |
| Precious metals | 759 | 836 | 295 | 39 | 346 | 41 |
| Copper | 213 | 174 | -30 | -14 | 14 | 8 |
| Livestock | 551 | 535 | 78 | 14 | 73 | 14 |
| Total | 9,507 | 9,193 | 1,214 | 60 | 926 | 75 |

Source: US Commodity Futures Trading Commission.

Agriculture's OIV decreased by 5.0% to 4,914,815 contracts in July. Meanwhile, money managers decreased their net long positions by 47% to 395,954 lots, largely because of decreasing net length in corn.

Henry Hub's natural gas OIV decreased by 5.1% m-o-m to 1,011,933 contracts in July. Money managers decreased their net short positions by 7.1% to reach 36,847 lots on increasing demand for cooling.

Graph 2.3: Speculative activity in key commodities, net length

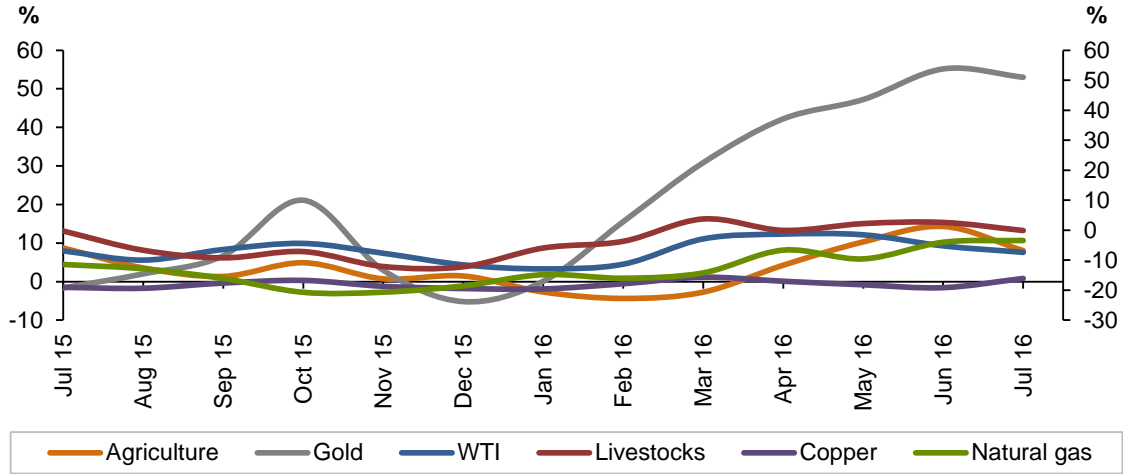


Source: US Commodity Futures Trading Commission.

Copper's OIV decreased by 18.1% m-o-m to 174,110 contracts in July. Money managers switched to a net long position of 14,130 lots from a net short position of 29,657 on improving manufacturing prospects and recovery in the real estate market in China.

Precious metals' OIV advanced by 10.1% m-o-m to 835,713 contracts in July. Money managers increased their net long positions by 17.3% to 346,488 lots.

Graph 2.4: Speculative activity in key commodities, as percentage of open interest



Source: US Commodity Futures Trading Commission.

World Economy

Global GDP growth remains unchanged at 3.0% for 2016 and 3.1% for 2017. This takes into consideration improving economic activity in the coming quarters in the US, Japan, Russia and Brazil. The Euro-zone, the UK, China and, to some extent, India are forecast to show lower quarterly growth on average. The sharpest drop in economic activity among these economies is expected for the UK.

After weak 1H16 growth, the 2016 growth forecast for the US has been revised down to 1.7%, while 2017 growth remains unchanged at 2.1%. With many uncertainties prevailing, more accurate data in the next month for the US economy will lead to another review of US growth. Japan has been revised up, based on the recent fiscal stimulus announcement and is now forecast to grow by 0.9% in both 2016 and 2017. The Euro-zone growth forecast remains unchanged.

India and China continue to expand in 2017 at a considerable rate of 7.2% and 6.1%, respectively. This is slightly lower than in 2016, with growth of 7.5% and 6.5%. While both Brazil and Russia are forecast to remain in a recession for a second consecutive year in 2016, they are both forecast to recover in 2017 to reach growth of 0.4% and 0.7%, respectively, fuelled by improving domestic demand and rising commodity prices.

Numerous uncertainties for global economic growth in the second half of 2016 and in the coming year remain. Among the most important issues, political developments will play a decisive role across the globe, ranging from important elections in key economies to fiscal policy decisions. Also, the monetary policies of major central banks will continue to be influential, but are expected to remain accommodative.

Table 3.1: Economic growth rate and revision, 2016-2017, %

| | World | OECD | US | Japan | Euro-zone | China | India | Brazil | Russia |
|----------------------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| 2016* | 3.0 | 1.7 | 1.7 | 0.9 | 1.5 | 6.5 | 7.5 | -3.4 | -0.8 |
| Change from previous month | 0.0 | -0.1 | -0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| 2017* | 3.1 | 1.7 | 2.1 | 0.9 | 1.2 | 6.1 | 7.2 | 0.4 | 0.7 |
| Change from previous month | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: * 2016 and 2017 = forecast.

Source: OPEC Secretariat.

OECD

OECD Americas

US

The first estimate of **2Q16 GDP** was unexpectedly low at only 1.2% q-o-q, at a seasonally adjusted annualized rate (SAAR). Moreover the Bureau of Economic Analysis (BEA) revised down 1Q16 figures to 0.8% from 1.1% q-o-q SAAR as part of its regular July revisions, so average growth for the first half of the year stood at only 1.0% growth. While private household consumption is continuing to be strong at 4.2% q-o-q

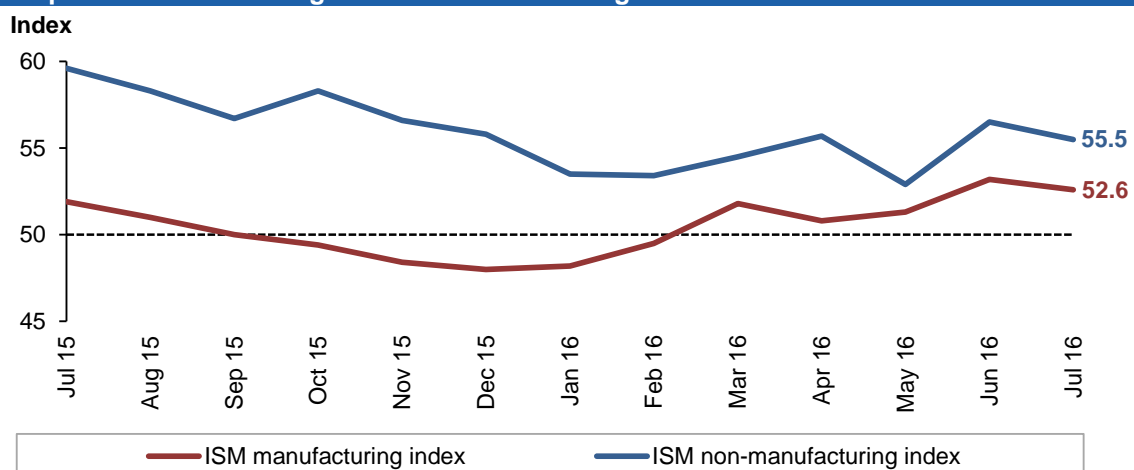
SAAR in the 2Q16, it was investments, mainly the energy sector's capex cuts and declining investments in the real estate sector that led to a decline of 9.7% q-o-q SAAR, pushing GDP growth down to its current low level. With oil prices having again declined in past weeks, it remains to be seen how investments from the energy sector will perform in the near future, but it is obvious this will remain an important area to monitor. Based on the most recent lead indicators, stronger growth is expected in the second half of the year, but some businesses seem reluctant to invest ahead of presidential elections.

Given, weak 1H16 growth in combination with the outcome of the UK referendum, the **US Federal Reserve (Fed)** will most likely not hike interest rates in the upcoming meeting. On the other hand, labour market development is showing continued strength, an important indicator for the Fed. While the unemployment rate held steady at 4.9% in July, non-farm payroll additions grew by a healthy and more-than-expected 255,000 after an upwardly-revised 292,000 in June.

Total **industrial production** is still weak and remains significantly impacted by challenges in the energy sector, but started to improve slightly on a monthly basis. Total industrial production declined by 0.7% y-o-y in June. Mining, including oil sector-related output, fell considerably again, dropping by 10.5% y-o-y. Ongoing weakness is also reflected in manufacturing orders, which fell by 5.6% y-o-y in June. The trend in order growth in the energy sector continued to be significantly negative, with new orders for machinery in the mining, oil and gas sectors declining by 62.9% y-o-y in June.

In line with the positive momentum of private household consumption from 2Q16 GDP numbers, **retail sales**, continued rising by 2.7% y-o-y in June. In line with these positive developments, the Conference Board's Consumer Confidence Index remained almost unchanged in July at 97.3, after reaching 97.4 in June.

Graph 3.1: Manufacturing and non-manufacturing ISM indices



Sources: Institute for Supply Management and Haver Analytics.

Additionally, July's **Purchasing Manager's Index (PMI)** for the manufacturing sector, as provided by the Institute of Supply Management (ISM), remained at a solid level of 52.6, compared with 53.2 the previous month. The very important services sector index also remained solid, reaching 55.5, after hitting 56.5 a month earlier.

Given the very weak 1H16 dynamic, the 2016 **growth forecast** has been revised down to 1.7%. More accurate data over the coming months will provide further insight to

allow a more detailed review of the US economic situation. The 2017 growth forecast of 2.1% remains unchanged.

Canada

While GDP growth in 1Q16 has recovered to 2.4% q-o-q SAAR, the situation for the Canadian economy remains challenging, given relatively low growth in the US and the negative impact from again-declining oil prices. The situation in the oil market has also led to declining industrial production once again, which fell by 2.2% in May, compared with a rise of 1.2% y-o-y in April. Output from the mining, oil and gas sectors has been exceptionally weak once more, with a decline of 5.7% y-o-y. Moreover, Canadian exports declined again in May, falling by 3.3% y-o-y after a decline of 3.1% y-o-y in April. Positively, the PMI for manufacturing remained at a healthy 51.9 in July, almost unchanged from 51.8 in June. The GDP forecast remains unchanged at 1.5% for 2016 and 1.7% for 2017.

OECD Asia Pacific

Japan

While the latest economic indicators continue to paint a challenging situation for the Japanese economy, the most recent announcement of further **fiscal stimulus**, in combination with ongoing monetary stimulus, points to a considerable effort to lift the economic situation. However, it remains to be seen to which extent this will be successful, as fiscal measures in the past, while having supported the economy, did not turn out to be as effective as initially envisaged. Additional net stimulus will be added to the current and the coming fiscal year in the amount of 7.5 trillion yen (around \$73 billion).

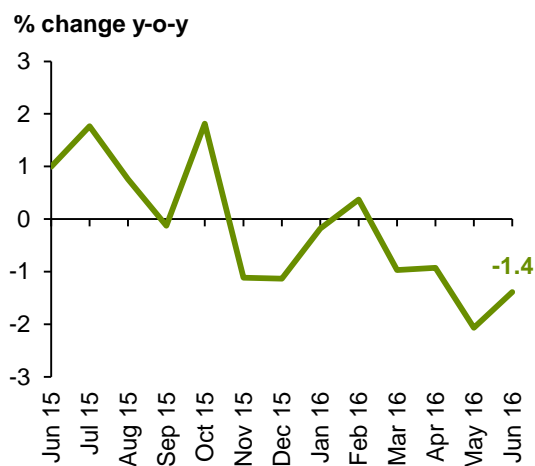
While this has slightly lifted growth expectations for 2016 and 2017, the economy continues on a **path of relatively low growth**, accompanied again by rising deflation. The issue of potentially rising sovereign debt due to new fiscal stimulus will also need close monitoring in the near future, particularly as the latest postponement of a planned 2017 sales tax increase will not materialise. Also, substantial structural measures implemented by the government are expected to only pay off slowly. Despite monetary measures, with monetary stimulus already at an unprecedented level, the yen has risen significantly on average in June, dampening the export ability of the economy. Inflation also remained in the negative, while the Bank of Japan (BoJ) is still trying to achieve an inflation rate of 2%.

After having turned slightly positive in February and remaining stagnant in March, **consumer prices** fell by 0.3% y-o-y in April, by 0.4% in May and by 0.5% y-o-y according to the latest June figure. When excluding the two volatile groups of energy and food, the country's core inflation figure stood at 0.5% in June. Despite the deflationary environment, real income has risen by a considerable 2.3% y-o-y in June. While labour-related earnings declined in 2015, these earnings have rebounded to 1.4% in 1Q16 and 1.2% in 2Q16. This means that the ultra-low unemployment rate in an extremely tight labour market has turned out to support rising wages. In June, the unemployment rate stood at 3.1%, the lowest in more than 20 years.

Japanese exports continued their declining trend, falling for nine consecutive months in June, down by 7.4% y-o-y after a decline of 11.3% y-o-y a month earlier. **Industrial production** also fell again considerably, declining by 1.8% y-o-y. The weakening output situation continued with a significant decline of 13.2% in manufacturing orders in June, y-o-y. **Domestic demand** has also remained very weak in the past months as

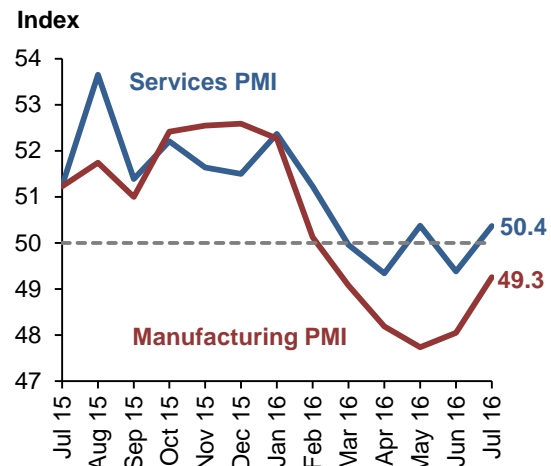
retail trade remained negative and again declined by 1.4% in June, after an even more accentuated drop of 2.1% y-o-y in the previous month.

Graph 3.2: Japanese retail trade



Sources: Ministry of Economy, Trade and Industry and Haver Analytics.

Graph 3.3: Japanese PMI indices



Sources: Markit, Japan Materials Management Association and Haver Analytics.

Albeit improving, ongoing weakness in the Japanese economy is also reflected in the **latest PMI numbers** provided by Markit. Though the PMI for manufacturing improved slightly, it remains clearly below the growth-indicating level of 50. It reached 49.3 in July, after ending at 48.1 a month earlier. Positively, the services sector PMI pointed at some modest growth, reaching 50.4 in July, after hitting 49.4 in the previous month.

After a solid 1Q16 GDP level and following the announcement of fiscal and ongoing monetary stimulus, the **GDP growth forecast** for both 2016 and 2017 has been lifted to now stand at 0.9%, 0.2 and 0.1 percentage points higher, respectively, than in the previous month's forecast. Ongoing stimulus measures will need close monitoring in the near term, but could turn out to be more effective than currently perceived.

South Korea

South Korea continues to enjoy healthy growth. However, it is expected to remain impacted by lower global trade as was seen following the announcement of a 10.5% y-o-y decline in exports for July. Industrial output grew by 4.7% y-o-y in June, after an already healthy expansion of 4.3% y-o-y a month earlier. The latest PMI number for the manufacturing sector in July indicates a continuation of slight improvements in the manufacturing sector. The index stood at 50.1, compared with 50.5 in June. This is the fourth consecutive month with a level above 50. The situation for the South Korean economy seems to be mixed, and while near-term developments warrant close monitoring, the GDP growth forecasts this month remained unchanged at 2.6% for 2016 and 2.5% for 2017.

OECD Europe

Euro-zone

The Euro-zone continues to **expand at a healthy level**, but many uncertainties remain. Among the most important issues are the consequences – economic and political – of the UK's "leave" vote, the ongoing weakening situation in the Euro-zone's banking sector and, in relation to this, the still weak sovereign debt situation in some of its member countries. The latest government attempts to recapitalize banks in Italy is another aspect that underscores the weakness of the sector in the Euro-zone and this

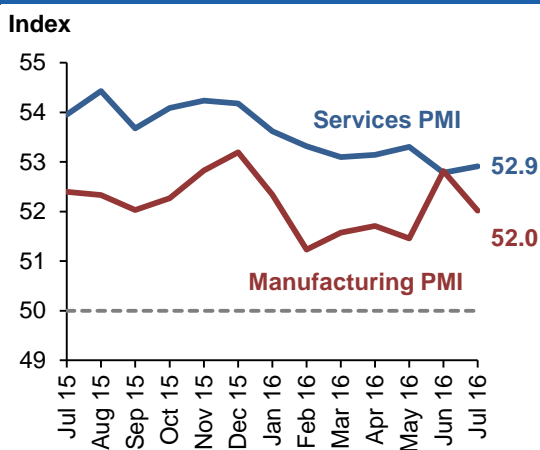
situation may become even more accentuated. Moreover, the high unemployment rate remains an issue. An upcoming referendum in Italy in September about a constitutional change, along with general and presidential elections in Germany and in France, will also be important in next year’s political debate.

The latest **industrial production** numbers for May continued their recovering trend, albeit at a lower level, growing only by 0.6% y-o-y, compared with 2.1% y-o-y a month earlier. After strong growth in April of 2.0% y-o-y, manufacturing growth was lower again in May at only 0.7% y-o-y. **Retail sales** performed slightly better in June with a growth rate of 0.8% y-o-y compared with 0.6% y-o-y in the previous month, probably partially supported by a slightly improving labour market. Though the unemployment rate in the Euro-zone remained at 10.1%, the same level as in May, it constitutes the lowest rate since mid-2011.

Despite the latest round of ECB stimulus, **inflation** remained low, but positive. It rose by 0.2% y-o-y in July, slightly more than the 0.1% y-o-y a month earlier. Positively, core inflation – the CPI excluding energy, tobacco and food — stood at 0.9% y-o-y. While slightly improving, the diminishing effectiveness of ECB stimulus seems to be mirrored again in credit supply figures. June’s growth stood at only 0.4% y-o-y, the same level as in May. This may also be the outcome of ongoing challenges in the banking system, with volatile developments in the credit supply seen in the past months pointing to continuing fragility.

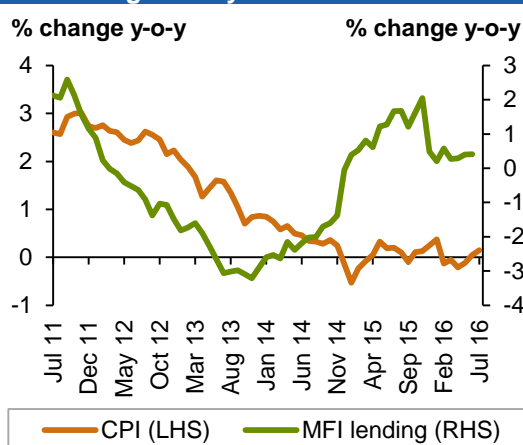
The latest **PMI indicators** are holding up well. The manufacturing PMI for July stood at 52.0, after reaching 52.8 in the previous month. The important services PMI increased to 52.9 from 52.8 a month earlier.

Graph 3.4: Euro-zone PMI indices



Sources: Markit and Haver Analytics.

Graph 3.5: Euro-zone consumer price index and lending activity



Sources: Statistical Office of the European Communities, European Central Bank and Haver Analytics.

While **recovery in the Euro-zone is ongoing**, multiple challenges remain. As most of these challenges were already considered in the previous month’s revisions, the GDP growth forecast remains unchanged. Growth is seen at 1.5% in 2016 and at 1.2% in 2017.

UK

Some uncertainties following the UK’s “leave” vote have abated. A new government is in place, but still it seems there is no definite plan on how to enact the vote. While the swift change of government has provided some support to markets, it seems the real

economy is starting to suffer. The pound sterling is hitting new lows, making vital imports more expensive and lifting inflation. The labour market shows some early signs of weakening and housing prices remain challenged. This has also led the Bank of England (BoE) to lower its key interest rate from 0.5% to 0.25% in its latest meeting in order to overcome some economic weakness. The BoE also projects that negative effects will be felt immediately and 2H16 growth is forecast to be considerably impacted. Even more so, 2017 growth is forecast to be impacted through a decline in investments, rising unemployment and rising inflation, although some counterbalancing deflationary factors may arise from a decline in house prices, which may lead to lower household wealth and income. The PMI for manufacturing in July already declined to 48.2, compared with 52.4 in June. The decline in services sector PMI was even more accentuated as it fell to 47.4 from 52.3. While the situation will need to be carefully monitored, potential negative effects are forecast to produce growth of only 0.4% in the coming year, considerably lower than growth in 2016, which is forecast at 1.5%, both are unchanged from the previous assessment.

Emerging and Developing Economies

The GDP of **Brazil** is forecast to contract by 3.4% y-o-y in 2016 before posting marginal growth of 0.4% in 2017 on expected lower inflation, some ease in the interest rate and slightly better commodity prices, alongside a positive spillover from Argentina.

In **Russia**, a notable slowdown in the GDP's rate of contraction in 2Q16 – with strong performance in the services sector and a controlled unemployment rate, along with easing inflation – have prompted a revision of the GDP forecast for 2016 for a deceleration of 0.8% instead of the previous contraction of 1.0%. For 2017, the forecast remains at 0.7% growth.

Strong private consumption may have underpinned **Indian** economic growth in 2Q16. Still, investment continues to disappoint and uncertainty about policy does not bode well for growth in the near term. For these reasons, India seeks to rebalance investor and state rights in favour of the state in trade and investment treaty negotiations with the European Union (EU). India's manufacturing economy saw a rebound at the beginning of 2H16 after a slowdown in the April–June quarter, as growth of both production and new orders continued to strengthen in July. India's parliament passed the long-awaited Goods and Services Tax (GST) bill, paving the way for a simplified indirect tax regime. When implemented, the GST is expected to provide a significant boost to GDP, with estimated gains to medium-term GDP levels of between 1% to 2%, according to the Finance Ministry.

China's overall GDP growth was steady in 2Q16 at 6.7%, as better exports and steady infrastructure investment offset downward pressure from increasingly weak corporate investment and as a spurt in real estate construction started to lose momentum. Consumption remained robust. Although, according to the household surveys, nationwide consumption grew by 6.5% in 2Q16 in real terms, down from 7.5% in 1Q16, real retail sales growth picked up throughout the quarter, as did that of passenger car sales. China's manufacturing PMI slipped into contraction, indicating softer industrial production in July. Output, new orders, and new export orders grew at their slowest rates since March 2016, but employment contracted at a slower pace. China's National Development and Reform Commission (NDRC) calls for proactive fiscal and financial policy to support investment in 2H16, focusing on private investment and housing market destocking to support growth.

Table 3.2: Summary of macroeconomic performance of BRIC countries

| | GDP growth rate | | Consumer price index, % change y-o-y | | Current account balance, US\$ bn | | Government fiscal balance, % of GDP | | Net public debt, % of GDP | |
|---------------|-----------------|------|--------------------------------------|------|----------------------------------|-------|-------------------------------------|------|---------------------------|------|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 |
| Brazil | -3.4 | 0.4 | 8.2 | 5.5 | -22.2 | -39.0 | -8.1 | -6.1 | 75.0 | 80.6 |
| Russia | -0.8 | 0.7 | 7.2 | 5.8 | 35.3 | 46.8 | -3.9 | -2.8 | 13.5 | 15.5 |
| India | 7.5 | 7.2 | 5.6 | 5.7 | -19.6 | -30.6 | -3.8 | -3.6 | 52.2 | 50.7 |
| China | 6.5 | 6.1 | 2.3 | 2.1 | 338.9 | 290.5 | -3.5 | -3.9 | 20.2 | 24.8 |

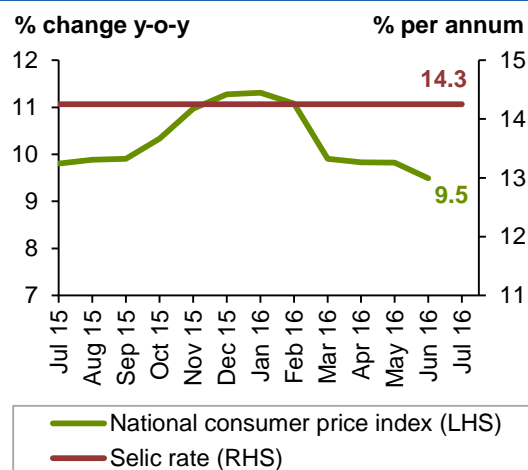
Note: 2016 and 2017 = forecast.

Sources: Consensus Economics, Economic Intelligence Unit, Financial Times, OPEC Secretariat and Oxford.

Brazil

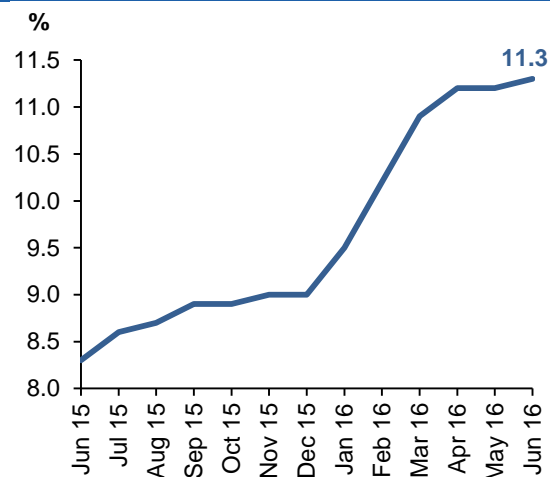
The real appreciated in July for the sixth consecutive month. It rose 4.4% m-o-m against the dollar. The central bank kept its benchmark **interest rate** unchanged for the 12th consecutive month at 14.25% in July, while **inflation** posted 9.5% in June, compared with 9.8% in May. Inflation targets for 2017 and 2018 were kept unchanged at 4.5%, while the tolerance range narrowed from ±2 pp to 1.5 pp. The three-month moving average **unemployment rate** stood at 11.3% in June, slightly higher than the previous month, though remaining at the highest rate on record since March 2012.

Graph 3.6: Brazilian inflation vs. Interest rate



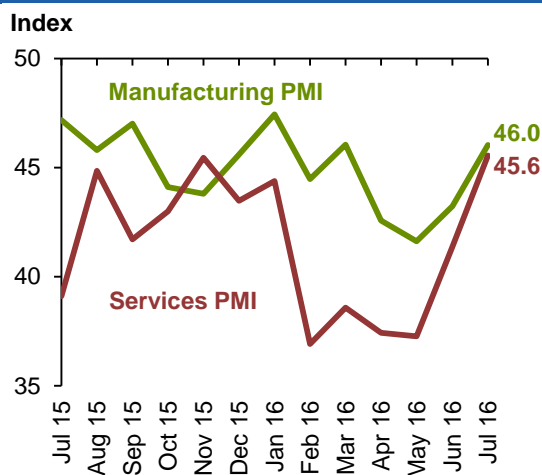
Sources: Banco Central do Brasil, Instituto Brasileiro de Geografia e Estatística and Haver Analytics.

Graph 3.7: Brazilian unemployment rate

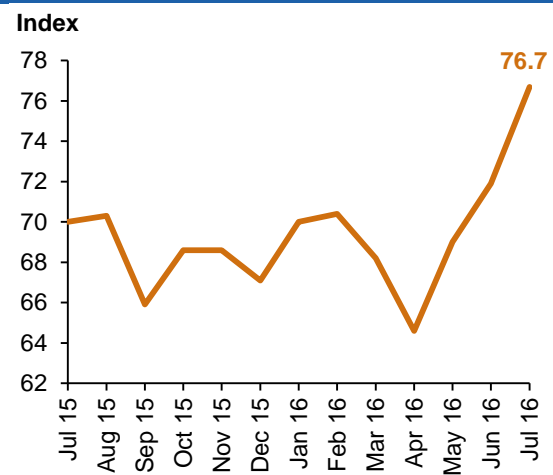


Sources: Instituto Brasileiro de Geografia e Estatística and Trading Economics.

Deceleration in the **manufacturing sector** slowed in July as revealed by the PMI survey. The index registered 46.0 the previous month, up from 43.2 on a lesser drop in new work received. The index, however, remained in contraction since February 2015. Weak domestic demand is causing major survey components to remain in contraction, including production, job creation and new orders.

Graph 3.8: Brazilian manufacturing and services PMIs

Sources: HSBC, Markit and Haver Analytics.

Graph 3.9: Brazilian consumer confidence index

Sources: Fundação Getúlio Vargas and Haver Analytics.

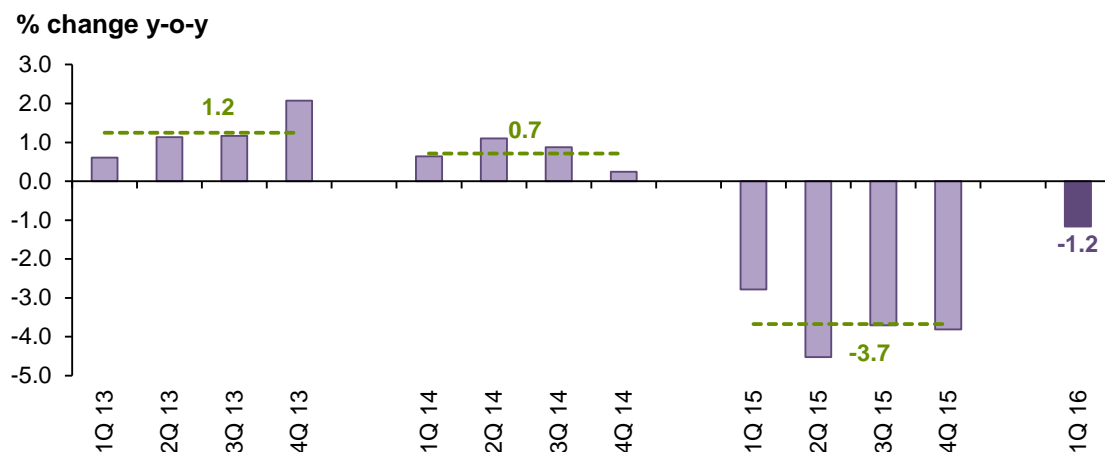
The **consumer confidence index** improved in July for the third month in a row. The index registered 76.7 in July, up from 71.9 a month earlier. Following a contraction of 5.4% y-o-y in 1Q16, there are not many positive indications to support the belief that a recovery started in 2Q16. The **economic activity index**, seen as a proxy for monthly GDP growth, fell by 4.9% y-o-y in May, compared with 5.0% in April. **Retail trade** dropped an average of 4% y-o-y in the first five months of 2016. On the external front, the ongoing deep recession continued to drag down **imports**, which fell by 15.4% y-o-y in June. The value of **exports**, on the other hand, decreased by 14.7% y-o-y in June, leading to a trade surplus of \$3.97 billion the same month.

GDP is forecast to contract by 3.4% y-o-y in 2016, before posting marginal growth of 0.4% in 2017 on expected lower inflation, some easing of the interest rate and slightly better commodity prices alongside positive spillover from Argentina.

Russia

The Economy Ministry announced that the first **GDP** estimate shows a contraction of only 0.6% y-o-y in 2Q16, after a 1.2% decline in 1Q16. This represents the smallest contraction in the economy since it fell into recession in 1Q15. The Ministry reported that “industrial production, transport and agriculture were the main factors behind the contraction slowdown, while construction and retail sales continued having a negative impact”.

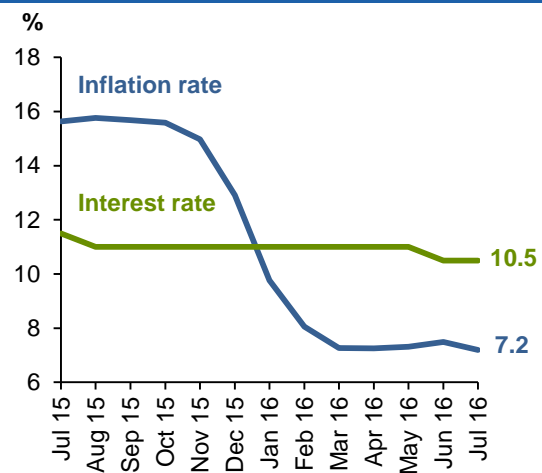
Graph 3.10: Russian GDP growth rate



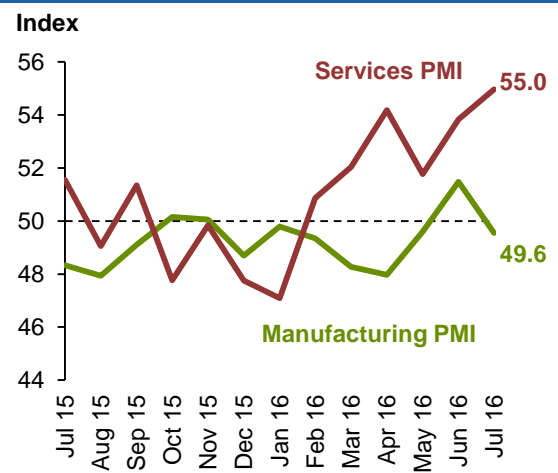
Sources: State Committee of the Russian Federation and Haver Analytics.

After appreciating 0.5% m-o-m vs. the dollar in June, the **ruble** appreciated 2.5% in 2Q16, compared with depreciation of 0.7% in 1Q16. It continued appreciating in July by 1.7% m-o-m. **Inflation** continued posting sub-8% readings for the fifth month in a row in July, registering 7.2%. By leaving its benchmark **interest rate** at 10.5% in July, the central bank showed its cautious approach towards inflation, which severely hit household consumption the previous year.

Graph 3.11: Russian inflation vs. Interest rate **Graph 3.12: Russian PMIs**



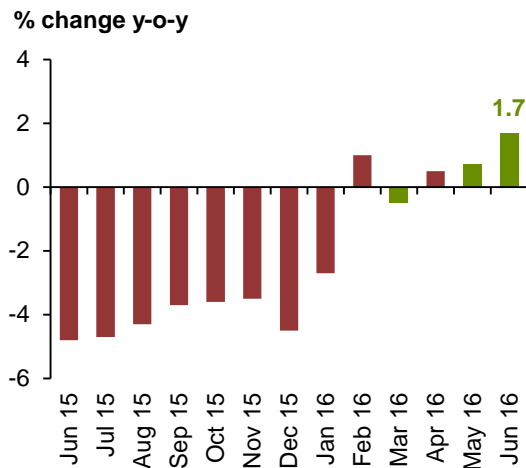
Sources: Federal State Statistics Service, Central Bank of Russia and Haver Analytics.



Sources: HSBC, Markit and Haver Analytics.

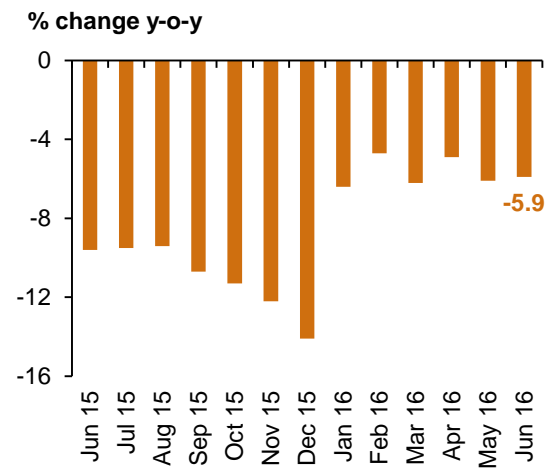
Another deterioration in the business conditions of the **manufacturing sector** in July was reported by the IHS Markit manufacturing PMI survey. The index went back into contraction territory the previous month amid a decrease in new business and slower production growth alongside less employment. The index posted 49.5 in July, from 51.5 a month earlier. On the other hand, business conditions in the **services sector** improved in July, according to its respective PMI. The survey showed the fastest pace of growth in output since February 2013, together with highest increase in new orders for 42 months, which lead to job creation in the services sector. On a related note, a slower contraction in **retail sales** continued in 2Q16. It dropped by 5.6% y-o-y in 2Q16 versus a 5.8% and 12.5% contraction in the previous two quarters, respectively.

Graph 3.13: Russian industrial production



Sources: Federal State Statistics Service and Haver Analytics.

Graph 3.14: Russian retail sales



Sources: Federal State Statistics Service and Haver Analytics.

A notable slowdown in the GDP's rate of contraction in 2Q16 with strong performance in the services sector and an unemployment rate that is under control, along with easing inflation, have all prompted a GDP forecast revision for 2016 to a deceleration of 0.8% instead of the previous contraction figure of 1.0%. For 2017, the forecast remains at 0.7% growth.

India

Strong private consumption may have underpinned economic growth in 2Q16. However, banking sector weakness will weigh on private investment. Government investment in road, rail and power will continue and help enhance overall infrastructure. It seems higher public sector wages should support consumer spending, although car sales have not been particularly robust in recent months. The recent surge in moped sales — a key mode of transport in rural India — suggests that rural demand is gathering momentum. Moreover, consumption is likely to gain further traction from higher public sector wages.

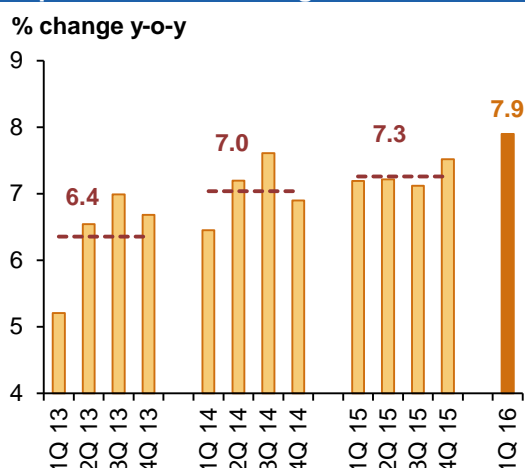
The **Consumer Price Index (CPI)** slightly increased to 5.8% in June from 5.7% in May, above the Reserve Bank of India (RBI)'s March 2017 target of 5%. Food prices continued to pick up, driven by a 15% surge in vegetable prices. Core inflation, however, dipped modestly to 4.5%, while fuel price inflation was stable at 2.9%. Meanwhile, industrial activity remained sluggish in May, with output up 1.2% on the year after a 1.3% decline in April. WPI increased by 1.6% in June compared with 0.7% in May.

The disappointing performance of activity indicators justifies the RBI's accommodative policy stance. But with inflation hovering around the upper end (6%) of the RBI's target range and monsoon-related risks lurking in the background, it seems to remain cautious and keep interest rates on hold until the risks to inflation appear more balanced. The prospect for further easing now also depends on the leanings of the incoming RBI Governor.

Investment continues to disappoint and uncertainty about policy does not bode well for growth, following weak 1Q16 investment, lack of evidence of a turnaround in private investment and fiscal constraints on public infrastructure spending. Due to these factors, India is seeking to rebalance investor and state rights in favour of the state in

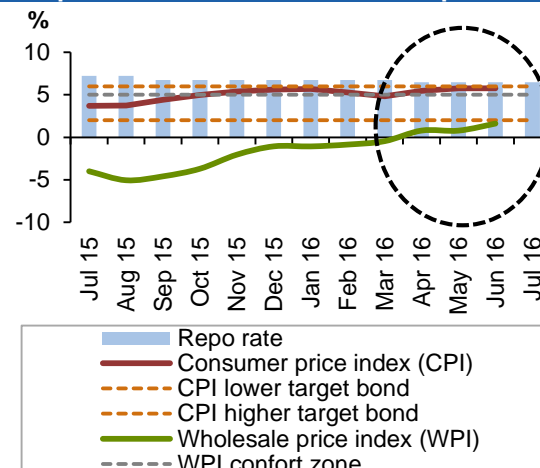
trade and investment treaty negotiations with the European Union (EU). Once new provisions take effect, investors will likely have less legal protection against future regulatory measures — such as tax or environmental measures — that India may impose. Some or all of the narrower investor protection is likely to take effect in the next one to five years, once existing investment treaties are renegotiated or new agreements concluded.

Graph 3.15: Indian GDP growth



Sources: National Informatics Centre (NIC) and Haver Analytics.

Graph 3.16: Indian inflation vs. Repo rate



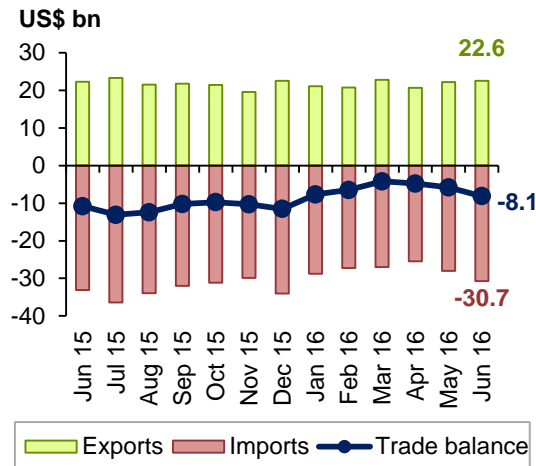
Sources: Ministry of Commerce and Industry, Reserve Bank of India and Haver Analytics.

Indian parliament passed a crucial **GST reform bill**. The GST implementation may be considered to be the most important Indian tax reform since the country's independence in 1947. When implemented, the GST is expected to provide a significant boost to GDP, with estimated gains to medium-term GDP levels of between 1–2%, according to the Finance Ministry. The GST will also provide a boost to Indian manufacturing competitiveness by significantly reducing logistics costs for Indian industry by more than 20% in some segments. The GST will accelerate the development of India's e-commerce industry by simplifying the taxation regime for online sales nationwide and removing barriers to interstate e-commerce sales. It will result in the elimination of a range of other indirect taxes, reducing double taxation. By significantly reducing logistics costs and double taxation, the GST will improve the competitiveness of India as a manufacturing hub.

India's merchandise **exports** increased by 1.3% y-o-y in June, after declining continuously since December 2014. However, India's merchandise **imports** contracted by 7.3% y-o-y and the **trade balance** deficit declined by 25% y-o-y to \$8.12 billion. The latest trade statistics show that oil imports (in US\$) were 44% higher in June than in January 2016. However, the trade deficit registered only modest deterioration over this period and is still much narrower than in 2H15. Falling gold imports, down by around 60% between January and June 2016, have partly offset the impact of a rising oil import bill on overall imports during this period (up by only 6.7%).

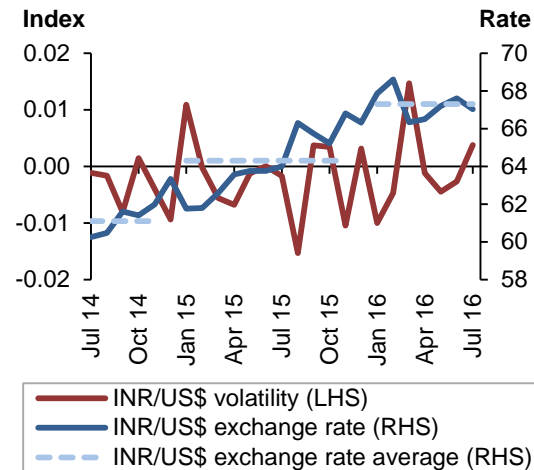
The **current account** deficit in India narrowed to \$0.3 billion or 0.1% of GDP in 1Q16 from a \$0.7 billion gap or 0.1% of GDP a year earlier, mainly due to a lower trade gap (\$24.8 billion from \$31.6 billion). Considering April to March of the 2015/16 fiscal year, the current account deficit decreased to 1.1% of GDP compared with 1.8% in the previous year.

Graph 3.17: Indian net exports



Sources: Ministry of Commerce and Industry and Haver Analytics.

Graph 3.18: US\$/INR exchange rate

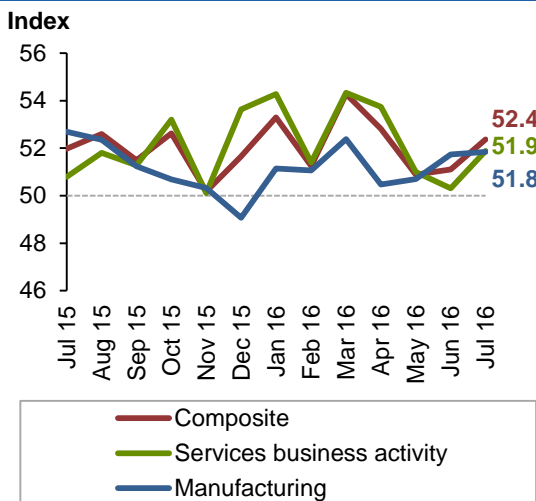


Sources: Ministry of Commerce and Industry, Reserve Bank of India and Haver Analytics.

India's **manufacturing** economy was reviving at the beginning of 2H16 after a slowdown seen in the April–June quarter, as growth of both production and new orders continued to strengthen in July. Although output expanded at its fastest rate since March and backlog accumulation intensified, businesses refrained from creating jobs. The ongoing muted trend for employment indicates that companies are still somewhat uncertain regarding the sustainability of the upturn.

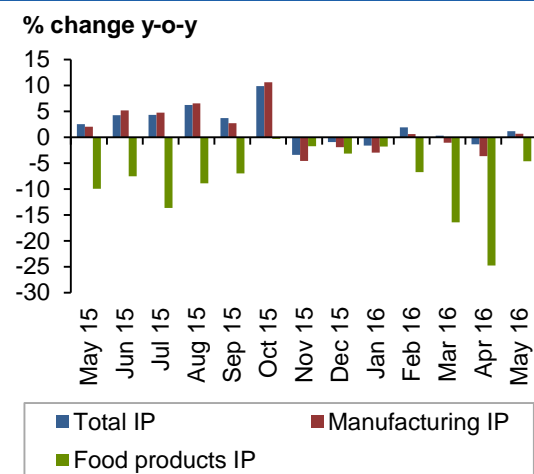
India's **PMI** posted a four-month high of 51.8 in July (51.7 in June). Upward movement in the headline index came from stronger contributions from four of its five components, the exception being supplier delivery times.

Graph 3.19: Indian PMIs



Sources: HSBC, Markit and Haver Analytics.

Graph 3.20: Indian industrial production breakdown



Sources: Central Statistical Organisation of India and Haver Analytics.

GDP growth expectation for 2016 and 2017 remain unchanged at 7.5% and 7.1% from the previous assessment. This raises the question of whether recovering oil prices (from the very low levels seen in 1Q16) could lead to renewed concerns about India's vulnerability to external risks.

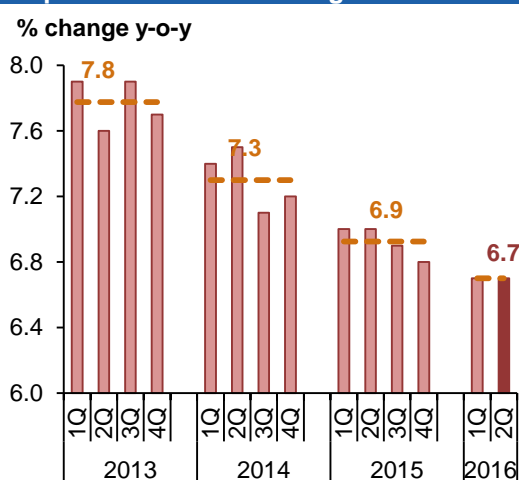
China

China's overall **GDP growth** held steady at 6.7% y-o-y in 2Q16, as better exports and steady infrastructure investment offset downward pressure from increasingly weak corporate investment and as a spurt in real estate construction started to lose momentum. It seems 2H16 growth will be challenged by a loss of momentum in real estate construction and weak prospects for exports and corporate investment, making the achievement of overly ambitious growth targets reliant on continued stimulus. With limits to credit-based stimulus becoming more obvious, the government may have to resort to greater reliance on fiscal policy.

Investment momentum weakened further in 2Q16. In particular, corporate **fixed asset investment** (FAI) decelerated, with FAI in manufacturing dropping by 0.3% on the year in June. Overall FAI growth fell from 10.5% y-o-y in 1Q16 to 8.3% y-o-y in 2Q16. A spurt in real estate investment in early 2016 was crucial to countering downward pressure on overall growth in the first half of this year, but a pick-up in the real estate sector seems to be losing momentum amid still-high inventories of unsold housing. Housing starts extended their decline to 7.3% y-o-y in June alongside a further deceleration in housing sales. However, infrastructure investment remained solid through June, reflecting its use by the government as a means to stimulate the economy.

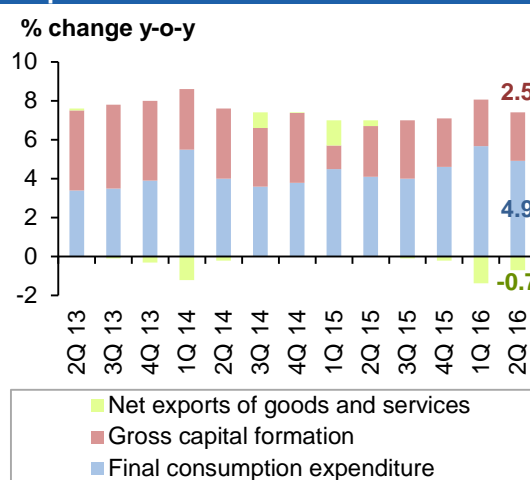
China's National Development and Reform Commission (NDRC) calls for proactive fiscal and financial policy to support investment in the next half, focuses on private investment and housing market destocking and seems likely to support growth in 2H16. The NDRC is known to advocate a lower interest rate environment to boost investment and lending to promote economic growth. However, the central bank is more cautious of interest rate cuts given the pressure of a yuan depreciation and capital flight as a result of the Brexit, the risk of a rise in the US interest rate, and the domestic real estate bubble. Regardless, the overall fiscal and financial environment will continue to ease in the second half, given the downward trend of economic growth.

Graph 3.21: Chinese GDP growth



Sources: China's National Bureau of Statistics and Haver Analytics.

Graph 3.22: Chinese GDP breakdown



Sources: China National Bureau of Statistics and Haver Analytics.

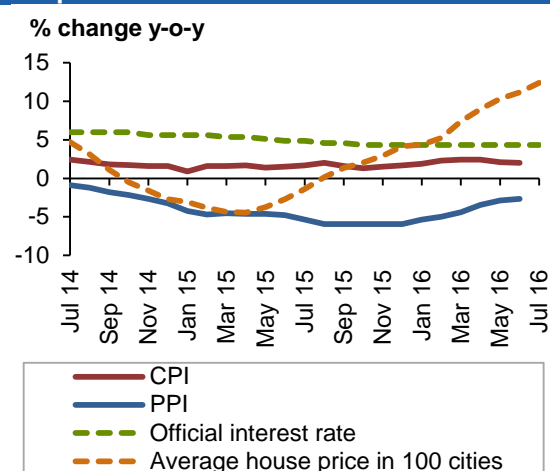
A noticeable **depreciation of the yuan** in recent months has left markets unmoved, in large part because net financial outflows have receded. Meanwhile, the weakening has removed the overvaluation that had developed in 2015. The yuan has weakened substantially in recent months, especially since early May. It reached 6.7 to the US dollar in the second week of July, a level not seen since 2010, before strengthening marginally. Historically, the Chinese yuan reached an all-time high of 8.73 in January of 1994 and a record low of 1.53 in January of 1981. It seems the depreciation of the yuan accelerated following Brexit and large moves in other major currencies. Further currency depreciation appears predictable in the short term, as global financial instability post-Brexit and softer external demand put pressure on policy and growth.

Consumption remained robust. According to household surveys, nationwide consumption grew by 6.5% in 2Q16 in real terms, down from 7.5% in 1Q16, real retail sales growth picked up throughout the quarter, as did that of passenger car sales. The latter were up by 17.7% y-o-y in June.

The **CPI** eased in June to 2% y-o-y on lower food price increases. Meanwhile, a 0.2% drop in prices in the latest month meant that the PPI was down by 2.7% on a year ago, although this rate of deflation is much less than at the start of the year (after noticeable m-o-m price increases during the March to May period). It remains to be seen whether the moderating deflation trend will continue now that real estate construction is cooling again.

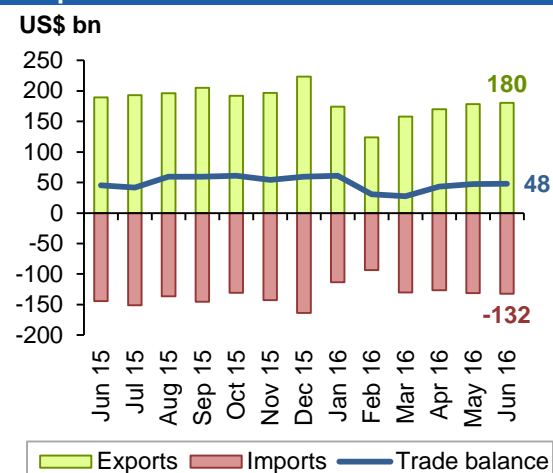
The Chinese **trade** surplus widened slightly by 6.4% y-o-y to \$47.9 billion in June. **Exports** from China fell by 4.9% y-o-y to \$ 180.2 billion in June, worse than market expectations of a 4.1% drop. In the last 12 months, exports rose only in March (by 10.7%). In yuan-denominated terms, exports grew by 1.2% y-o-y in June following a 0.3% decline in May. **Imports** to China shrank by 8.4% y-o-y to \$132.2 billion in June, following a 0.4% decline in May. It is the 20th straight month of decline, a likely sign of weaker domestic demand and lower growth prospects. In yuan-denominated terms, imports fell by 2.3%, reversing growth of 5% in May.

Graph 3.23: Chinese CPI vs. PPI



Sources: China Index Academy, China National Bureau of Statistics, Soufan and Haver Analytics.

Graph 3.24: Chinese trade balance

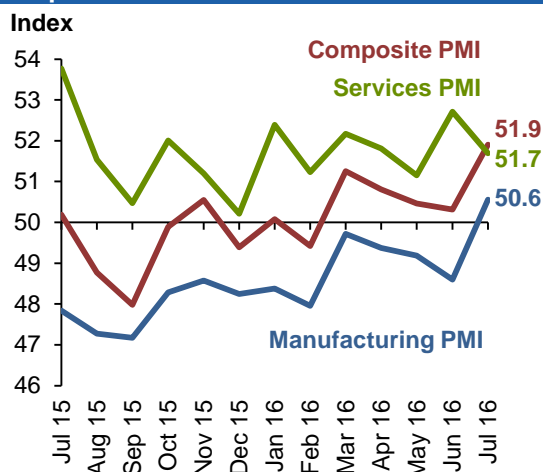


Sources: China Customs and Haver Analytics.

China's **manufacturing PMI** increased, indicating improvements in **industrial production** in July. Output, new orders, and new export orders grew at their slowest rates since March 2016, while employment contracted at a slower pace. China's non-manufacturing PMI continued to improve, while construction expanded at a slower pace. The headline figure accelerated by 0.2 basis points with a 0.4 basis point

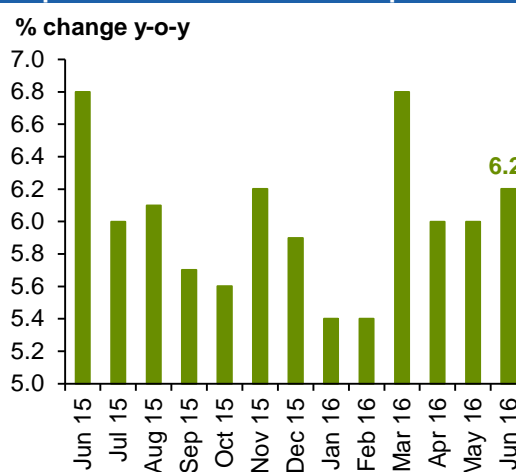
improvement in the services sub-index, while the construction index decelerated by 0.9 points. Headline new orders decelerated by 0.9 points to fall below the expansion threshold, dragging by 2.3 points in the construction orders sub-index. Deterioration in real estate investment was the main contributor to weakening construction activity, but it remained at a relatively high level compared with the same period the previous year, owing to strong infrastructure investment. Non-manufacturing employment contracted at a more rapid pace, owing to deterioration in both construction and services.

Graph 3.25: Chinese PMIs



Sources: HSBC, Markit and Haver Analytics.

Graph 3.26: Chinese industrial production



Sources: China National Bureau of Statistics and Haver Analytics.

China's **GDP growth** expectation in 2016 and 2017 is kept unchanged at 6.5% and 6.1%, respectively.

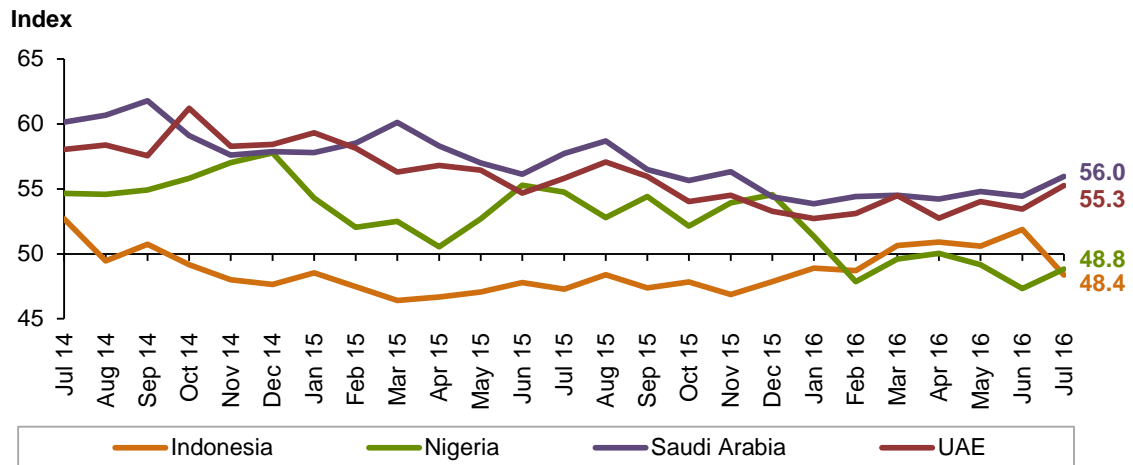
OPEC Member Countries

In **Saudi Arabia**, consumer price inflation posted a rise of 4.1% y-o-y in June, unchanged from the previous month. The country's non-oil private sector reported further expansion in July, with the PMI at 56.0, up from 54.4 a month earlier. Robust growth in output and new orders were behind the previous month's improvement in business conditions.

In **Indonesia**, inflation is much lower this year than in 2015. The average inflation rate for January–July stood at 3.8% this year versus 6.9% in 2015. The unemployment rate in 1Q16 stood at its lowest reading in the available history of data at 5.5%. The manufacturing sector performed well in 2Q16, where it posted an average PMI of 51, vs. 47 in the same period of the previous year. However, the index fell back into contraction territory in July on shrinking new orders and production.

In the **United Arab Emirates**, consumer price inflation was at 1.8% y-o-y in July, up from 1.6% in June. The country's non-oil private sector posted its 10-month fastest improvement in business conditions the previous month, according to the PMI. An index improvement to 54.5 in July, up from 53.4 in June, was mainly due to higher output, new work received and job creation.

Graph 3.27: PMIs of Indonesia, Saudi Arabia and UAE



Sources: HSBC, Markit, Nikkei, SAAB, Stanbic IBTC Bank and Haver Analytics.

Other Asia

The economy of **Vietnam** expanded by 5.5% y-o-y in 2Q16, similar to the previous quarter. Agriculture, forestry and fishing contracted by 0.2%, while industry, construction and service activities expanded by 7.1% and 6.4%, respectively. Inflation registered at higher levels than the previous year with 2.4% y-o-y in July, compared with 0.9% in July 2015.

The central bank of **Malaysia** lowered its benchmark interest rate by 25 bp to 3.0% in July as inflation posted a 15-month low reading of 1.6% in June. The economy expanded by its slowest pace in 1Q16 since 2009 — 4.2% y-o-y. Investment barely grew by 0.07% y-o-y in 1Q16, while private final consumption expenditure grew by its second-lowest pace since 2009 at 5.3%.

Africa

Inflation in **Egypt** increased by 14.8% y-o-y in June, the highest since at least July 2009. This came on the back of a sharp depreciation in the Egyptian pound versus the dollar. The pound was 16.4% lower y-o-y in 1Q16. The economy expanded by 6.7% y-o-y in 1Q16. Business conditions in the private sector moved closer to stabilization in July, though remaining in contraction territory on less shrinkage in output and new orders.

In **South Africa**, the unemployment rate stood at 26.6% in 2Q16, compared with 26.7% in 1Q16. The economy declined by 0.2% y-o-y in 2Q16 on shrinking investment, which decreased by 1.3% y-o-y. The rand appreciated by 4.3% m-o-m in July. Inflation is generally higher so far this year, averaging 6.5% in 1H16 versus 4.3% in the same period of the previous year. The PMI reading for July nearly hit the stabilization line, posting 49.9 on improvements in employment and inventories, despite a continued drop in output and new business.

Latin America

In **Argentina**, the currency depreciated 5.5% m-o-m in July, while the prime lending rate was largely unchanged at 20.1% per annum. The Buenos Aires consumer price index posted its highest reading in data history (since July 2013) at 47.1% in June 2016, up from 44.4% a month earlier. Activity in the construction sector was 19.6% y-o-y lower in June, as suggested by the synthetic indicator of construction activity. The depreciated currency and rising inflation are negatively impacting retail sales and consumer confidence. The consumer confidence index remained in slowdown territory for the sixth consecutive month in July, posting 45.6.

Transition region

In the **Czech Republic**, the currency depreciated 1.4% m-o-m in July, while inflation barely increased by 0.1% y-o-y in May and June. Unemployment stood at 4.3%, the lowest rate since 2Q08. The country's retail sales improved by 6.2% y-o-y in June, up from 4.0% the previous month. For the first time since April 2013, the manufacturing sector's PMI fell into contraction in July on a production drop and less additions to employment in the sector.

Oil prices, US dollar and inflation

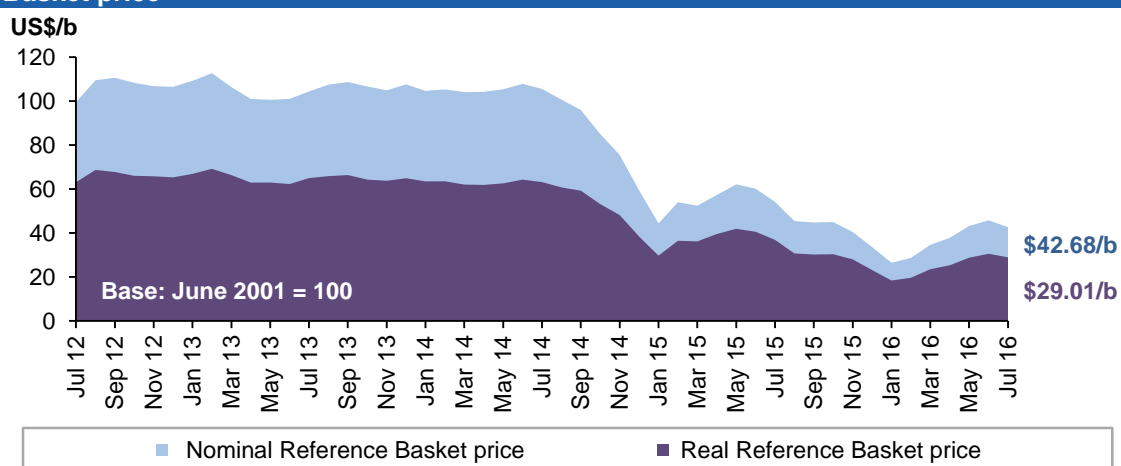
The **US dollar strengthened in July against major currencies**. On average the US dollar gained 8.0% against the pound sterling. It gained 1.5% against the euro in July, rising for the third consecutive month. It advanced against the Swiss franc by 1.2%. It declined for the eight consecutive month against the yen, down by 1.4% from the previous month.

Compared with the Chinese yuan, the US dollar rose by 1.4% m-o-m on average in June, its third consecutive monthly increase. It declined by 0.1% m-o-m against the Indian rupee. Compared with the Brazilian real, the dollar fell by 4.4% m-o-m on average in July, but has strengthened by 19% since January. The US dollar also fell against the Russian ruble by 1.7% m-o-m.

Market participants' expectations for interest rate hikes by the US Federal Reserve during the current year were diminished after weak 1H16 growth in US numbers in combination with the UK's vote on exiting the EU. Furthermore, the Bank of England announced monetary stimulus recently, while the ECB also highlighted its willingness to engage in further monetary policy accommodation in its previous meeting. This may keep the US dollar at around the current level on average in the coming months.

In nominal terms, the price of the OPEC Reference Basket (ORB) declined by a monthly average of \$3.16/b, or 6.9%, from \$45.84/b in June to reach \$42.68/b in July. In real terms, after accounting for inflation and currency fluctuations, the ORB declined by 5.2%, or \$1.59, to reach \$29.01/b from \$30.60/b (base June 2001=100). Over the same period, the US dollar advanced by 1.7% against the import-weighted modified Geneva I + US dollar basket*, while inflation declined by 0.1%.

Graph 3.28: Impact of inflation and currency fluctuations on the spot OPEC Reference Basket price*



Source: OPEC Secretariat.

* The 'modified Geneva I+US\$ basket' includes the euro, the Japanese yen, the US dollar, the pound sterling and the Swiss franc, weighted according to the merchandise imports of OPEC Member Countries from the countries in the basket.

World Oil Demand

World oil demand growth in 2016 now stands at 1.22 mb/d after a slight upward revision of 30 tb/d due to better-than-expected performances from OECD Europe and Other Asia in 1Q16 and 2Q16. Total oil demand is now pegged at 94.26 mb/d.

In 2017, world oil demand is projected to grow at the same level projected last month, increasing by 1.15 mb/d from 2016 levels, and with total oil consumption hitting a new record of 95.41 mb/d.

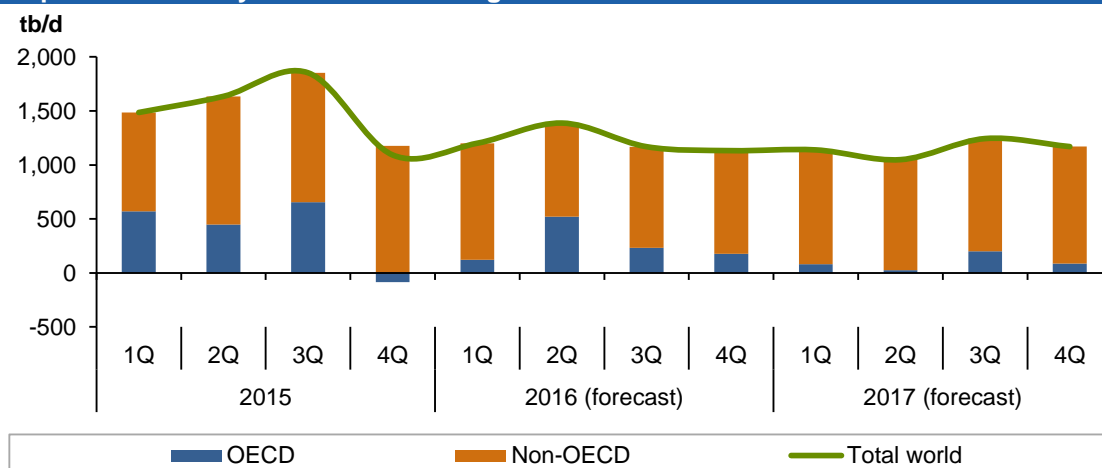
Table 4.1: World oil demand in 2016, mb/d

| | 2015 | 1Q16 | 2Q16 | 3Q16 | 4Q16 | 2016 | Change 2016/15 | |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|-------------|
| | | | | | | | Growth | % |
| Americas | 24.46 | 24.46 | 24.56 | 25.15 | 24.74 | 24.73 | 0.27 | 1.10 |
| of which US | 19.70 | 19.79 | 19.86 | 20.25 | 19.91 | 19.96 | 0.25 | 1.28 |
| Europe | 13.73 | 13.57 | 13.76 | 14.16 | 13.70 | 13.80 | 0.07 | 0.51 |
| Asia Pacific | 8.02 | 8.57 | 7.55 | 7.59 | 8.08 | 7.94 | -0.08 | -0.95 |
| Total OECD | 46.21 | 46.59 | 45.86 | 46.89 | 46.52 | 46.47 | 0.26 | 0.57 |
| Other Asia | 12.04 | 12.30 | 12.63 | 12.40 | 12.73 | 12.52 | 0.47 | 3.92 |
| of which India | 4.05 | 4.49 | 4.25 | 4.11 | 4.44 | 4.33 | 0.27 | 6.78 |
| Latin America | 6.56 | 6.19 | 6.51 | 6.84 | 6.47 | 6.50 | -0.05 | -0.84 |
| Middle East | 8.11 | 8.06 | 8.00 | 8.68 | 8.09 | 8.21 | 0.09 | 1.14 |
| Africa | 3.99 | 4.12 | 4.09 | 4.03 | 4.17 | 4.10 | 0.11 | 2.78 |
| Total DCs | 30.71 | 30.68 | 31.23 | 31.95 | 31.45 | 31.33 | 0.62 | 2.02 |
| FSU | 4.62 | 4.49 | 4.37 | 4.73 | 5.04 | 4.66 | 0.04 | 0.81 |
| Other Europe | 0.67 | 0.68 | 0.64 | 0.68 | 0.77 | 0.70 | 0.02 | 3.57 |
| China | 10.83 | 10.71 | 11.33 | 10.97 | 11.41 | 11.11 | 0.28 | 2.54 |
| Total "Other regions" | 16.13 | 15.89 | 16.35 | 16.38 | 17.22 | 16.46 | 0.34 | 2.09 |
| Total world | 93.04 | 93.16 | 93.44 | 95.22 | 95.19 | 94.26 | 1.22 | 1.31 |
| Previous estimate | 92.98 | 93.09 | 93.25 | 95.15 | 95.18 | 94.18 | 1.19 | 1.29 |
| Revision | 0.06 | 0.07 | 0.19 | 0.07 | 0.01 | 0.09 | 0.03 | 0.03 |

Note: Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Graph 4.1: Quarterly world oil demand growth



Source: OPEC Secretariat.

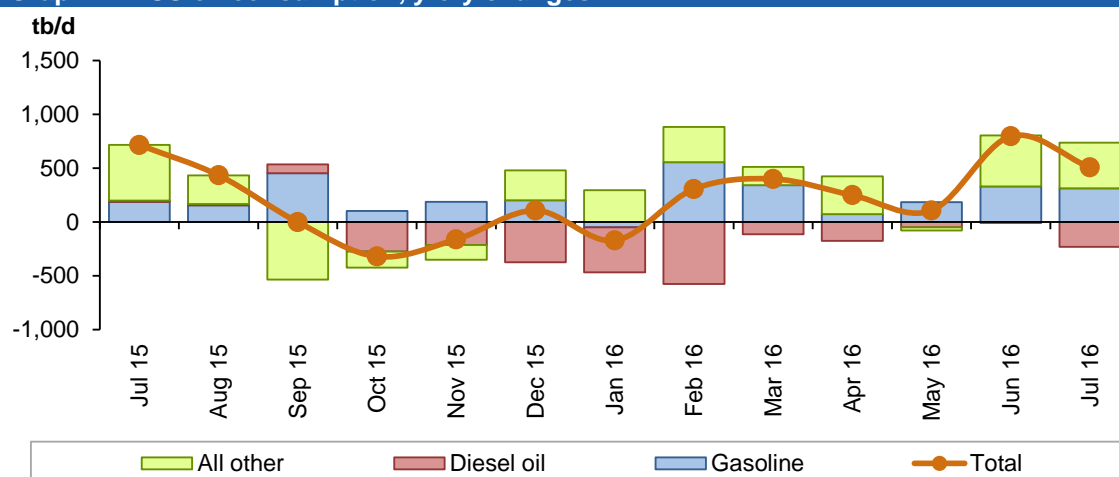
World Oil Demand for 2016 and 2017

OECD Americas

US monthly oil demand remained on a positive upward trend in May, supported by the continuing lower oil price environment and in line with rising private household consumption. Increasing oil requirements have been seen for all months since February 2016, although the increase in May was lower than in previous months.

US oil demand rose by 0.11 mb/d, or 0.6%, compared to the same month a year ago. All petroleum product categories were on the rise, with the exception of diesel oil demand, which continued on the downward trend it has seen since 3Q15. May 2016 gasoline demand remained unsurprisingly bullish compared to the same month a year ago, as a result of increasing mileage driven and a generally ongoing lower oil price environment. The average of five months in 2016 show US oil demand higher by around 0.18 mb/d as compared to the same period in 2015. There were growing requirements in all main product categories except diesel oil, with notable gains recorded in gasoline as well as jet/kerosene consumption. These developments reflect the trends in economic activity of falling industrial output and declining investments, but strong private household consumption supported by the low oil price environment.

Graph 4.2: US oil consumption, y-o-y changes



Source: US Energy Information Administration.

Preliminary weekly data for June and July 2016 show roughly a continuation of the current picture; rising gasoline jet/kerosene and fuel oil requirements being partly offset by declining diesel oil demand and leading to a solidly increasing total oil demand by 4.0% (for June) and 1.7% (for July) as compared to the same months in 2015.

US oil demand in 2016 remains strongly dependent on the development of the US economy and oil price developments with risks being balanced as compared to last month's projections. The US is considered to be the main contributor of OECD oil demand growth during 2017. Projections are unchanged and indicate lower growth than in 2016, with the oil price effects being milder during next year and the outlook in the petrochemical industry posing an additional positive factor for oil demand growth.

Table 4.2: US oil demand, tb/d

| | Average January - June | | Change 2016/15 | |
|-----------------------|------------------------|---------------|----------------|------------|
| | 2016 | 2015 | tb/d | % |
| Propane/propylene | 1,129 | 1,154 | -24 | -2.1 |
| Gasoline | 9,387 | 9,139 | 247 | 2.7 |
| Diesel oil | 3,842 | 4,063 | -221 | -5.4 |
| Jet/kerosene | 1,584 | 1,524 | 60 | 4.0 |
| Fuel oil | 345 | 233 | 112 | 48.3 |
| Other products | 1,129 | 1,154 | -24 | -2.1 |
| US 50 | 19,755 | 19,464 | 290 | 1.5 |
| US territories | 398 | 375 | 23 | 6.1 |
| Total | 20,153 | 19,840 | 313 | 1.6 |

Source: US Energy Information Administration.

In **Mexico**, June 2016 oil demand decreased by 1.5% y-o-y. Gasoline and diesel oil demand grew strongly, but were more than offset by sluggish LPG and falling fuel oil requirements. 2016 Mexican oil demand is expected to remain flat y-o-y as projected during last month, while for 2017, a positive outlook on economic growth is expected to positively influence oil demand.

Decreasing demand for LPG was partly offset by rising oil usage in the road transportation sector, leading to an overall 3.7% y-o-y decline in **Canadian** oil requirements for May 2016, following a weak period of January-April 2016. Projections for 2016 Canadian oil demand remain unchanged from those in the previous months, leaving oil requirements during 2016 lower than 2015. Road transportation fuels represent the main bulk of growth, being, however, more than offset by declines in the demand for some industrial fuels. For 2017, growth in Canadian oil requirements is projected to be slightly higher than in 2016.

In 2016, **OECD Americas** oil demand is estimated to grow by 0.27 mb/d compared with 2015. 2017 OECD Americas oil demand is expected to be higher by 0.20 mb/d compared with 2016.

OECD Europe

European oil demand grew strongly in May 2016, rising by around 0.45 mb/d y-o-y, with positive growth in the majority of countries in the region. Gains observed were related to petroleum products used in road transportation and industrial sectors, largely diesel oil and to a lesser extent gasoline, despite declines in some petrochemical feedstocks, particularly naphtha.

Preliminary data for June 2016 indicated some gains in Italy (14 tb/d), while oil requirements in Germany, the UK and France decreased y-o-y by 25 tb/d, 54 tb/d and 44 tb/d, respectively. The overall preliminary data indicated a possible decline of around 0.11 mb/d, equating to around 2% y-o-y.

However, positive momentum in auto sales continued for the 34th month in a row according to data from the European Automobile Manufacturers Association (ACEA). Registrations rose by close to 7% compared to June 2015, reaching 1.46 million units, close to the level of June 2007, just before the automotive industry was hit by the economic crisis. Auto sales in Italy, Spain and Germany expanded by 12%, 11% and 8%, respectively. For the remainder of the year, expectations for European oil demand face some uncertainties, primarily with respect to potential consequences from the

UK's decision to leave the European Union. These uncertainties will also impact oil demand next year. The high historical baseline and reduced price elasticities for road transportation fuels represent risks to the downside. Nevertheless, a soft exit of the UK from the EU and projected improvements in major economies in the coming year may support oil requirements.

Table 4.3: Europe Big 4* oil demand, tb/d

| | <u>Jun 16</u> | <u>Jun 15</u> | <u>Change</u> | <u>Change, %</u> |
|----------------|---------------|---------------|---------------|------------------|
| LPG | 419 | 408 | 11 | 2.7 |
| Naphtha | 601 | 627 | -26 | -4.2 |
| Gasoline | 1,139 | 1,143 | -4 | -0.4 |
| Jet/kerosene | 761 | 774 | -13 | -1.7 |
| Diesel oil | 3,254 | 3,208 | 46 | 1.4 |
| Fuel oil | 259 | 277 | -18 | -6.5 |
| Other products | 571 | 676 | -105 | -15.5 |
| Total | 7,004 | 7,113 | -109 | -1.5 |

Note: * Germany, France, Italy and the UK.

Sources: JODI, OPEC Secretariat, UK Department of Energy and Climate Change and Unione Petrolifera.

European oil demand is projected to increase by 0.07 mb/d in 2016. In 2017, the region's oil demand is projected to decline slightly y-o-y by 0.02 mb/d.

OECD Asia Pacific

Preliminary data indicates that **Japan's** oil demand fell by 0.19 mb/d, or 6%, y-o-y in June 2016, with requirements for the majority of the main petroleum product categories being on the decline, y-o-y. Demand for naphtha rose, while requirements for all other product categories fell and gasoline remained flat-to-slightly-decreasing y-o-y. Direct crude and fuel oil burning for electricity generation was a major factor in the declines for another month.

The outlook for 2016 Japanese oil demand assumes current indications will largely remain unchanged from last month's forecasts with risks continuing to be skewed to the downside. Oil demand projections for 2017 have taken into consideration assumptions of ongoing improvements in the country's economy, but also a number of additional nuclear plants re-joining operation. For 2017, and as result of these assumptions, risks continue to be skewed to the downside.

Table 4.4: Japanese domestic sales, tb/d

| | <u>Jun 16</u> | <u>Jun 15</u> | <u>Change</u> | <u>Change, %</u> |
|----------------------|---------------|----------------|---------------|------------------|
| LPG | 342 | 363 | -21 | -5.7 |
| Naphtha | 714 | 677 | 37 | 5.5 |
| Gasoline | 871 | 879 | -8 | -0.9 |
| Jet/kerosene | 181 | 199 | -18 | -4.6 |
| Diesel oil | 555 | 589 | -34 | -5.7 |
| Fuel oil | 382 | 419 | -37 | -8.7 |
| Other products | 60 | 53 | 7 | 13.2 |
| Direct crude burning | 37 | 153 | -116 | -75.9 |
| Total | 3,143 | 3,331.5 | -188 | -5.6 |

Source: Ministry of Economy Trade and Industry of Japan.

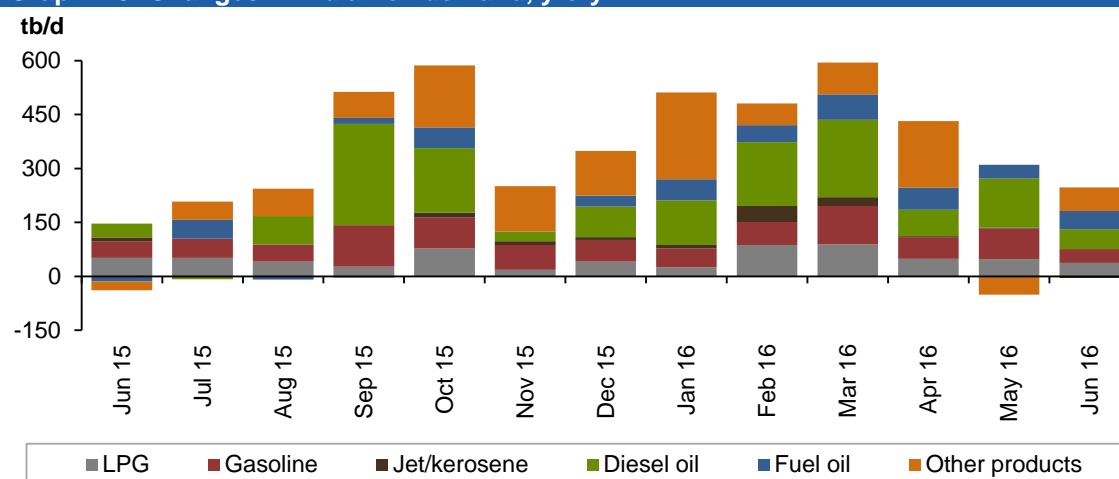
In **South Korea**, May 2016 came up bullish by a remarkable 0.28 mb/d, or around 12% y-o-y growth. Demand for all main petroleum product categories was on the rise, being particularly strong for products used in the petrochemical industry, LPG and naphtha, as well as transportation fuels. The outlook for South Korean oil demand during 2016 is positive, unchanged compared with last month's projections, while expectations for 2017, particularly developments in the country's petrochemical industry, allow potential for further solid growth.

OECD Asia Pacific oil consumption is expected to fall in 2016 by 0.08 mb/d and by the same amount in 2017, y-o-y.

Other Asia

Oil demand growth in **India** remained high in June, increasing by more than 0.24 mb/d y-o-y and leading to 0.31 mb/d growth in 2Q16, much higher than the level recorded in 2Q15 of 0.18 mb/d.

Graph 4.3: Changes in Indian oil demand, y-o-y



Sources: OPEC Secretariat and Petroleum Planning and Analysis Cell of India.

From a products point of view, oil demand was encouraged by high fuel oil demand growth followed by diesel, gasoline and LPG. Fuel oil demand increased by 55 tb/d, rising by more than 20% y-o-y in June, mainly on the overall demand improvements of power generation in various sectors supported by infrastructure projects.

Diesel demand also increased, gaining around 55 tb/d, or around 3% higher y-o-y as improvements in the overall economic environment lent support to increased usage of the product.

Gasoline requirements continued to rise, adding roughly 40 tb/d, or around 8% y-o-y, with total consumption now at approximately 0.55 mb/d. As in previous months, demand for gasoline was well supported with the continuous increase in passenger vehicle sales, specifically SUVs, which increased by around 35% y-o-y. Sales of SUVs continued at a record 25% of total vehicle sales in June. Two-wheeler sales also increased during the month, growing by more than 12% y-o-y, reaching 1.5 million units.

LPG also grew strongly during the month of June, recording around 37 tb/d of growth, or 7% y-o-y. The continuation of expansion and operations by distribution companies provided support to product growth.

Table 4.5: Indian oil demand by main products, tb/d

| | <u>Jun 16</u> | <u>Jun 15</u> | <u>Change</u> | <u>Change, %</u> |
|----------------|---------------|---------------|---------------|------------------|
| LPG | 594 | 557 | 37 | 6.7 |
| Gasoline | 552 | 514 | 39 | 7.5 |
| Jet/kerosene | 267 | 272 | -5 | -1.8 |
| Diesel oil | 1,627 | 1,572 | 55 | 3.5 |
| Fuel oil | 307 | 256 | 51 | 20.0 |
| Other products | 847 | 782 | 65 | 8.3 |
| Total | 4,196 | 3,954 | 242 | 6.1 |

Sources: OPEC Secretariat and Petroleum Planning and Analysis Cell of India.

In **Thailand**, the latest May 2016 data show an increase of around more than 2% y-o-y with all products rising at different magnitudes. Significant increases were seen in transportation fuels, with gasoline and jet/kerosene rising by more than 11% and 10%, respectively. However, notable declines in LPG and fuel oil offset most of those significant increases.

For the remainder of **2016**, India is anticipated to be the main contributor to growth in the **Other Asia** region with a solid 1H16 performance contributing largely to oil demand growth backed by strong economic conditions. Middle distillates, followed by gasoline, will be the products leading oil demand in the region.

In **2017**, Other Asia's oil demand growth is anticipated to continue at a healthy pace with major assumptions based on positive economic growth coupled with steady retail prices. Within the region, India is seen to be the largest contributor to growth, and other countries in the region – such as Indonesia, Thailand, Singapore and the Philippines – are also projected to contribute positively to oil demand growth in 2017. Light distillate products, which include LPG, naphtha and gasoline, will lead oil demand growth next year.

Other Asia's oil demand is anticipated to grow by 0.47 mb/d y-o-y in 2016. As for 2017, oil demand is forecast to increase by 0.37 mb/d y-o-y.

Latin America

Overall demand in the region continues to decline, with most countries registering a downward trend this month around.

Total consumption in **Brazil** stood at 2.36 mb/d in June 2016, lower by more than 0.13 mb/d y-o-y, maintaining its sluggish performance in 2016, in line with the economic downturn witnessed in the country. All product categories demonstrated declining trends, with the exception of gasoline and LPG, which recorded slight increases. The largest declines were recorded in fuel oil, ethanol jet/kerosene and diesel oil. Total gasoline requirements inched up in June to 0.71 mb/d, higher by 5 tb/d y-o-y. Conversely, ethanol consumption remained in the negative, shedding around 50 tb/d, roughly 15% y-o-y, as ethanol prices remained higher than gasoline. Going forward, due to colder-than-anticipated weather conditions in Brazil, ethanol crop production should be limited, providing further support to gasoline demand in the near future.

Additionally, overall vehicle sales in the country continued to decline during the month of June, dipping by more than 20% y-o-y and providing another negative factor to transportation fuel consumption. Diesel demand showed similar declining trends to previous months as total consumption eased to 0.97 mb/d, which was more than

World Oil Demand

50 tb/d lower than in June 2015. Most of this decline was witnessed in nearly all parts of the country, apart from the Southern region, where demand for diesel picked up to meet construction activities for the Olympic Games.

Y-t-d information depicts the slowdown in the Brazilian economy in 2016, with data from January to June highlighting a sharp decline of more than 0.12 mb/d, or more than 5% y-o-y, with all products indicating less consumption than during the same period a year earlier, with the exception of gasoline, which grew by around 2% y-o-y, primarily as a result of its price advantage over ethanol.

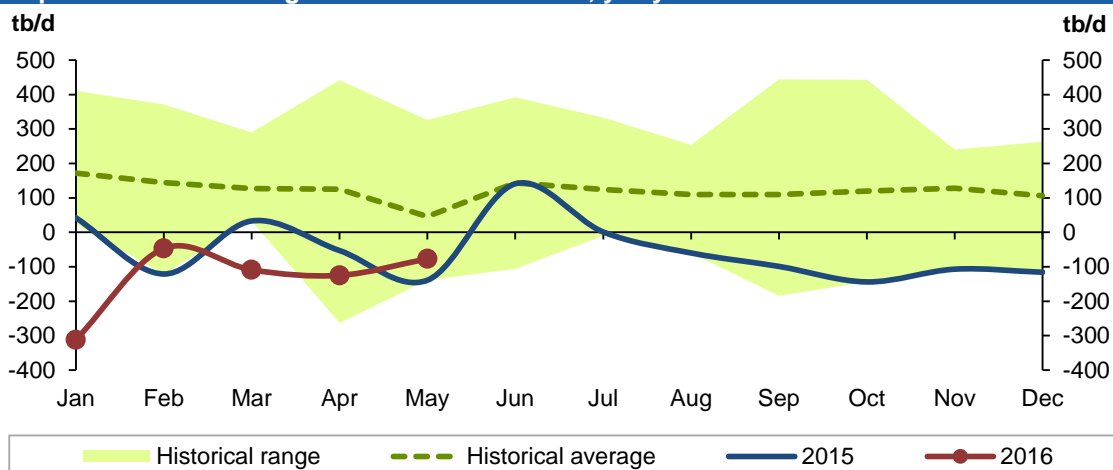
Table 4.6: Brazilian inland deliveries, tb/d

| | <u>Jun 16</u> | <u>Jun 15</u> | <u>Change</u> | <u>Change, %</u> |
|--------------|---------------|---------------|---------------|------------------|
| LPG | 250 | 244 | 6 | 2.4 |
| Gasoline | 708 | 702 | 5 | 0.8 |
| Jet/kerosene | 113 | 124 | -11 | -8.8 |
| Diesel oil | 968 | 1,020 | -52 | -5.1 |
| Fuel oil | 54 | 86 | -32 | -37.7 |
| Alcohol | 264 | 312 | -48 | -15.4 |
| Total | 2,356 | 2,488 | -132 | -5.3 |

Source: Agência Nacional do Petróleo, Gás Natural e Biocombustíveis of Brazil.

Similarly, in **Ecuador**, oil demand declined during the month of May, decreasing by more than 20 tb/d, or more than 9%, y-o-y. The decline was largely a result of a sharp drop in fuel oil requirements, which fell by more than 44% y-o-y.

Graph 4.4: Oil demand growth in Latin America, y-o-y



Sources: ANP, Joint Organisations Data Initiative and OPEC Secretariat.

The risks for the remainder of 2016 oil demand in the region are skewed to the downside and depend on the performance of the major economies in Latin America, with a special focus on the Brazilian economy.

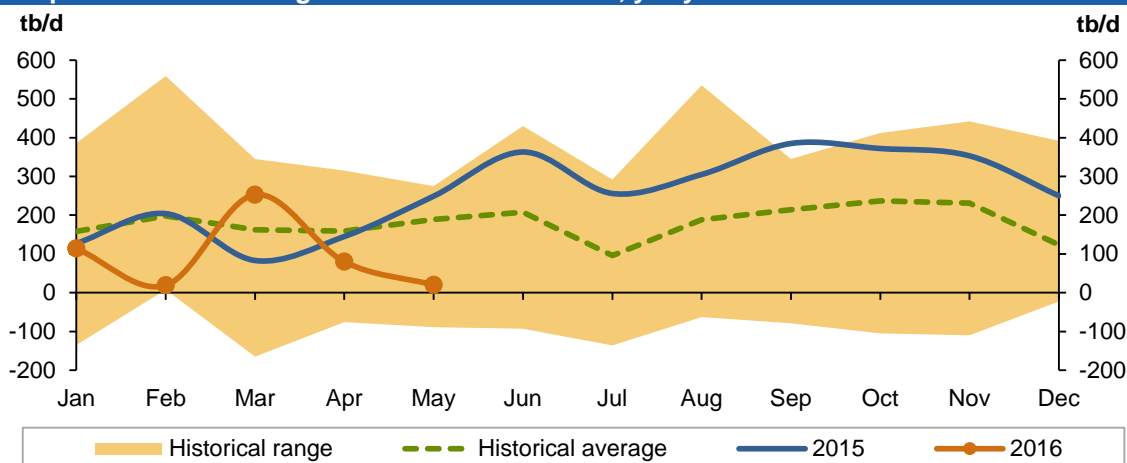
In 2017, projections are largely hinged upon the possible improvements in the overall economy next year. Oil demand should improve as a result of this, and the low base from this year should also provide a lower baseline of comparison. Brazil's GDP could grow by 0.4% in 2017 after contracting by an expected 3.4% this year. In terms of products, diesel oil and gasoline will have higher growth potential and are expected to fuel the industrial and transportation sectors.

Latin American oil demand is expected to contract in 2016 by 55 tb/d y-o-y, while in 2017, it is forecast to return back to positive territory and rise by 70 tb/d y-o-y.

Middle East

In June 2016, total oil demand in **Saudi Arabia** stands at 2.76 mb/d, with oil demand contracting by around 0.22 mb/d, or around 8% y-o-y, primarily as consumption for direct crude for burning declined. All major products increased, with the exception of direct crude burning and other product categories. LPG, gasoline, jet/kerosene and fuel oil all recorded solid gains of around 6%, 3%, 12% and 16% y-o-y, respectively, with fuel oil being supported by the high air-conditioning usage during the summer season. Y-t-d, the picture is more or less the same, with solid demand across the barrel, with the exception of direct crude burning and other product categories. The completion of the Wasit gas plants in March 2016 replaced some of the direct crude burning for power generation and is expected to replace even further quantities in the near future. Weather conditions ended the month of June slightly warmer than in June 2015 with Cooling Degree Days 0.2% higher y-o-y, allowing, on one hand, additional air conditioning usage and, on the other hand, more consumption of fuel oil, which increased by around 70 tb/d y-o-y. Air traffic activities were also higher, especially as school holidays began, and were projected to see a solid increase during the summer months with jet/kerosene adding around 10 tb/d y-o-y in June.

Graph 4.5: Oil demand growth in the Middle East, y-o-y



Sources: Direct communication, JODI and OPEC Secretariat calculations

In **Kuwait**, oil demand reversed the sharp y-o-y drop of March and returned to growth during the month of May, according to the latest available data. Oil demand growth was primarily driven by fuel oil to feed into power generation plants during peak summer air-condition season. Demand for fuel oil is projected to remain elevated during June and July months as weather conditions were warmer than in the same months of 2015. In June 2016, **Iraqi** oil demand increased slightly by around 1% y-o-y. Most product categories registered positive growth, with the exception of fuel oil while gasoline and diesel oil remained broadly flat.

In 2017, oil demand growth is foreseen to gain momentum over the levels experienced in the current year. This will mainly be the result of assumed improvements in the economy. In terms of countries within the region, Saudi Arabia is projected to be the largest contributor to growth. On the other hand, geopolitical concerns, as well as subsidy reduction policies, are assumed to contribute negatively to demand growth in

2017. In terms of products, transportation fuels – gasoline and diesel oil – are expected to lead oil demand growth.

For 2016, **Middle East** oil demand is expected to grow by 90 tb/d compared with 2015, while oil demand in 2017 is projected to increase by 0.18 mb/d y-o-y.

China

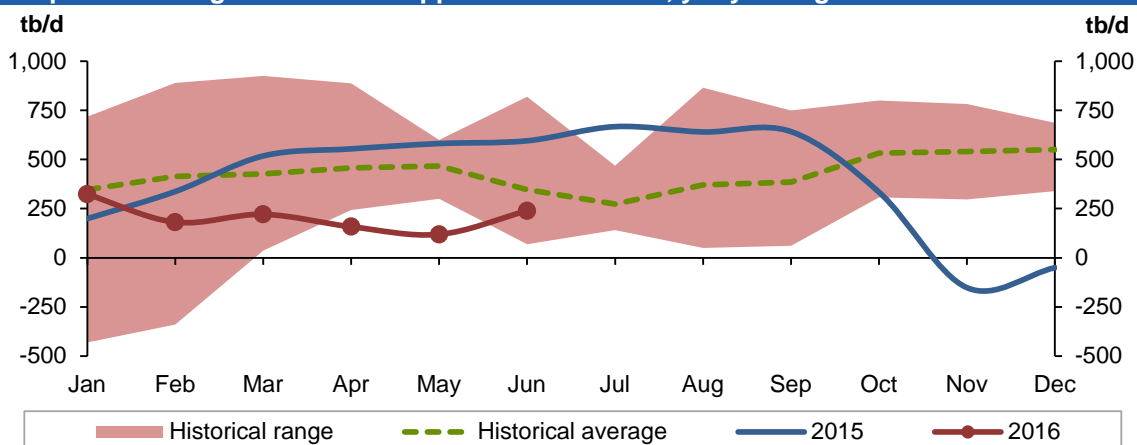
Chinese oil demand grew in June 2016 by around 0.24 mb/d, or 2% y-o-y, far lower than the average growth registered in 2015 of 6% y-o-y. Total consumption reached approximately 11.23 mb/d. Oil demand growth was mostly determined by ongoing increases in LPG usage in the petrochemical industry and jet/kerosene and gasoline consumption in the transportation sector, with both growing by around 12% and 3% y-o-y, respectively.

LPG demand growth continued its anticipated gains, recording an increase of around 0.26 mb/d y-o-y and bringing total consumption to approximately 1.5 mb/d, mainly as a result of startup and ramp-up operations in a number of propane dehydrogenation plants (PDH) around the country.

Jet/kerosene demand increased by around 77 tb/d, or 14% y-o-y, with total demand at approximately 0.65 mb/d. This increase is in line with the recent uptick in travel activities during the summer holidays.

Gasoline demand was higher compared with last year, rising by 78 tb/d y-o-y, according to statistics and analysis of the China Association of Automobile Manufacturers (CAAM). In June, sales of passenger cars reached 1.8 million units, higher by 18% from the level experienced in June 2015. For the first half of 2016, sales of passenger cars totaled 11 million units, higher by 9% y-o-y. As for the passenger cars by type, comparing with the same period of last year, SUVs continued to experience solid growth as sales increased by more than 44% y-o-y. MPVs also grew solidly, adding some 18%, compared with the same period in 2015. Diesel oil demand was lower y-o-y by around 0.20 mb/d, which equates to 5% y-o-y, as industrial activities appeared to be lower than in June 2015.

Graph 4.6: Changes in Chinese apparent oil demand, y-o-y changes



Sources: Argus Global Markets, China OGP (Xinhua News Agency), Facts Global Energy, JODI, National Bureau of Statistics of China and OPEC Secretariat.

For **2017**, as economic development in China is assumed to be at similar levels to 2016, oil demand growth is expected to remain within the 2016 range. On the other

hand, the continuation of fuel quality programmes targeting fewer emissions, as well as ongoing fuel substitution with natural gas and coal, are assumed in the projections for 2017. In terms of products, gasoline and LPG are assumed to lead product growth in 2017 to fulfill the demand arising from ever growing vehicle sales and ongoing improvements in the petrochemical sector.

For 2016, China's oil demand is anticipated to grow by around 0.28 mb/d y-o-y, while expectations for 2017 oil demand growth in China are in the range of 0.27 mb/d y-o-y.

Table 4.7: World oil demand in 2017, mb/d

| | <u>2016</u> | <u>1Q17</u> | <u>2Q17</u> | <u>3Q17</u> | <u>4Q17</u> | <u>2017</u> | Change 2017/16 | |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------|-------------|
| | | | | | | | Growth | % |
| Americas | 24.73 | 24.67 | 24.72 | 25.40 | 24.91 | 24.92 | 0.20 | 0.80 |
| of which US | 19.96 | 19.93 | 19.96 | 20.47 | 20.06 | 20.11 | 0.15 | 0.75 |
| Europe | 13.80 | 13.52 | 13.72 | 14.15 | 13.70 | 13.78 | -0.02 | -0.15 |
| Asia Pacific | 7.94 | 8.48 | 7.45 | 7.54 | 8.00 | 7.87 | -0.08 | -0.97 |
| Total OECD | 46.47 | 46.67 | 45.89 | 47.09 | 46.61 | 46.57 | 0.10 | 0.21 |
| Other Asia | 12.52 | 12.63 | 13.02 | 12.78 | 13.10 | 12.88 | 0.37 | 2.93 |
| of which India | 4.33 | 4.64 | 4.40 | 4.32 | 4.57 | 4.48 | 0.16 | 3.63 |
| Latin America | 6.50 | 6.28 | 6.55 | 6.89 | 6.56 | 6.57 | 0.07 | 1.06 |
| Middle East | 8.21 | 8.25 | 8.18 | 8.83 | 8.27 | 8.39 | 0.18 | 2.17 |
| Africa | 4.10 | 4.23 | 4.19 | 4.14 | 4.29 | 4.21 | 0.11 | 2.63 |
| Total DCs | 31.33 | 31.39 | 31.95 | 32.64 | 32.22 | 32.05 | 0.72 | 2.31 |
| FSU | 4.66 | 4.55 | 4.41 | 4.78 | 5.09 | 4.71 | 0.05 | 1.08 |
| Other Europe | 0.70 | 0.70 | 0.65 | 0.69 | 0.79 | 0.71 | 0.01 | 1.71 |
| China | 11.11 | 10.99 | 11.59 | 11.26 | 11.65 | 11.37 | 0.27 | 2.41 |
| Total "Other regions" | 16.46 | 16.24 | 16.66 | 16.73 | 17.53 | 16.79 | 0.33 | 2.00 |
| Total world | 94.26 | 94.30 | 94.49 | 96.47 | 96.36 | 95.41 | 1.15 | 1.22 |
| Previous estimate | 94.18 | 94.23 | 94.30 | 96.40 | 96.35 | 95.33 | 1.15 | 1.22 |
| Revision | 0.09 | 0.07 | 0.19 | 0.07 | 0.01 | 0.09 | 0.00 | 0.00 |

Note: Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

World Oil Supply

World liquids supply in 2Q16 decreased by 1.06 mb/d q-o-q to average 94.6 mb/d, and declined by 0.30 mb/d compared to 2Q15. However, some non-OPEC supply outages in 2Q16 that helped the recent oil price rally will be coming back online in 2H16, such as oil sands production that was shut down due to wildfires in Canada. The continued rise in US rig counts and end of seasonal maintenance will also support output.

Non-OPEC oil supply is estimated to have averaged 56.13 mb/d in 2016, a contraction of 0.79 mb/d over the previous year. This follows an upward revision of 90 tb/d since the previous report, driven by higher-than-expected oil output in 2Q16 in the US and UK. The forecast remains subject to growing uncertainties over the world economy and impacts on the performance of non-OPEC production, including the behaviour of US tight oil production, a possible change in Russia's oil output, the on-time implementation of Brazilian projects, geopolitical concerns, as well as the effects of downward spending revisions by International Oil Companies (IOCs). In contrast, non-OPEC oil supply in 2017 was revised down by 40 tb/d to average 0.15 mb/d from the previous assessment to settle at an average of 55.97 mb/d due to the base change and revisions on future projects.

OPEC NGL production is forecast to grow by 0.16 mb/d and 0.15 mb/d to average 6.29 mb/d and 6.43 mb/d in 2016 and 2017, respectively. In July, OPEC production increased by 46 tb/d to average 33.11 mb/d, according to secondary sources. As a result, preliminary data indicates that global oil supply increased by 240 tb/d in July to average 95.14 mb/d.

Table 5.1: Non-OPEC oil supply in 2016, mb/d

| | 2015 | 1Q16 | 2Q16 | 3Q16 | 4Q16 | 2016 | Change 2016/15 | |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|
| | | | | | | | Growth | % |
| Americas | 21.01 | 21.00 | 20.13 | 20.43 | 20.40 | 20.49 | -0.53 | -2.50 |
| of which US | 13.99 | 13.81 | 13.63 | 13.46 | 13.41 | 13.58 | -0.41 | -2.93 |
| Europe | 3.76 | 3.90 | 3.77 | 3.58 | 3.71 | 3.74 | -0.02 | -0.55 |
| Asia Pacific | 0.46 | 0.44 | 0.42 | 0.44 | 0.42 | 0.43 | -0.03 | -6.72 |
| Total OECD | 25.23 | 25.33 | 24.31 | 24.45 | 24.53 | 24.66 | -0.58 | -2.29 |
| Other Asia | 2.70 | 2.74 | 2.66 | 2.72 | 2.74 | 2.71 | 0.01 | 0.51 |
| Latin America | 5.19 | 4.98 | 5.08 | 5.21 | 5.24 | 5.13 | -0.06 | -1.19 |
| Middle East | 1.27 | 1.27 | 1.27 | 1.26 | 1.25 | 1.26 | -0.01 | -1.00 |
| Africa | 2.14 | 2.11 | 2.09 | 2.10 | 2.12 | 2.11 | -0.03 | -1.48 |
| Total DCs | 11.30 | 11.09 | 11.09 | 11.29 | 11.36 | 11.21 | -0.09 | -0.82 |
| FSU | 13.69 | 13.95 | 13.75 | 13.59 | 13.72 | 13.75 | 0.06 | 0.42 |
| of which Russia | 10.85 | 11.07 | 11.00 | 10.88 | 10.95 | 10.98 | 0.13 | 1.18 |
| Other Europe | 0.14 | 0.13 | 0.13 | 0.15 | 0.15 | 0.14 | 0.00 | 1.63 |
| China | 4.38 | 4.22 | 4.11 | 4.18 | 4.23 | 4.19 | -0.19 | -4.39 |
| Total "Other regions" | 18.21 | 18.31 | 17.99 | 17.92 | 18.10 | 18.08 | -0.13 | -0.73 |
| Total non-OPEC production | 54.74 | 54.73 | 53.39 | 53.66 | 53.99 | 53.94 | -0.80 | -1.46 |
| Processing gains | 2.17 | 2.19 | 2.19 | 2.19 | 2.19 | 2.19 | 0.01 | 0.60 |
| Total non-OPEC supply | 56.91 | 56.92 | 55.57 | 55.84 | 56.17 | 56.13 | -0.79 | -1.39 |
| Previous estimate | 56.91 | 56.91 | 55.38 | 55.68 | 56.14 | 56.03 | -0.88 | -1.54 |
| Revision | 0.01 | 0.01 | 0.19 | 0.16 | 0.03 | 0.10 | 0.09 | 0.16 |

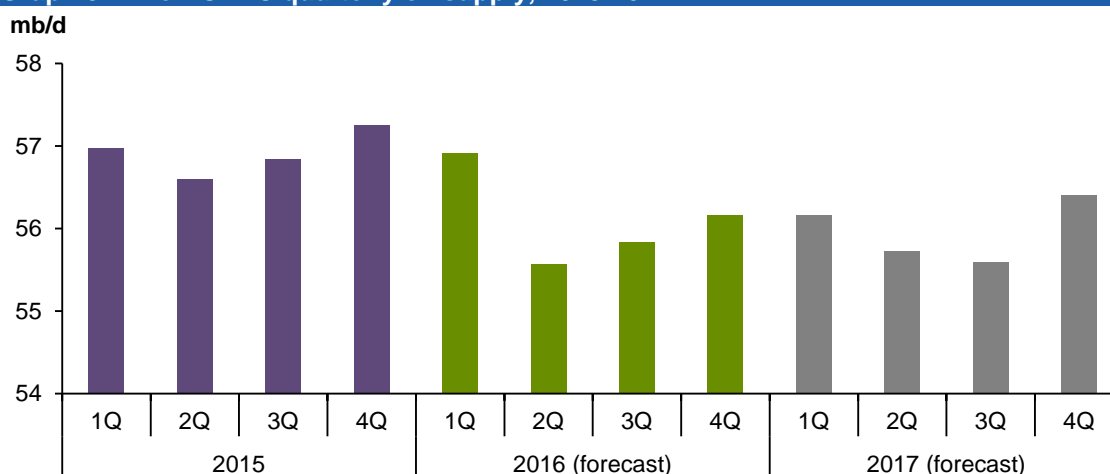
Source: OPEC Secretariat.

Forecast for 2016 Non-OPEC Supply

Non-OPEC oil supply is forecast to contract by 0.79 mb/d in 2016 to average 56.13 mb/d, revised up by 90 tb/d m-o-m. Upward revisions due to higher-than-expected oil production from the US, UK, Norway, India, Brazil, Oman and Ghana were seen mainly during 2Q16, which was partially offset by downward revisions in the forecasts for Australia, Brunei, Malaysia, Thailand, Russia, Kazakhstan and FSU others.

The overall indications in the supply side by the end of 2Q16 are showing that the short-term outlook for non-OPEC supply in 2016 is being revised up due to the recovery in Canadian oil production following the vast wildfire in Alberta and rising rig counts in the US for four consecutive weeks, resulting in higher-than-expected output.

Graph 5.1: Non-OPEC quarterly oil supply, 2015-2017



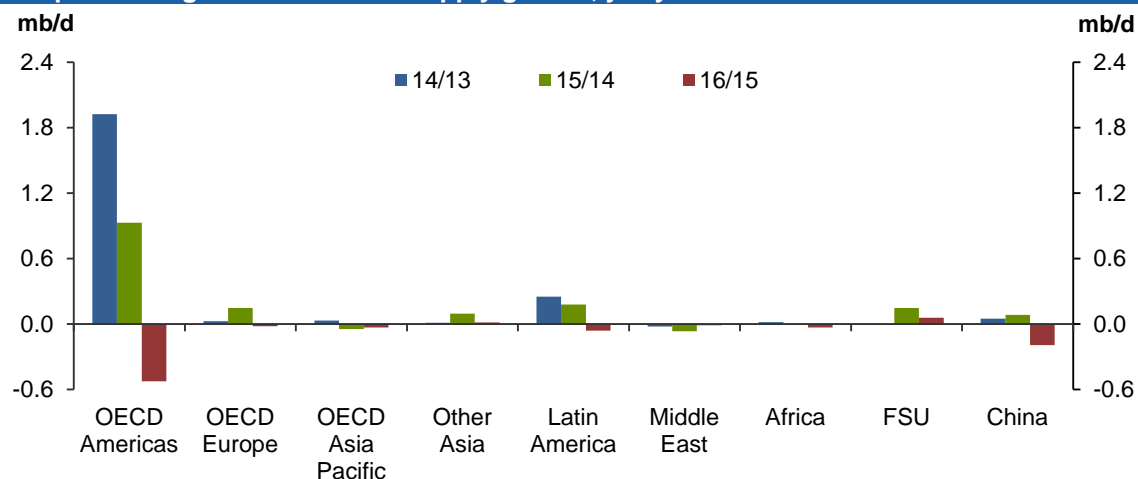
Source: OPEC Secretariat.

IOCs' cash flow shows that they cut a remarkable amount of planned investment and spending on exploration and production y-o-y due to the bearish oil price environment, impacting mostly non-OPEC production performance. In 2015, the top ten major oil and gas companies, including two main service companies, cut spending by 15% y-o-y, compared to a decline of 6% in 2014 from a year ago.

For 2016, a further cut of 20%, with total spending of \$135 billion, is anticipated, which is quite low compared to the \$213 billion in 2013. In general, non-OPEC upstream spending was reduced from \$750 billion in 2014 to \$550 billion in 2016. Spending declines in 2015 were largely driven by reduced US shale drilling, while 2016 reductions are expected to mostly stem from mature offshore and deepwater Greenfield activities, oil sands and other projects across non-OPEC countries. Although the impact of spending cuts on non-OPEC supply showed itself with a decline of only 0.5 mb/d in 1H16 compared to 1H15, but a lack of usual exploration activities for new discoveries and replacing old fields will lead to an acceleration of production declines in the coming years.

Non-OPEC supply on a regional basis in 2016 shows a strong impact of low oil prices on supply in OECD Americas and, to a lesser degree, in Latin America. China was also impacted, but only in 2016, while in other regions, supply was affected by different factors, which are partially relevant to low oil prices.

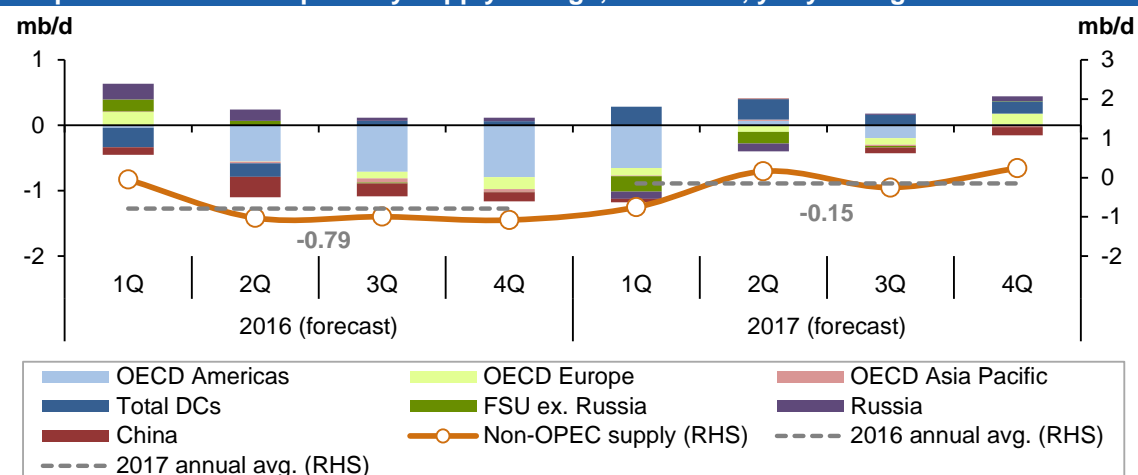
Graph 5.2: Regional non-OPEC supply growth, y-o-y



Source: OPEC Secretariat.

Recent developments in the upstream, as well as renewed oil price volatility, have made forecasting non-OPEC supply more challenging. This has added to the uncertainties affecting the market amid expected moderate global economic growth in the current year. Another indication of uncertainty in the production growth outlook of non-OPEC oil producers in the coming months would be the number of active rigs around the world, particularly in those regions in which the oil production breakeven point is much higher than the current oil prices from unconventional sources or deep offshore and North Sea. According to the latest report of Baker Hughes, the total drilling rig count outside of North America plunged by 118 rigs to average 927 active rigs in June compared to January 2016, almost entirely land-based oil rigs. In the US and Canada, the number of active rigs declined by 366 rigs to average 480 rigs during the same period.

Graph 5.3: Non-OPEC quarterly supply change, 2016-2017, y-o-y change



Source: OPEC Secretariat.

Non-OPEC supply in 2Q16 is expected to contract by 1.35 mb/d, q-o-q (mainly due to production shut-ins in Alberta, because of the wildfires in May), but output will again increase by 0.27 mb/d in 3Q16, partially due to the end of seasonal maintenance, and is expected to grow by 0.33 mb/d in 4Q16. Nevertheless, non-OPEC supply in 2H16 is expected to be almost 1 mb/d lower than 2H15.

Non-OPEC supply is forecast to continue at the same level into 1Q17 at 56.17 mb/d and then decrease in 2Q17 to 55.73 mb/d. Higher production is expected in 4Q17, compared to 2Q17.

OECD

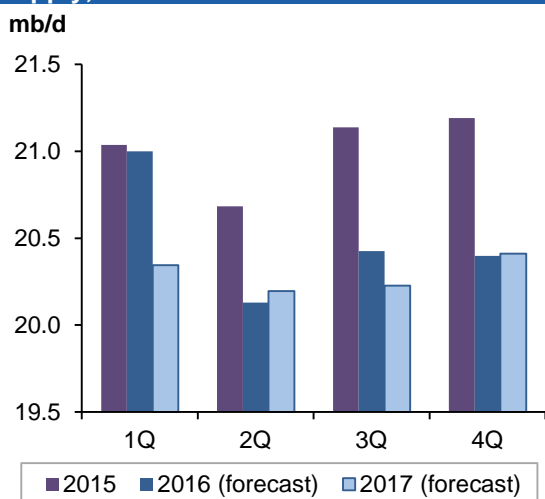
Total **OECD liquids production** in 2016 is expected to contract by 0.58 mb/d to average 24.66 mb/d, revised up by 85 tb/d from the last *MOMR*. Output in 2Q16 was revised up by 0.22 mb/d to average 24.31 mb/d, nevertheless it declined by around 1 mb/d compared to 1Q16.

For comparison, OECD supply in 2Q15 declined by only 0.27 mb/d compared to 1Q15. Y-o-y contraction in 2016 is expected to come from OECD Americas by 0.53 mb/d, OECD Europe by 0.02 mb/d and OECD Asia Pacific by 0.03 mb/d.

OECD Americas

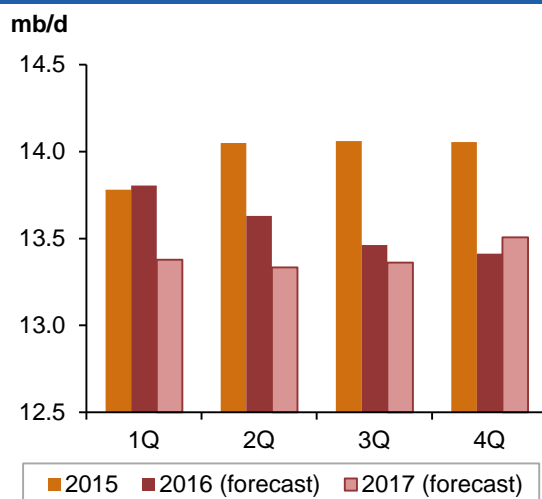
OECD Americas' oil supply is estimated to average 20.49 mb/d, showing a contraction of 0.53 mb/d y-o-y, representing an upward revision of 80 tb/d from the last monthly report. This was the result of higher-than-expected output in the US in 2Q16. Supply in the US and Mexico is expected to decline in 2016, while production in Canada is anticipated to remain unchanged compared with 2015.

Graph 5.4: OECD Americas quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.5: US quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

US

US total oil production is anticipated to decline by 0.41 mb/d to average 13.58 mb/d in 2016, representing an upward revision of 80 tb/d from the last monthly report. The US actual liquids supply, in spite of falling crude oil production by 53 tb/d, was stagnant at 13.70 mb/d in May, m-o-m. The preliminary estimation for 2Q16 indicated a drop by 0.15 mb/d compared to a quarter earlier to average 13.63 mb/d. US total crude oil production decreased by only 53 tb/d to 8.89 mb/d in May, following a robust decline of 0.22 mb/d in April.

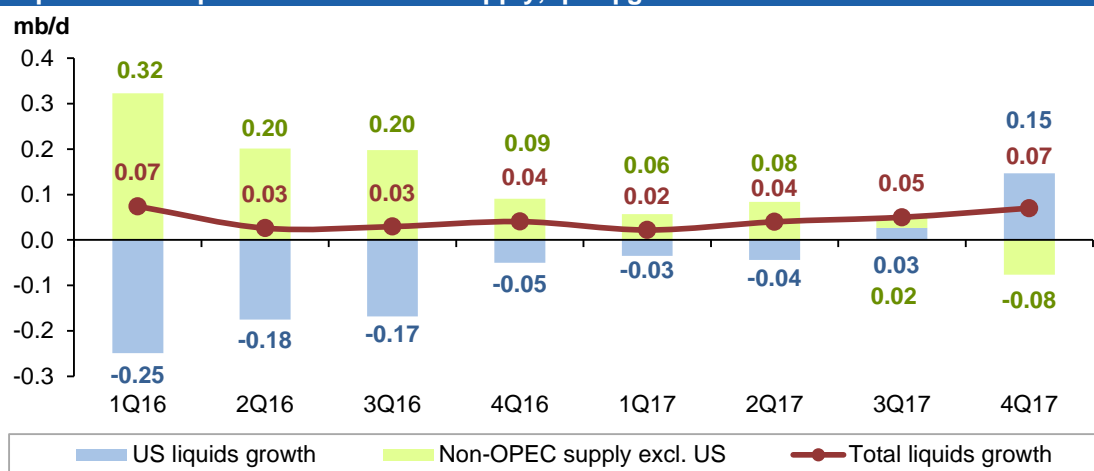
In Texas, the two main tight oil plays, the Permian and Eagle Ford, showed declines of 51 tb/d m-o-m to average 3.2 mb/d in May 2016, but oil production from Federal Offshore in PADD3 – the Gulf of Mexico (GoM) – increased by 22 tb/d to average

World Oil Supply

1.62 mb/d. Nevertheless, the Permian and Anadarko Basins have the lowest break evens among the US shale plays, which is why the most activity is located there. Well economics continue to improve in all basins with lower well costs and higher initial production numbers. Oil output in North Dakota, mainly from the Bakken shale site in the Williston Basin, was steady at 1.04 mb/d in April and May. Oil production from Alaska also increased by 16 tb/d to average 0.5 mb/d in May. By adding the number of rigs mostly in Texas in July, output is expected to decline at a slower pace during this month. Moreover, total US oil production on a quarterly basis was revised up, although the production will have a decreasing trend up to the end of 1H17.

Crude oil production in August from seven major US shale plays is expected to decline by 99 tb/d to settle at 4.55 mb/d, according to the US Energy Information Administration's Drilling Productivity Report (DPR). The EIA had projected a 114 tb/d decline for May, while the recent monthly report showed a decline of only 53 tb/d, partially due to increasing production, and partially the result of a difference between the short-term prediction model done by EIA and actual production. The DPR focuses on the Bakken, Eagle Ford, Haynesville, Marcellus, Niobrara, Permian and Utica sites, which altogether accounted for more than 90% of US oil production increases.

Graph 5.6: US liquids vs. non-OPEC supply, q-o-q growth



Source: OPEC Secretariat.

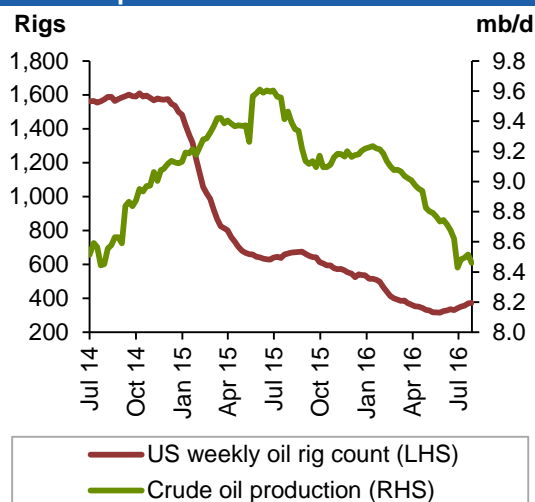
Total quarterly US liquids production in 2016 was revised up to 13.81 mb/d, 13.63 mb/d, 13.46 mb/d and 13.41 mb/d in 1Q to 4Q, respectively.

US oil rig count

Total US rig count increased w-o-w during last five consecutive weeks up to the end of the last week of July. It climbed by 1 rig w-o-w and reached 463 rigs on 29 July. The US rig count rose for the first time since declining from Dec. 2014 on a monthly basis. At the same time, the **US oil rig count** added 3 rigs w-o-w, reaching 374 rigs, according to Baker Hughes' latest survey.

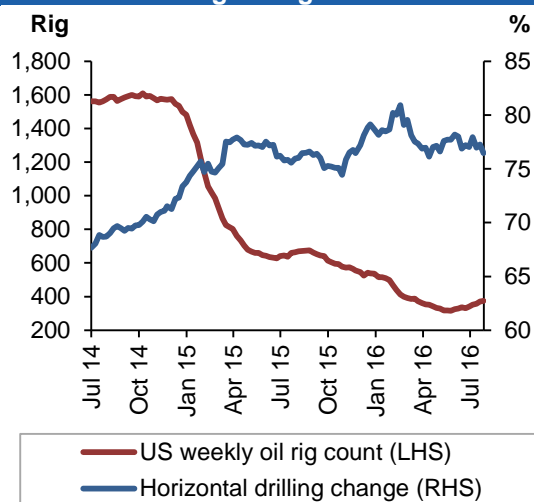
On a monthly basis, the **total US rig count in July increased by 32 rigs m-o-m to 463 rigs** – 80.8% active in oil fields - but declined by 411 rigs y-o-y. Oil rigs were also up by 33 rigs in July to 374 rigs, mostly in Texas, compared to a month earlier, but declined by 290 rigs y-o-y. It seems that by adding the number of rigs, oil output would increase in July onwards, particularly in Texas. Since the peak of 1,609 oil rigs on 10 October 2014, the count has fallen about 77%, and the overall rig count has dropped 76% from its peak of 1,920 on 5 December 2014.

Graph 5.7: US weekly oil rig count vs. Crude oil production



Sources: Baker Hughes and EIA.

Graph 5.8: US weekly oil rig count vs. Horizontal drilling change

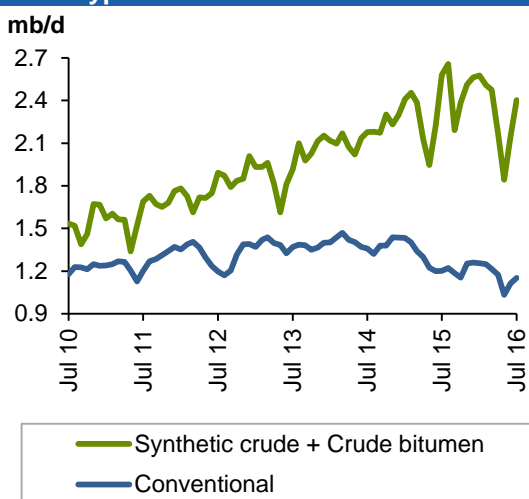


Source: Baker Hughes.

Canada and Mexico

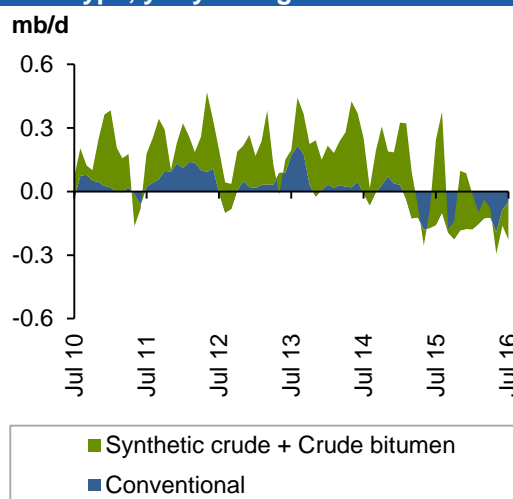
Oil supply in **Canada** is expected to remain flat in 2016 to average 4.42 mb/d y-o-y, unchanged from the previous month. Preliminary estimates place April Canadian oil output lower m-o-m by 0.34 mb/d to average 4.22 mb/d. In April, output of oil sands declined by 0.31 mb/d to settle at 2.2 mb/d, while conventional oil and NGLs also declined to 1.18 mb/d and 0.84 mb/d, respectively. Considering the impact of the Alberta wildfires in early May 2016 and declining output due to seasonal maintenance, oil production is expected to drop by 0.96 mb/d, 0.56 mb/d and 0.25 mb/d in May, June and July 2016 to average 3.69 mb/d, 4.09 mb/d and 4.40 mb/d, respectively. Therefore, Canadian output in 2Q16 will be lower y-o-y by 70 tb/d at 4.0 mb/d.

Graph 5.9: Canada production by crude type



Source: OPEC Secretariat.

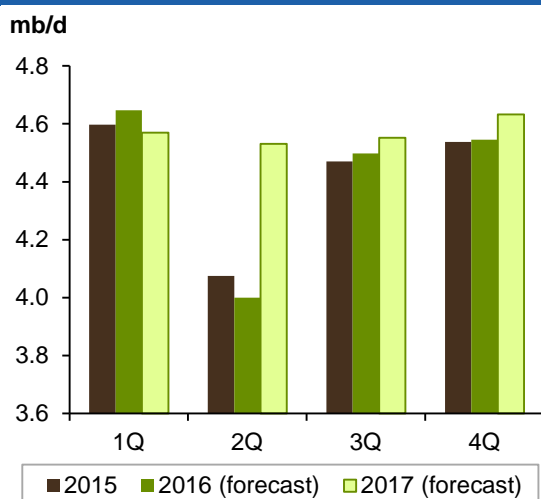
Graph 5.10: Canada production by crude type, y-o-y change



Source: OPEC Secretariat.

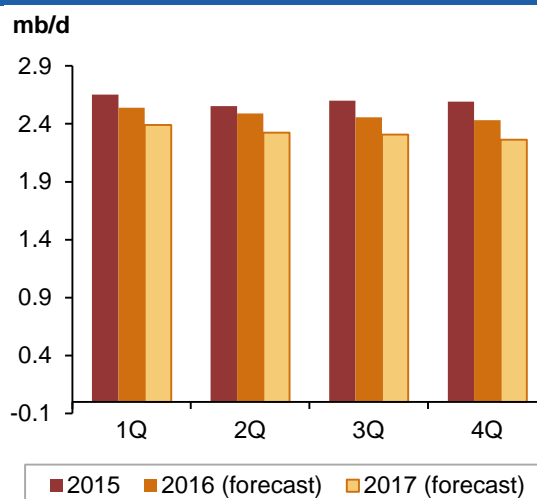
Canada's overall rig count at the end of July added 17 units w-o-w to reach a total of 119. The number of active rigs in Alberta, the main state for production of oil sands, also increased by 37 rigs to average 65 units compared to 28 rigs in May, at the time of the wildfires. Nevertheless, Alberta's rigs were down by around 46% y-o-y, and Canada's overall rig count fell by 95 rigs.

Graph 5.11: Canada quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.12: Mexico quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Mexican liquids production in 2016 is expected to decline by 0.12 mb/d to average 2.48 mb/d following the heavy annual decline of 0.20 mb/d in 2015. Oil output in 2Q16 declined by 50 tb/d to average 2.49 mb/d. Crude output was steady at 2.18 mb/d in 2Q16. Pemex is struggling to keep production stable at around 2.2 mb/d, with output stagnating at its main offshore complex, Ku-Maloob-Zaap, and other fields are in decline. Mexico is the only country in the region with an active bid round, but first new production from promising deepwater acreage to be auctioned in December is at best several years away.

OECD Europe

Total **OECD Europe** oil supply, which grew by 0.15 mb/d to average 3.76 mb/d in 2015, is expected to decline this year by 20 tb/d due to low performance of oil production in all countries of the region. Nevertheless, growth was revised up by 20 tb/d from the previous assessment, due to an upward revision in the UK's forecast.

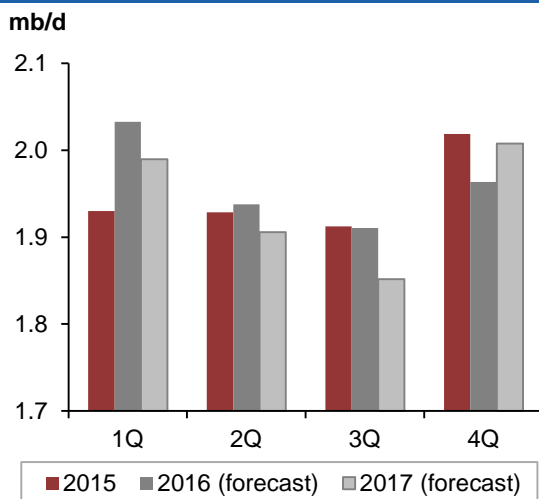
Norway's oil supply is expected to grow by 10 tb/d from the previous year to average 1.96 mb/d in 2016, revised up marginally in growth, but broadly unchanged from the previous *MOMR*. Preliminary production figures for June 2016 show an average production of about 1.82 mb/d of oil, NGLs and condensate, which is 0.14 mb/d (about 7%) less than in May 2016.

A report from the Norwegian Petroleum Directorate (NPD), showed that the average daily liquid production in June was 1.44 mb/d of oil (May output was 1.57 mb/d), 0.34 mb/d of NGLs and 34 tb/d of condensate. Oil production is 8% below the oil production in June last year. Despite the oil output decline in June, the y-t-d liquids production is still higher by 56 tb/d compared to the same period a year earlier. Average production from Edvard Grieg during 2Q16 was more than 32 tboe/d. The field came onstream last November with three production wells in operation by this January and a fourth well, which should come onstream at year-end, allowing the field to achieve plateau production of 100 tboe/d. In total, 14 development wells are scheduled to be drilled on the field with the programme set to continue into 2018.

Production in June was partially offline by more than 0.22 mb/d, mainly in the Ekofisk, Eldfisk, Ula and Valhal fields, due to seasonal maintenance, which was offset by new

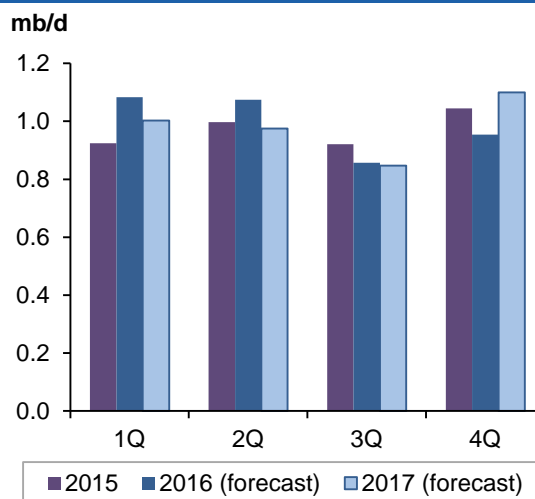
production ramp-ups in the Edvard Grieg and Goliat fields.

Graph 5.13: Norway quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.14: UK quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

The **UK's** oil supply is predicted to increase by 20 tb/d in 2016 y-o-y to average 0.99 mb/d, revised up by 10 tb/d from the previous *MOMR*. UK liquids production in June 2016 decreased by 44 tb/d m-o-m, due to maintenance, to average 0.95 mb/d. Nevertheless, 2Q16 was revised up by 58 tb/d, since our forecast was lower than expected, due to the seasonal maintenance. Some of this offline production was offset by new project start-ups of Conwy and Solan in June.

Despite the announcement of a planned strike on 26 July on eight Shell-operated platforms in the UK North Sea, no impact on production is expected.

OECD Asia Pacific

OECD Asia Pacific's oil supply is expected to decline by 30 tb/d in 2016 to average 0.43 mb/d, revised down by 10 tb/d from the previous month. Australia's oil supply is likely to decline by 30 tb/d to average 0.35 mb/d due to weak output in 2Q16 of 30 tb/d.

Oil production from Other Asia Pacific (mainly New Zealand) during recent years has been stagnant y-o-y. Therefore, 0.08 mb/d of average production is expected for 2016.

Developing Countries

Total oil production from **developing countries (DCs)** was revised up this month by 40 tb/d to reach an average of 11.21 mb/d in 2016, a contraction of 0.09 mb/d compared with 0.21 mb/d and 0.26 mb/d growth in 2015 and 2014, respectively. The main reasons for this year's decline are lower output levels coming from Brazil, Colombia and Vietnam.

Other Asia

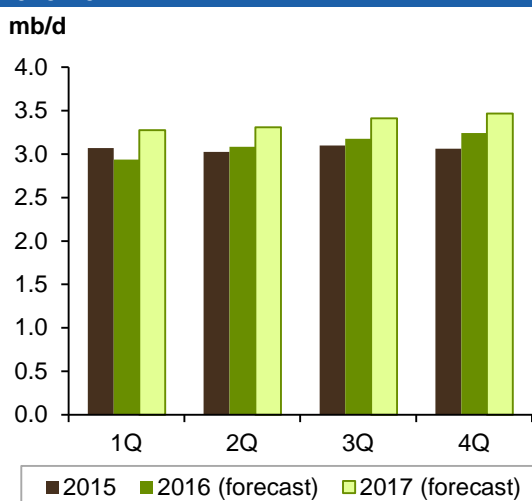
Other Asia's oil production is predicted to increase by 10 tb/d in 2016 to average 2.71 mb/d, unchanged from the previous *MOMR*. Total oil output in Malaysia and Thailand is forecast to grow by 50 tb/d, while oil production in India, Brunei and Vietnam will decrease.

Latin America

Latin America's oil supply is estimated to decline by 0.06 mb/d to average 5.13 mb/d in 2016, revised up by 10 tb/d from the last *MOMR*. Latin America, which was the second-highest driver of growth in 2014 and 2015 among all non-OPEC regions next to OECD Americas, is now expected to decline in 2016 after the drop in oil prices. Brazil was the main driver of this growth in the past, but due to lower activity in upstream, production growth is predicted at a slower pace for this year, while oil production in other Latin American countries, particularly Colombia, is expected to decline by a total of 0.11 mb/d in 2016.

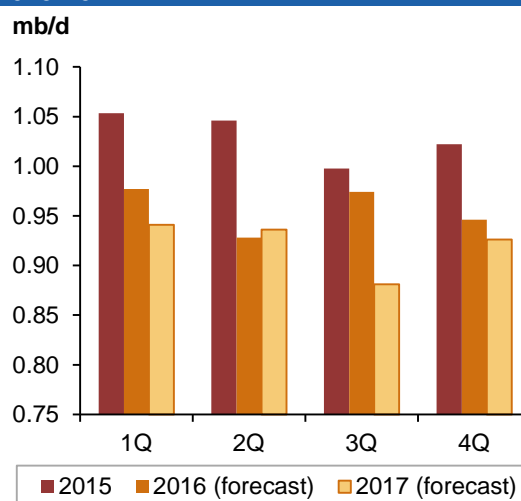
Brazil's liquid supply is expected to average 3.11 mb/d in 2016, an increase of 0.05 mb/d over the previous year, while it was revised up by 10 tb/d from the previous *MOMR*. Brazilian crude oil and NGL production increased in June following a recovery in May, mostly from the Lula field, reported by Petrobras registered at 2.53 mb/d (40 tb/d higher m-o-m) and 0.1 mb/d, respectively.

Graph 5.15: Brazil quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.16: Colombia quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Middle East

Middle East oil supply is estimated to decrease by 10 tb/d in 2016 from the previous year to average 1.26 mb/d, revised up by 20 tb/d from the previous *MOMR*. Despite the upward revision in total production, no growth from this region's countries is forecast, and a decline of 30 tb/d is expected for Yemen's oil production on an annual basis.

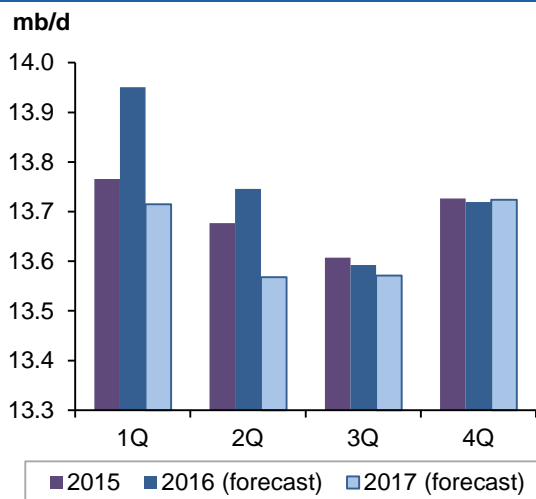
Africa

Africa's oil supply is projected to average 2.11 mb/d in 2016, a decline of 30 tb/d y-o-y and revised down by 10 tb/d from the previous *MOMR*. In 2016, oil production from Congo is only expected to grow by 30 tb/d to average 0.31 mb/d, while output in other African countries – despite increasing output from Ghana's production start-up in the "TEN" project and production ramp-up in Jubilee field in 2H16 – will decline or to be stagnant in 2016.

FSU, other regions

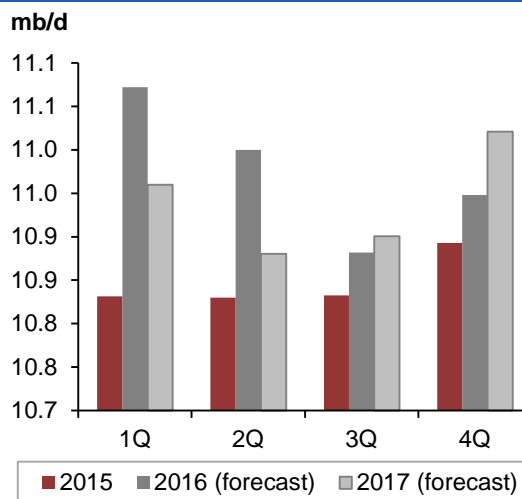
Total FSU oil supply is expected to grow in 2016 at an average of 13.75 mb/d, revised down by 20 tb/d from the previous month's estimation. In 2016, oil production in Russia will increase, while oil production in Kazakhstan, Azerbaijan and FSU others is expected to decrease.

Graph 5.17: FSU quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.18: Russia quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Russia

Russian oil output is expected to increase by 0.13 mb/d to average 10.98 mb/d in 2016, unchanged from the previous *MOMR*. Oil output increased in July by 10 tb/d to average 11.01 mb/d. Oil production in 1H16 increased by 0.21 mb/d to average 11.04 mb/d compared to 1H15. Russian oil production is expected to decline by 130 tb/d in 2H16 compared to 1H16, but up by 50 tb/d from the same period a year earlier.

The Russian oil industry is performing well, and both investment and production are growing despite low oil prices. The Russian Energy Minister assured the President that the country's energy industry is performing well in the face of low prices, Western sanctions and tough competition in key markets. The Minister highlighted an increase in Russian oil and continued robust investment in the energy sector, which should rise by 15% this year to 3.6 trillion rubles (\$55.5 billion) despite the challenging market environment. He said the country's crude oil and gas condensate production averaged 10.87 mb/d in the first half, up roughly 2% on the same period last year. The first-half figures keep Russia broadly on pace with the ministry's forecast that Russian output should total 542 million-544 million tonnes this year, up from 534 million tonnes in 2015. According to the preliminary Russian oil companies' production report in 2016 up to 1H16, except Rosneft (as the biggest producer) and Lukoil (as the second biggest producer), oil production has more or less increased at other Russian companies such as Novatek, which was at the top with growth of 80 tb/d.

Russia's crude oil production keeps rising, mainly as a result of new fields developed by Gazprom Neft and Bashneft, as well as the country's production sharing agreements. The Minister also said oil producers managed to increase output of hard-to-recover crude by 15% despite difficulties with finding partners and financing for those developments. Bashneft increased crude production by around 11% y-o-y during 1H16 to 424 tb/d, mostly by the rising output from green-fields. Output from the Trebs and Titov fields reached 44 tb/d – a 79% increase compared to 1H15. Oil output from the Burneftegaz

fields in West Siberia also increased by 44% to average 49 tb/d in the same period. Brownfield production in Bashkortostan, which has driven Bashneft's output in recent years, increased by just 1.4% compared with 1H15 to settle at 334 tb/d.

Western sanctions prohibit exports of foreign technology and investment for shale oil production as well as financing for blacklisted Russian companies such as Rosneft, but not all tight reserves are classified as shale oil, which is prompting some firms and their Western partners to go ahead with those projects.

Caspian

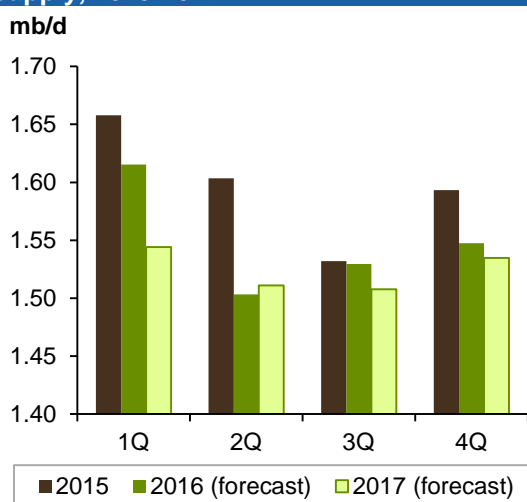
Kazakhstan's oil supply is expected to decrease by 50 tb/d over the previous year to average 1.55 mb/d in 2016, revised down by 10 tb/d from the previous *MOMR*. Kazakhstan's oil production in May dropped to 1.46 mb/d, but recovered in June by 100 tb/d to average 1.56 mb/d after seasonal maintenance in Karachaganak was ended. Across 2H15 and 1H16, Kazakh oil production was stagnant at 1.56 mb/d, although it declined by 80 tb/d compared to the average output of 1.63 mb/d in 1H15.

Azerbaijan's oil supply is anticipated to average 0.85 mb/d, remaining unchanged from the previous *MOMR* and indicating a minor contraction of 10 tb/d in 2016. Azeri crude oil output in June decreased by 10 tb/d to average 0.86 mb/d, following a decline of 10 tb/d in May. Nevertheless, total oil production (crude plus NGLs) was pegged at 0.87 mb/d in 1H16, the same as 1H15, but higher by 20 tb/d than 2H15.

Oil supply in FSU others, mainly in Turkmenistan, is expected to decline by 10 tb/d y-o-y to average 0.38 mb/d, unchanged from last month's estimation.

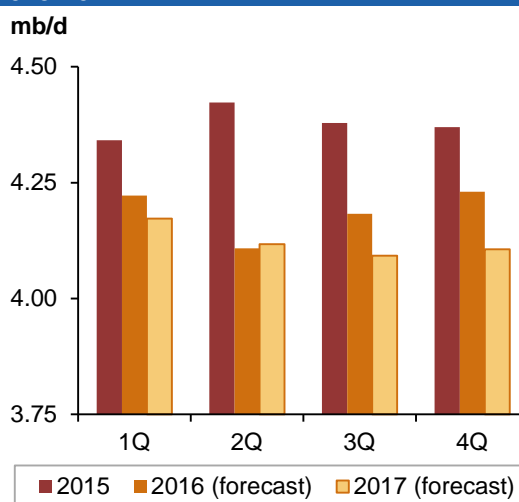
Other Europe's oil supply is estimated to remain flat from 2012 to average 0.14 mb/d and continue at this level in 2016.

Graph 5.19: Kazakhstan quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.20: China quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

China

China's supply is expected to contract by 0.19 mb/d over the previous year to average 4.19 mb/d in 2016, unchanged from last month's forecast. Chinese crude output in 2Q16 was lower by 50 tb/d at 4.11 mb/d compared to 1Q16. Following a drop of 60 tb/d in May, Chinese output increased by 70 tb/d in June to average 4.14 mb/d, and finally led to a decline of 0.11 mb/d in 2Q16 compared to 1Q16, which was at 4.22 mb/d. Declining oil output in China could be attributed to hefty spending cuts in 2016 by major Chinese oil companies – CNPC, Sinopec and CNOOC.

Forecast for 2017 Non-OPEC supply

Non-OPEC oil supply growth in 2017 was revised down by 40 tb/d this month and is expected to contract by 0.15 mb/d over the current year to average 55.97 mb/d. This revision was due to the 2016 base change and also partially due to a change in the UK production forecast. The weak growth trend estimated for 2016 is expected to continue at a slower pace in 2017 up to the end of the second half, supported by OECD Americas' lower decline and higher gains in Latin America and Africa. Yet this will be partly offset by declines in FSU. Supply in the OECD, FSU and China in 2017 is expected to contract by 0.24 mb/d, 0.11 mb/d and 0.06 mb/d, respectively, while in DCs, growth of 0.23 mb/d is forecast.

Table 5.2: Non-OPEC oil supply in 2017, mb/d

| | 2016 | 1Q17 | 2Q17 | 3Q17 | 4Q17 | 2017 | Change 2017/16 | |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|
| | | | | | | | Growth | % |
| Americas | 20.49 | 20.35 | 20.20 | 20.23 | 20.41 | 20.29 | -0.19 | -0.94 |
| of which US | 13.58 | 13.38 | 13.33 | 13.36 | 13.51 | 13.40 | -0.18 | -1.34 |
| Europe | 3.74 | 3.79 | 3.67 | 3.48 | 3.88 | 3.70 | -0.04 | -1.01 |
| Asia Pacific | 0.43 | 0.43 | 0.44 | 0.43 | 0.40 | 0.42 | -0.01 | -2.19 |
| Total OECD | 24.66 | 24.56 | 24.30 | 24.13 | 24.68 | 24.42 | -0.24 | -0.97 |
| Other Asia | 2.71 | 2.74 | 2.73 | 2.72 | 2.72 | 2.73 | 0.02 | 0.56 |
| Latin America | 5.13 | 5.26 | 5.28 | 5.32 | 5.41 | 5.32 | 0.19 | 3.79 |
| Middle East | 1.26 | 1.24 | 1.23 | 1.23 | 1.22 | 1.23 | -0.03 | -2.44 |
| Africa | 2.11 | 2.14 | 2.15 | 2.17 | 2.19 | 2.16 | 0.06 | 2.68 |
| Total DCs | 11.21 | 11.38 | 11.40 | 11.45 | 11.54 | 11.44 | 0.23 | 2.10 |
| FSU | 13.75 | 13.72 | 13.57 | 13.57 | 13.72 | 13.64 | -0.11 | -0.78 |
| of which Russia | 10.98 | 10.96 | 10.88 | 10.90 | 11.02 | 10.94 | -0.03 | -0.32 |
| Other Europe | 0.14 | 0.15 | 0.15 | 0.15 | 0.16 | 0.15 | 0.01 | 10.24 |
| China | 4.19 | 4.17 | 4.12 | 4.09 | 4.11 | 4.12 | -0.06 | -1.53 |
| Total "Other regions" | 18.08 | 18.04 | 17.84 | 17.82 | 17.99 | 17.92 | -0.16 | -0.87 |
| Total non-OPEC production | 53.94 | 53.97 | 53.54 | 53.39 | 54.22 | 53.78 | -0.16 | -0.30 |
| Processing gains | 2.19 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 0.01 | 0.50 |
| Total non-OPEC supply | 56.13 | 56.17 | 55.73 | 55.59 | 56.41 | 55.97 | -0.15 | -0.27 |
| Previous estimate | 56.03 | 56.12 | 55.63 | 55.61 | 56.31 | 55.92 | -0.11 | -0.20 |
| Revision | 0.10 | 0.05 | 0.10 | -0.02 | 0.10 | 0.06 | -0.04 | -0.07 |

Source: OPEC Secretariat.

On a regional basis, OECD Americas with an annual average drop of 0.19 mb/d, OECD Europe with 0.04 mb/d, OECD Asia Pacific with 0.01 mb/d, the Middle East with 0.03 mb/d, FSU with an average contraction of 0.11 mb/d and China at minus 0.06 mb/d are the main reasons for an oil supply decline in 2017. In contrast, Other Asia with 0.02 mb/d, Latin America with 0.19 mb/d, Africa with 0.06 mb/d and Other

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Europe with 0.01 mb/d are foreseen as the main contributors to growth in 2017. The forecast for non-OPEC supply in 2017 is associated with a high level of risk.

On a country basis, Brazil with 0.26 mb/d, Canada with 0.15 mb/d, Other Africa with 0.05 mb/d, Congo with 0.05 mb/d and Malaysia with 0.04 mb/d are the main contributors to growth next year. The US, Mexico, China, Colombia, Azerbaijan, Russia, Vietnam, Kazakhstan, Norway and the UK are, in contrast, all expected to provide the main declines.

The main risk factors, such as geopolitical tensions in some oil producing territories, environmental and HSE regulations on oil production and transportation, technical developments and, most importantly, oil prices, will continue to have an impact on supply growth expectations.

Table 5.3: Non-OPEC supply forecast comparison, 2016-2017

| Region | 2016 | Change 2016/15 | 2017 | Change 2017/16 |
|----------------------------|--------------|-------------------|--------------|-------------------|
| OECD Americas | 20.49 | -0.53 | 20.29 | -0.19 |
| OECD Europe | 3.74 | -0.02 | 3.70 | -0.04 |
| OECD Asia Pacific | 0.43 | -0.03 | 0.42 | -0.01 |
| Total OECD | 24.66 | -0.58 | 24.42 | -0.24 |
| Other Asia | 2.71 | 0.01 | 2.73 | 0.02 |
| Latin America | 5.13 | -0.06 | 5.32 | 0.19 |
| Middle East | 1.26 | -0.01 | 1.23 | -0.03 |
| Africa | 2.11 | -0.03 | 2.16 | 0.06 |
| Total DCs | 11.21 | -0.09 | 11.44 | 0.23 |
| FSU | 13.75 | 0.06 | 13.64 | -0.11 |
| Other Europe | 0.14 | 0.00 | 0.15 | 0.01 |
| China | 4.19 | -0.19 | 4.12 | -0.06 |
| Non-OPEC production | 53.94 | -0.80 | 53.78 | -0.16 |
| Processing gains | 2.19 | 0.01 | 2.20 | 0.01 |
| Non-OPEC supply | 56.13 | -0.79 | 55.97 | -0.15 |

Source: OPEC Secretariat.

In the **US**, total liquids production is forecast to only marginally pick up by the beginning of the 3Q17 and to decline by 0.18 mb/d on average for the whole year. Total US crude oil is forecast to decline by 0.42 mb/d to average 8.47 mb/d, compared to 8.89 mb/d a year earlier. Some of the declines in onshore crude will be offset by growth of 0.16 mb/d in the GoM. Nevertheless, growth for NGLs and biofuels output is expected to increase by 0.22 mb/d and 12 tb/d, respectively.

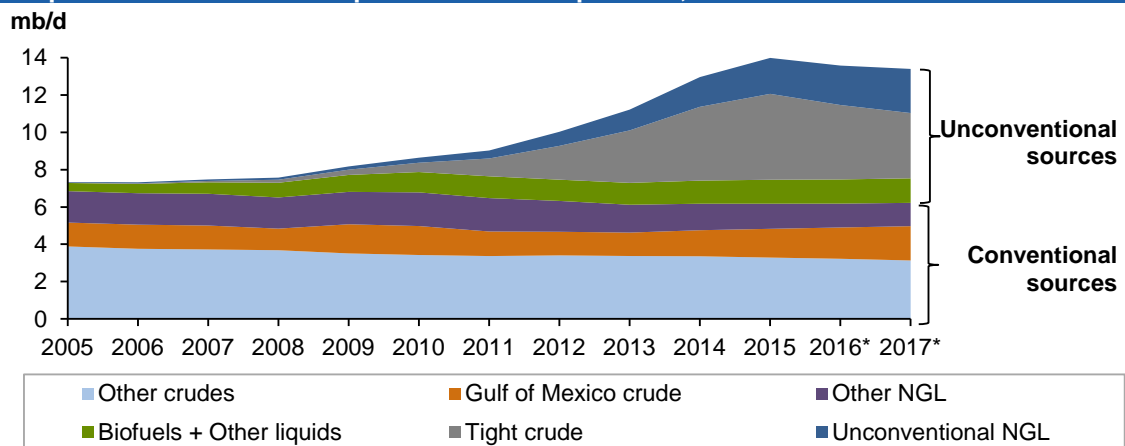
US total oil supply is anticipated to decline by 0.18 mb/d, to average 13.40 mb/d in 2017, representing a downward revision of 40 tb/d from the last monthly report. The main component of US oil output, tight oil, is forecast to contract by 0.49 mb/d y-o-y. Growth in oil production in GoM in 2017 would be mostly on the back of ramp-ups of the implemented projects in 2016 such as; Gunflint, Dantzler and the Big Bend, all started up on time by Noble Energy in the deepwater GoM and Julia, which started up in Mid-April. Production is also expected to start up in Heidelberg, Coelacanth, Dalmatian, Kodiak, Stones, Horn Mountain and Holstein from 2H16 onwards.

Table 5.4: US liquids production breakdown forecast, 2016-2017, tb/d

| | <u>2014</u> | <u>2015</u> | <u>Change</u> | <u>2016 *</u> | <u>Change</u> | <u>2017 *</u> | <u>Change</u> |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Tight crude | 3,954 | 4,602 | 648 | 3,988 | -614 | 3,498 | -490 |
| Gulf of Mexico crude | 1,397 | 1,541 | 144 | 1,677 | 136 | 1,837 | 160 |
| Other crudes | 3,357 | 3,287 | -69 | 3,223 | -64 | 3,133 | -90 |
| Unconventional NGL | 1,594 | 1,926 | 332 | 2,114 | 188 | 2,364 | 250 |
| Other NGL | 1,420 | 1,347 | -74 | 1,280 | -67 | 1,250 | -30 |
| Biofuels + Other liquids | 1,238 | 1,283 | 45 | 1,295 | 11 | 1,315 | 20 |
| US total supply | 12,960 | 13,987 | 1,027 | 13,577 | -410 | 13,397 | -180 |

Note: * 2016-2017 = forecast.

Source: OPEC Secretariat.

Graph 5.21: Trend of US oil production's components, 2005-2017

Note: *2016-2017= forecast.

Source: OPEC Secretariat.

Canada is expected to be the second largest source of non-OPEC supply growth after Brazil in 2017, expanding by 0.15 mb/d to 4.57 mb/d. Growth will come mainly from Surmont 2, Christian Lake, Sunrise and Kearl oil sands projects' ramp-ups, as well as new start-ups from Edam East, West and Vawm heavy oil thermal projects in 2017. Oil sands Projects such as; Kirby North phase 1, Christian Lake phase G and Foster Creek phase H which were planned to start in 2017, were deferred due to low oil prices. The total plateau volumes of these three projects are estimated at about 0.11 mb/d, with total capex of US\$5.4 billion.

In the **Caspian**, according to the latest news from Energy Intelligence, the head of exploration and production at Eni announced the sooner-than-expected start-up in October 2016, to reach an initial plateau of 0.37 mb/d by mid-2017. Hence, if the production target is achieved, the oil market will see another supply surplus in 2017. Therefore, the Kazakh oil production growth currently forecast to contract by 20 tb/d in 2017, will probably be revise up in the coming forecast, pending official startup.

In **Brazil**, following three planned projects of Lula Central, Lula Alto and Lapa, of which two projects have been implemented with total peak capacity of 0.38 mb/d in 1H16, Petrobras has planned to add another seven FPSOs in the Santos Basin, including three in the Lula field – including Lula South (FPSO P-66) and Lula South Extension (FPSO P-68) two in the Buzios field, one in the Lapa field and one at the giant Libra area. Oil production is expected to increase by 0.26 mb/d to average 3.37 mb/d when these seven new projects materialize next year.

In **China**, following the weak output in 1H16 due to low oil prices and Chinese companies' lower spending, the analysis of upstream projects indicates the return of offshore producers in 2017. About 0.15 mb/d of new production is expected to come onstream in China, mostly in offshore fields. Offshore companies plan to start up new projects at Chunxiao, Weizhou 11-4 North Phase II and Enping 23-1 in 2017, but the main state-owned oil companies have cut their capital expenditure as well as output, therefore despite the expected start-ups, a y-o-y contraction of 60 tb/d for 2017 is forecast, to average 4.12 mb/d. Also, fewer new offshore developments in China are expected to come online in 2017.

OPEC NGLs and non-conventional oils

OPEC natural gas liquids (NGLs) and non-conventional liquids (mostly GTLs) were estimated to average 6.29 mb/d in 2016, representing growth of 0.16 mb/d over the previous year. In 2017, OPEC NGLs and non-conventional liquids are projected to average 6.43 mb/d, an increase of 0.15 mb/d over the previous year. There are no changes in the 2016 estimation and 2017 predictions for OPEC NGLs and non-conventional liquids production compared with the last *MOMR*.

Table 5.5: OPEC NGLs + non-conventional oils, 2014-2017

| | | | <i>Change</i> | | | | | | | <i>Change</i> | |
|-------------------|-------------|-------------|---------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|--------------|
| | <u>2014</u> | <u>2015</u> | <u>15/14</u> | <u>1Q16</u> | <u>2Q16</u> | <u>3Q16</u> | <u>4Q16</u> | 2016 | <u>16/15</u> | 2017 | <u>17/16</u> |
| Total OPEC | 6.00 | 6.13 | 0.13 | 6.24 | 6.27 | 6.30 | 6.34 | 6.29 | 0.16 | 6.43 | 0.15 |

Source: OPEC Secretariat.

OPEC crude oil production

According to secondary sources, OPEC-14 crude oil production (following the rejoining of Gabon on 1 July), averaged 33.11 mb/d in July, an increase of 46 tb/d over the previous month. Crude oil output increased mostly from Iraq, while production in Nigeria showed the largest drop.

Table 5.6: OPEC crude oil production based on *secondary sources*, tb/d

| | 2014 | 2015 | 4Q15 | 1Q16 | 2Q16 | May 16 | Jun 16 | Jul 16 | Jul/Jun |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Algeria | 1,123 | 1,106 | 1,110 | 1,093 | 1,085 | 1,082 | 1,087 | 1,087 | 0.0 |
| Angola | 1,654 | 1,754 | 1,780 | 1,766 | 1,781 | 1,772 | 1,786 | 1,782 | -3.8 |
| Ecuador | 544 | 546 | 545 | 547 | 549 | 549 | 549 | 548 | -0.8 |
| Gabon | 222 | 219 | 218 | 217 | 230 | 239 | 235 | 230 | -4.7 |
| Indonesia | 696 | 695 | 707 | 720 | 736 | 739 | 738 | 737 | -0.5 |
| Iran, I.R. | 2,778 | 2,840 | 2,874 | 3,096 | 3,545 | 3,560 | 3,617 | 3,629 | 12.5 |
| Iraq | 3,267 | 3,933 | 4,232 | 4,242 | 4,284 | 4,265 | 4,245 | 4,320 | 74.8 |
| Kuwait | 2,781 | 2,730 | 2,720 | 2,765 | 2,730 | 2,760 | 2,783 | 2,783 | 0.0 |
| Libya | 470 | 405 | 401 | 370 | 314 | 272 | 325 | 304 | -20.8 |
| Nigeria | 1,953 | 1,867 | 1,885 | 1,793 | 1,554 | 1,444 | 1,549 | 1,508 | -41.3 |
| Qatar | 714 | 667 | 669 | 667 | 662 | 665 | 662 | 662 | 0.0 |
| Saudi Arabia | 9,688 | 10,123 | 10,122 | 10,147 | 10,294 | 10,242 | 10,447 | 10,477 | 30.1 |
| UAE | 2,759 | 2,856 | 2,881 | 2,807 | 2,845 | 2,858 | 2,923 | 2,943 | 20.4 |
| Venezuela | 2,361 | 2,357 | 2,354 | 2,278 | 2,168 | 2,171 | 2,115 | 2,095 | -19.7 |
| Total OPEC | 31,010 | 32,098 | 32,498 | 32,508 | 32,775 | 32,617 | 33,059 | 33,106 | 46.4 |

Note: Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 5.7: OPEC crude oil production based on *direct communication*, tb/d

| | 2014 | 2015 | 4Q15 | 1Q16 | 2Q16 | May 16 | Jun 16 | Jul 16 | Jul/Jun |
|-------------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------|---------------|----------------|
| Algeria | 1,193 | 1,157 | 1,179 | 1,128 | 1,126 | 1,133 | 1,104 | 1,145 | 41.0 |
| Angola | 1,654 | 1,767 | 1,742 | 1,773 | 1,730 | 1,707 | 1,752 | 1,761 | 8.6 |
| Ecuador | 557 | 543 | 536 | 548 | 554 | 556 | 550 | .. | .. |
| Gabon | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Indonesia | 697 | 690 | 693 | 739 | .. | 737 | .. | .. | .. |
| Iran, I.R. | 3,117 | 3,152 | 3,313 | 3,385 | 3,570 | 3,600 | 3,610 | 3,620 | 10.0 |
| Iraq | 3,110 | 3,504 | 3,846 | 4,598 | 4,523 | 4,499 | 4,549 | 4,606 | 57.0 |
| Kuwait | 2,867 | 2,859 | 2,876 | 3,000 | 2,934 | 2,950 | 2,950 | 2,950 | 0.0 |
| Libya | 480 | .. | .. | .. | .. | .. | .. | .. | .. |
| Nigeria | 1,807 | 1,748 | 1,778 | 1,667 | 1,485 | 1,506 | 1,379 | 1,527 | 147.4 |
| Qatar | 709 | 656 | 651 | 675 | 655 | 671 | 670 | .. | .. |
| Saudi Arabia | 9,713 | 10,193 | 10,202 | 10,225 | 10,360 | 10,270 | 10,550 | 10,673 | 123.0 |
| UAE | 2,794 | 2,989 | 2,999 | 2,944 | 3,035 | 3,107 | 3,168 | 3,181 | 13.0 |
| Venezuela | 2,683 | 2,654 | 2,587 | 2,515 | 2,408 | 2,370 | 2,364 | .. | .. |
| Total OPEC | .. | .. | .. | .. | .. | .. | .. | .. | .. |

Note: Totals may not add up due to independent rounding.

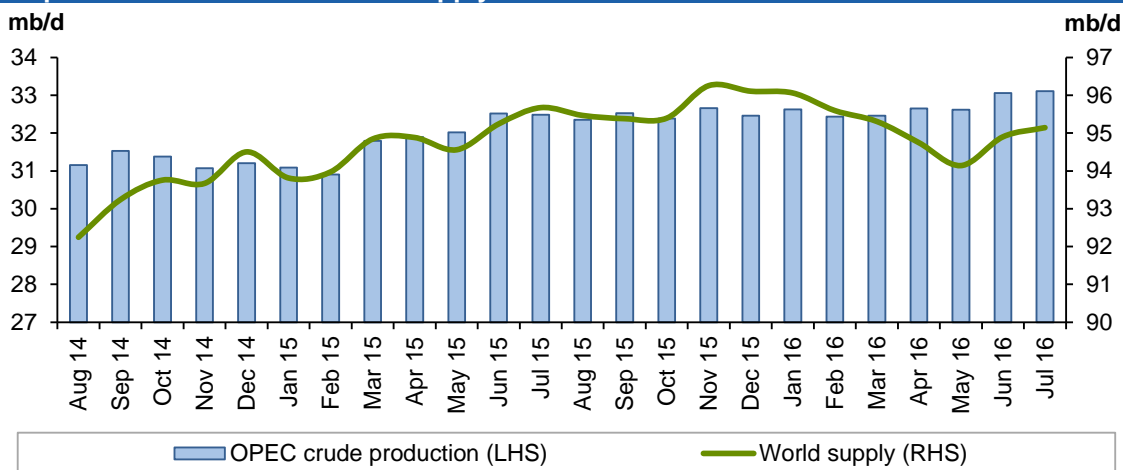
.. Not available.

Source: OPEC Secretariat.

World oil supply

Preliminary data indicates that global oil supply increased by 0.24 mb/d to average 95.14 mb/d in July 2016 compared with the previous month. The increase of both non-OPEC supply by 0.20 mb/d and OPEC crude oil production by 0.05 mb/d in July increased global oil output. The share of OPEC crude oil at 34.8% of total global production unchanged in July compared to a month earlier. Estimates are based on preliminary data for non-OPEC supply as well as OPEC NGLs and non-conventional liquids from direct communications, while estimates for OPEC crude production come from secondary sources.

Graph 5.22: OPEC and world oil supply

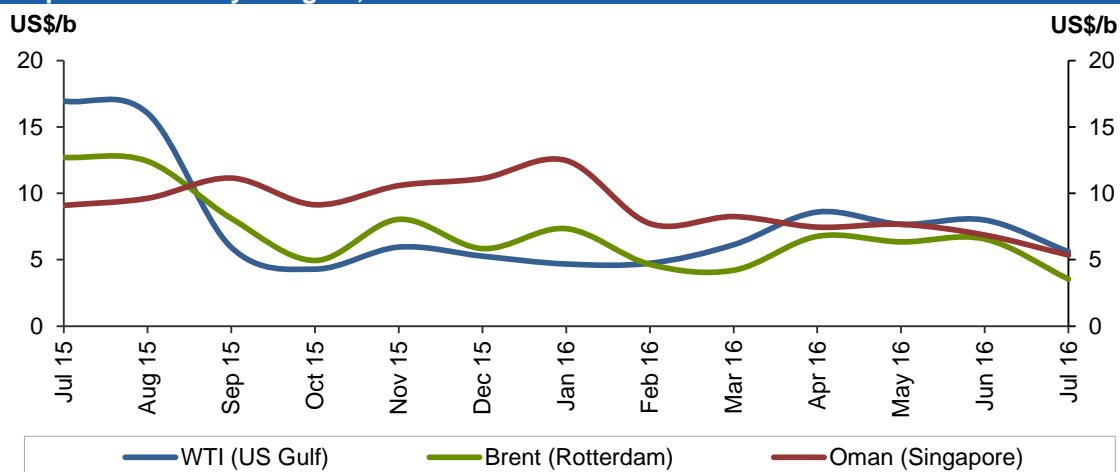


Source: OPEC Secretariat.

Product Markets and Refinery Operations

Product markets in the Atlantic Basin weakened during July, despite gasoline demand hitting record levels in the US during the peak of the driving season. Bearish sentiment has been fueled by high gasoline inventories and slower middle distillate demand. This offset the vibrant recovery seen at the bottom of the barrel, supported by a tightening market, and caused refinery margins to fall in the region. Meanwhile, Asian margins continued falling due to the oversupply environment weighing on the top and middle of the barrel.

Graph 6.1: Refinery margins, 2015-2016



Sources: Argus Media and OPEC Secretariat.

US gasoline demand continued to rise in July, reaching more than 9.7 mb/d at the end of the month, the highest level seen in years. However, despite stronger domestic gasoline demand, crack spreads continued under pressure due to the high levels of inventories, which remained well above the five-year average. On the other hand, middle distillate demand weakened, causing margins to fall. US Gulf refinery margins for WTI crude lost more than \$2 versus the previous month's levels to average around \$6/b during July.

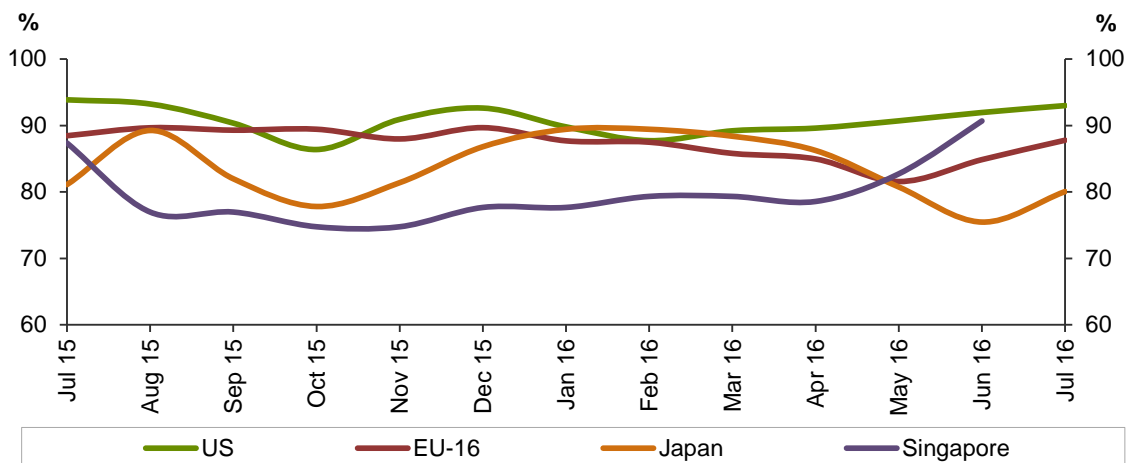
Product markets in **Europe** showed mixed performances during July, with the top and middle of the barrel weakening sharply due to regional oversupply amid limited export opportunities. The refinery margin for Brent crude in Northwest Europe (NWE) showed a loss of almost \$3 versus the previous month to average \$3.5/b. Further losses in margins were avoided by the strong recovery exhibited by the bottom of the barrel on the back of a tightening market amid increasing fuel oil demand.

The ongoing oversupply in the region caused **Asian** refinery margins to continue weakening during July. In addition, middle-of-the-barrel demand was impacted by bad weather conditions, mainly in China. Refinery margins in Singapore dropped by more than \$1 to average \$5.4/b during July. Losses were capped by continued strengthening at the bottom of the barrel, supported by higher power generation requirements due to the heatwave in the region.

Refinery operations

Refinery utilization in the **US** averaged around 93% in July, corresponding to 16.7 mb/d, which was around 200 tb/d higher than a month earlier. However, this level is more than 100 tb/d lower than the same month a year earlier due to economic run cuts encouraged by the weakening seen in the margins along with the persistently high level of product inventories in the region.

Graph 6.2: Refinery utilisation rates, 2015-2016



Sources: Argus Media and OPEC Secretariat.

European refinery runs averaged around 88% of capacity in July, corresponding to a throughput of 10.4 mb/d, which was 340 tb/d higher than in the previous month. Refinery runs have been on the rise in Europe with several refineries being back from maintenance, and following the recovery from the negative impact of the strike in France. However, a weakening in the refinery margins seen in the last weeks, along with a high level of inventories could lead to some run cuts in coming weeks.

In **Asia**, refinery utilization rates continued to rise, following the end of the maintenance season. Refinery runs in China have been on the rise, hitting a new record level of around 11 mb/d during June, and they are expected to remain high considering the increase in export quotas. Refinery runs in Singapore for June averaged around 90%, up 7 percentage points (pp) compared to the previous month, meanwhile, Japanese throughputs averaged 80% of capacity, 5 pp higher than the previous month, as some refineries returned from maintenance

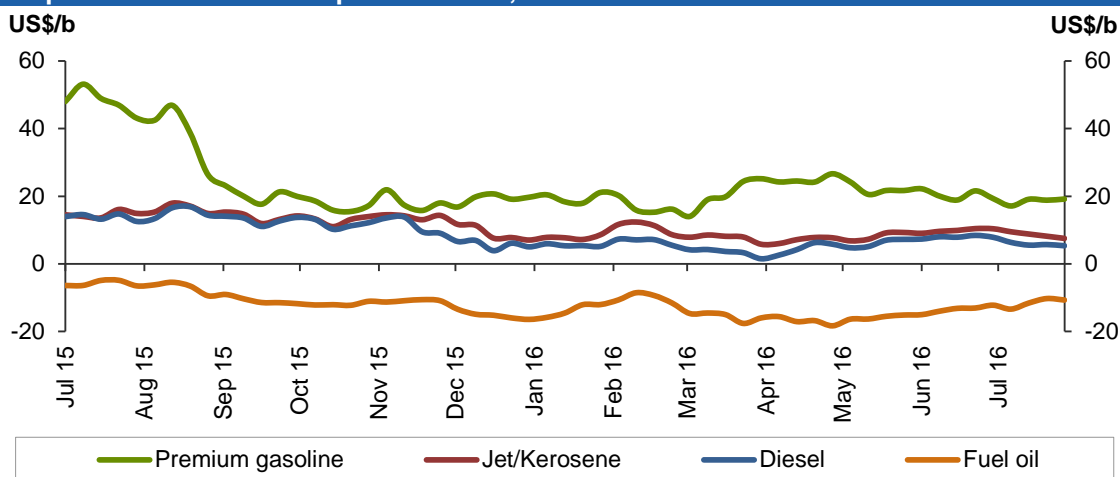
US market

US gasoline demand stood at around 9.7 mb/d in July, approximately 40 tb/d higher than in the previous month and more than 310 tb/d higher than in the same month a year earlier. Despite stronger domestic gasoline demand, hitting the highest level seen in years, crack spreads continued under pressure due to the high level of inventories, which remained well above the five-year average level.

High inventories in the USEC forced some cargoes to deviate from Europe to Latin America while higher inflows of high-octane blend stocks in the US East Coast market have continued depressing the premium gasoline price.

The gasoline crack spread lost almost \$2 compared to the previous month's level to average \$18.4/b in July.

Graph 6.3: US Gulf crack spread vs. WTI, 2015-2016



Sources: Argus Media and OPEC Secretariat.

Middle distillate demand stood at around 3.7 mb/d in July, some 170 tb/d lower than in the previous month and around 200 tb/d lower than in the same month a year earlier. The middle distillate market has reversed the ground gained last month, and fundamentals have become weaker, due to slowing demand amid increasing supplies, causing inventories to be on the rise and pressuring the market. Another bearish factor has been the tight arbitrage exports to Europe. The US Gulf Coast gasoil crack averaged around \$6/b, losing more than \$2 from the previous month.

At the **bottom of the barrel**, the fuel oil market continued its recovery trend, supported by stronger demand amid slower inventories on the back of lower inflows to the region. The US Gulf Coast high sulphur fuel oil crack gained around \$2 to average around minus \$11.5/b in July.

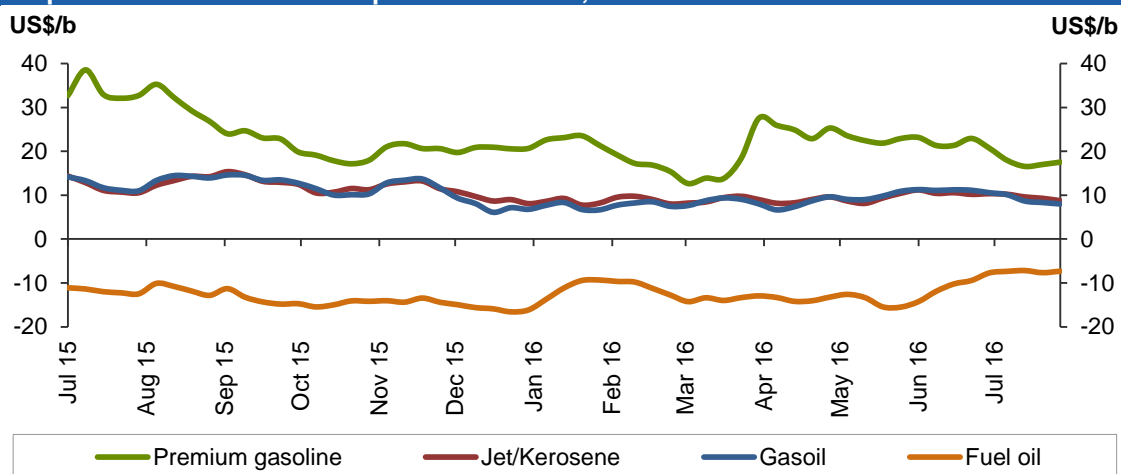
European market

Product markets in Europe showed mixed performances during July, with gasoline and gasoil crack spreads weakening due to regional oversupply, while the bottom of the barrel continued exhibiting a strong recovery on the back of a tightening market.

The **gasoline** market continued weakening in July, due to a lack of export opportunities, as high inventories reduced interest in imports from the USEC.

The gasoline crack spreads continued losing ground in July, as regional oversupply outweighed strong seasonal demand. Additional pressure came from increasing inventories in the region. Another bearish factor has been lower export opportunities to the Middle East and West Africa. The gasoline crack spread against Brent saw a drop of more than \$4 from the previous month to average around \$17.4/b. Strong export opportunities to Latin America could lend support to European gasoline, while exports to Nigeria are expected to pick up soon.

The light-distillate **naphtha** crack weakened due to oversupply in the region with slowing demand from gasoline blenders amid reduced arbitrage to the Asia Pacific region. There are expectations of increasing demand in the coming weeks, with some crackers being back from maintenance amid healthy margins in the sector.

Graph 6.4: Rotterdam crack spreads vs. Brent, 2015-2016

Sources: Argus Media and OPEC Secretariat.

The European **gasoil** market reversed the recovery trend witnessed last month, due to pressure coming from the supply side as increasing regional supplies outweighed the slower Russian inflows resulting from maintenance in that country. Weak domestic demand also exerted pressure, although it was partially compensated for by higher exports to North and West Africa. The gasoil crack spread against Brent crude at Rotterdam averaged around \$9/b in July, losing more than \$2 versus the previous month's level. Increasing volumes are expected in the coming weeks from Asia and the Middle East, which could continue pressuring the gasoil market.

At the **bottom of the barrel**, the fuel oil market continued exhibiting a strong recovery on the back of a tightening market with strong demand in the Mediterranean area amid lower inflows from the Black Sea as Russian exports fell due to the starting of new conversion capacity. Support also came from the re-opening of arbitrage opportunities to Singapore amid falling inventories.

The NWE fuel oil crack gained almost \$3 compared to the previous month to average around minus \$7/b in July.

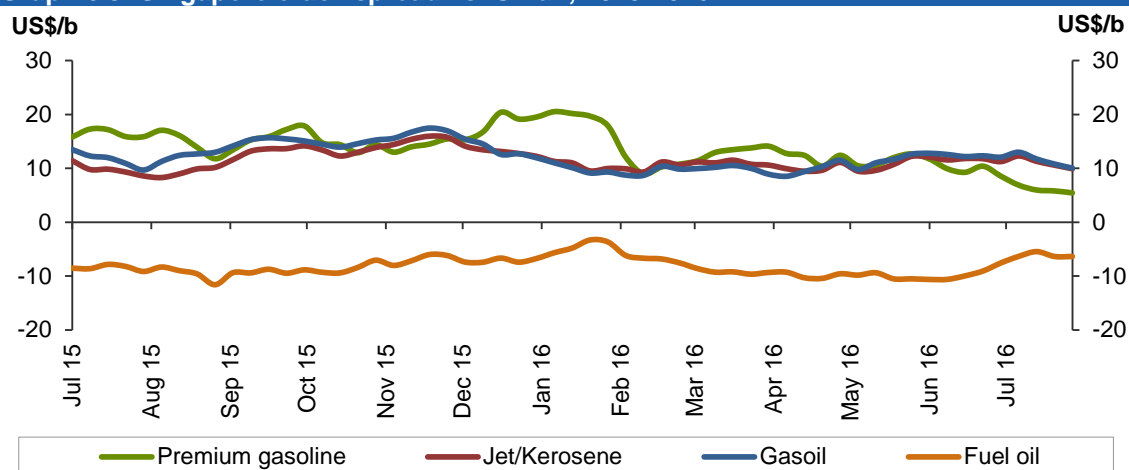
Asian market

The Asian market continued bearish in July, due to weakness seen at the top of the barrel, resulting from pressure by the ongoing oversupply in the region. In addition, the middle of the barrel also weakened due to gasoil demand being impacted by bad weather conditions, mainly in China, causing refinery margins to fall sharply despite the strengthening witnessed at the bottom of the barrel, which received support from boosted demand resulting from the onset of power generation requirements.

The Asian **gasoline** market continued weakening during July, pressured by ongoing oversupply, with Asian refiners increasing inflows within the region, mainly from Taiwan, India and China, and with export quotas for the Chinese refineries being on the rise. These increasing exports outweighed the higher requirements being reported from East Africa, mainly Kenya and Tanzania. Another bearish factor was the persistently high level of inventories in Singapore. The gasoline crack spread against Oman crude in Singapore averaged \$6/b in July, losing almost \$4 compared to the previous month's level. The weak market allowed for unusual arbitrage flows to Latin America, mainly to Peru and Mexico, where refinery outages caused increasing imports of gasoline in recent weeks.

The Singapore **naphtha** crack continued its downward trend, losing around \$1/b over the month, due to a continued supply glut with increasing volumes coming from the condensate splitter, which re-started operations in Singapore. On the other hand, demand was impacted by reduced imports from Japan due to the outage of a cracker unit along with the move to more petrochemical sector consolidation seen during the previous months in Japan.

Graph 6.5: Singapore crack spread vs. Oman, 2015-2016



Sources: Argus Media and OPEC Secretariat.

At the **middle of the barrel**, the gasoil crack spread exhibited a sharp loss, pressured by plentiful supply with refineries returning from maintenance while demand was seen as limited, mainly in China, as it has been impacted by bad weather conditions, including heavy rains, floods and typhoons.

The abundant regional supplies have pressured the market by outweighing some additional demand emerging from Vietnam, the Philippines and from West Africa, while arbitrage opportunities to Europe have been limited.

The gasoil crack spread in Singapore against Oman averaged around \$8.4/b in July, losing around \$4 compared to the previous month's level.

The Asian **fuel oil** market strengthened, receiving support from the slim arbitrage inflows seen in the last weeks amid falling import volumes from Russia, which has fueled the tightening sentiment in the market. Additional support came from higher demand for power generation in South Korea, China and Japan, where warmer-than-average temperatures have boosted power generation requirements. The fuel oil crack spread in Singapore against Oman averaged about minus \$6/b in July, gaining more than \$3 from the previous month.

Product Markets and Refinery Operations

Table 6.1: Refined product prices, US\$/b

| | <u>Jun 16</u> | <u>Jul 16</u> | <u>Change Jul/Jun</u> | <u>Year-to-date</u> | |
|-------------------------------------|---------------|---------------|---------------------------|---------------------|-------------|
| | | | | <u>2015</u> | <u>2016</u> |
| US Gulf (Cargoes FOB): | | | | | |
| Naphtha* | 48.48 | 44.93 | -3.55 | 65.49 | 42.56 |
| Premium gasoline (unleaded 93) | 69.12 | 63.42 | -5.70 | 86.38 | 60.51 |
| Regular gasoline (unleaded 87) | 64.64 | 59.19 | -5.45 | 75.19 | 54.35 |
| Jet/Kerosene | 58.68 | 53.34 | -5.34 | 70.94 | 48.73 |
| Gasoil (0.2% S) | 56.74 | 50.60 | -6.14 | 70.54 | 45.83 |
| Fuel oil (3.0% S) | 35.15 | 34.06 | -1.09 | 47.20 | 27.27 |
| Rotterdam (Barges FoB): | | | | | |
| Naphtha | 45.89 | 41.73 | -4.16 | 54.97 | 39.94 |
| Premium gasoline (unleaded 98) | 70.22 | 62.35 | -7.87 | 81.05 | 60.89 |
| Jet/Kerosene | 58.80 | 54.48 | -4.32 | 73.16 | 49.69 |
| Gasoil/Diesel (10 ppm) | 59.37 | 53.84 | -5.53 | 72.62 | 49.30 |
| Fuel oil (1.0% S) | 37.81 | 37.60 | -0.21 | 46.61 | 28.84 |
| Fuel oil (3.5% S) | 32.24 | 32.21 | -0.03 | 47.30 | 24.53 |
| Mediterranean (Cargoes FOB): | | | | | |
| Naphtha | 45.11 | 41.06 | -4.05 | 51.76 | 38.89 |
| Premium gasoline** | 62.71 | 54.17 | -8.53 | 75.64 | 53.39 |
| Jet/Kerosene | 57.36 | 52.69 | -4.67 | 70.00 | 47.95 |
| Diesel | 60.35 | 54.28 | -6.07 | 74.22 | 50.39 |
| Fuel oil (1.0% S) | 36.97 | 36.85 | -0.12 | 48.43 | 29.13 |
| Fuel oil (3.5% S) | 34.59 | 34.84 | 0.25 | 47.06 | 27.22 |
| Singapore (Cargoes FOB): | | | | | |
| Naphtha | 45.56 | 41.74 | -3.82 | 56.52 | 40.57 |
| Premium gasoline (unleaded 95) | 59.05 | 51.87 | -7.18 | 74.42 | 53.13 |
| Regular gasoline (unleaded 92) | 56.49 | 49.46 | -7.03 | 71.40 | 50.19 |
| Jet/Kerosene | 58.27 | 54.37 | -3.90 | 71.01 | 49.09 |
| Gasoil/Diesel (50 ppm) | 58.96 | 54.76 | -4.20 | 72.26 | 48.97 |
| Fuel oil (180 cst 2.0% S) | 38.62 | 38.35 | -0.27 | 53.19 | 32.10 |
| Fuel oil (380 cst 3.5% S) | 36.68 | 36.47 | -0.21 | 51.16 | 29.92 |

Note: * Barges.

** Cost, insurance and freight (CIF).

Sources: Argus Media and OPEC Secretariat.

Table 6.2: Refinery operations in selected OECD countries

| | Refinery throughput, mb/d | | | | Refinery utilization, % | | | |
|----------------|----------------------------------|---------------|---------------|---------------------------|--------------------------------|---------------|---------------|---------------------------|
| | <u>May 16</u> | <u>Jun 16</u> | <u>Jul 16</u> | <u>Change Jul/Jun</u> | <u>May 16</u> | <u>Jun 16</u> | <u>Jul 16</u> | <u>Change Jul/Jun</u> |
| US | 16.26 | 16.48 | 16.71 | 0.23 | 90.71 | 91.96 | 93.00 | 1.04 |
| France | 0.87 | 0.75 | 1.11 | 0.35 | 61.95 | 53.63 | 78.73 | 25.11 |
| Germany | 1.77 | 1.91 | 1.91 | 0.00 | 80.71 | 87.29 | 87.16 | -0.14 |
| Italy | 1.33 | 1.24 | 1.30 | 0.05 | 65.00 | 60.65 | 63.29 | 2.64 |
| UK | 1.06 | 1.02 | 1.01 | -0.01 | 75.61 | 72.90 | 72.25 | -0.64 |
| Euro-16 | 9.66 | 10.06 | 10.40 | 0.35 | 81.57 | 84.87 | 87.79 | 2.92 |
| Japan | 3.16 | 2.96 | 3.14 | 0.18 | 80.76 | 75.47 | 80.07 | 4.60 |

Sources: Argus Media, EIA, Euroilstock, IEA, METI, OPEC Secretariat and Petroleum Association of Japan.

Tanker Market

Crude oil tanker market sentiment weakened in July, as average spot freight rates declined on all reported routes. On average, dirty tanker freight rates were down by 19% from the month before. Spot freight rates for VLCC, Suezmax and Aframax vessels reached the lowest level seen this year so far. Despite a high number of fixtures seen in the VLCC market, average dirty spot freight rates declined, influenced by high vessel availability as new deliveries were reportedly added to the fleet. Suezmax and Aframax freight rates also edged down by 18% and 20%, respectively, from the previous month, due to limited demand for both classes. Thus, freight rates weakened on all reported routes with no exception amid persisting tonnage oversupply.

Clean tanker spot freight rates also developed negatively in July as medium-range (MR) tanker freight rates declined on all routes, with the only exception being Middle East-to-East fixtures.

Spot fixtures

Following a drop seen the previous month, global spot fixtures increased in July by 0.4%. Gains came mainly on the back of higher fixtures registered for westbound destinations, as Middle East-to-West fixtures rose by 0.62 tb/d in July, while OPEC fixtures declined by 0.6% from a month earlier. Compared with a year ago, OPEC and spot global fixtures were down by 3.4% and 0.3%, respectively.

Table 7.1: Tanker chartering, sailings and arrivals, mb/d

| | <u>May 16</u> | <u>Jun 16</u> | <u>Jul 16</u> | <u>Change Jul 16/Jun 16</u> |
|------------------------|---------------|---------------|---------------|---------------------------------|
| Spot Chartering | | | | |
| All areas | 16.62 | 16.59 | 16.66 | 0.07 |
| OPEC | 11.50 | 11.60 | 11.53 | -0.07 |
| Middle East/East | 5.33 | 5.78 | 5.22 | -0.56 |
| Middle East/West | 2.70 | 2.57 | 3.19 | 0.62 |
| Outside Middle East | 3.48 | 3.25 | 3.12 | -0.13 |
| Sailings | | | | |
| OPEC | 23.99 | 24.01 | 24.10 | 0.09 |
| Middle East | 17.38 | 17.41 | 17.49 | 0.08 |
| Arrivals | | | | |
| North America | 9.99 | 9.82 | 10.62 | 0.80 |
| Europe | 12.46 | 12.60 | 12.09 | -0.51 |
| Far East | 8.43 | 8.85 | 8.50 | -0.35 |
| West Asia | 4.83 | 4.37 | 4.69 | 0.32 |

Source: Oil Movements.

Sailings and arrivals

OPEC sailings rose in July, increasing from the previous month and year by 0.4% and 0.8%, respectively. According to preliminary data, arrivals to North America and West Asia increased by 800 tb/d and 320 tb/d, respectively, from the previous month, while arrivals to the Far East and Europe declined by 4% each from the previous month.

Spot freight rates

VLCC

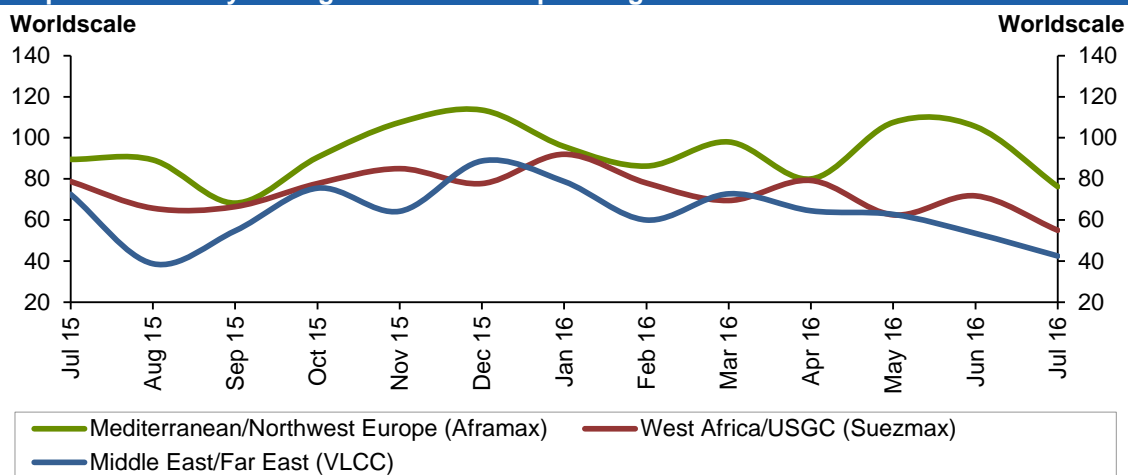
Softer sentiment continued in July for the VLCC class; rates dropped overall from the previous month, following a generally weak trend. VLCC spot freight rates experienced a gradual decline from the beginning of the month, with an over-populated tonnage list often providing charterers with plenty of vessels to choose from. In general, the market was quiet in July despite a high number of fixtures for Middle East loading. These were not sufficient to alleviate tonnage availability issues supported by new tonnage entries into the market. Tonnage build up resulted in a drop in freight rates, which were occasionally reported to be at their lowest levels this year so far.

Similarly, **Atlantic** fixtures were slow, leading to a weak market in West Africa. As a result, VLCC spot freight rates for tankers operating on the West Africa-to-East route dropped in July from a month earlier to average WS 49 points, down by WS 9 points or 15% from the previous month.

VLCC spot freight rates on the **Middle East-to-East long-haul route** declined as well in July, to average WS 43 points, down by 20% from the previous month. Annually, freight rates for VLCCs on both routes were down, by 41% and 30% from the previous year. Against expectations, spot freight rates for eastern destinations dropped, as delays in Chinese ports eased, while supply tightened as typhoon hits did not materialize, providing no support to freight rates.

VLCC spot freight rates on the **Middle East-to-West long-haul route** were no exception in July; they dropped by 18% from one month before to average WS 26 points.

Graph 7.1: Monthly averages of crude oil spot freight rates



Sources: Argus and Platts.

Suezmax

In a pattern similar to VLCCs, Suezmax spot freight rates also developed negatively in July. Suezmax average rates dropped by 18% compared with the previous month. The biggest rate drop was seen for Suezmax vessels operating in the **West**. Chartering activities on the Africa-to-US route dropped by 23%, as they eased at the beginning of the month. Tonnage build-up in July prevented freight rates from moving forward, even during relatively higher tonnage demand days.

Spot freight rates registered for tankers on the Northwest Europe(NWE)-to-US routes decreased by 12%. Slow tonnage demand, combined with fierce competition, pushed rates to the lowest level registered since the beginning of the year.

Table 7.2: Spot tanker crude freight rates, Worldscale

| Crude | Size 1,000 DWT | Change | | | |
|--------------------------------|--------------------------|---------------|---------------|---------------|----------------------|
| | | May 16 | Jun 16 | Jul 16 | Jul 16/Jul 15 |
| Middle East/East | 230-280 | 63 | 54 | 43 | -11 |
| Middle East/West | 270-285 | 38 | 31 | 26 | -6 |
| West Africa/East | 260 | 62 | 58 | 49 | -9 |
| West Africa/US Gulf Coast | 130-135 | 63 | 72 | 55 | -17 |
| Northwest Europe/US Gulf Coast | 130-135 | 63 | 61 | 54 | -7 |
| Indonesia/East | 80-85 | 91 | 97 | 89 | -8 |
| Caribbean/US East Coast | 80-85 | 104 | 93 | 79 | -14 |
| Mediterranean/Mediterranean | 80-85 | 109 | 111 | 82 | -29 |
| Mediterranean/Northwest Europe | 80-85 | 108 | 106 | 76 | -29 |

Sources: Argus Media and OPEC Secretariat.

Aframax

Aframax spot freight rates experienced a drop across all reported routes in July from one month earlier of 20%, the greatest decline compared with dirty tankers in other classes. Lower freight rates were reported in various areas; in the Mediterranean and Black Sea they dropped despite a busy market and stable fixing activities seen earlier in July.

Rates in the **Mediterranean** dropped significantly, to the lowest level seen for some time, as a result of reduced delays and smooth operations which supported tonnage supply in that area. Spot freight rates for Mediterranean-to-Mediterranean and Mediterranean-to-Northwest Europe routes declined by 26% and 28%, respectively, to stand at WS 82 points and WS 76 points.

The **Caribbean's** Aframax charter market was quiet, with insufficient activity to prevent freight rates from dropping, despite a rush of inquiries which arrived at the end of the previous month, providing temporary support, though unable to provide a full recovery. Thus, Caribbean-to-US rates dropped by 15% from the previous month to average WS 79 points.

Aframax freight rates in the **East** were no exception. They dropped on the Indonesia-to-the-East route by 8% to average WS 89 points.

Clean spot freight rates

In the **clean tanker** sector, average spot freight rates dropped as freight rates edged down on most reported routes from a month before.

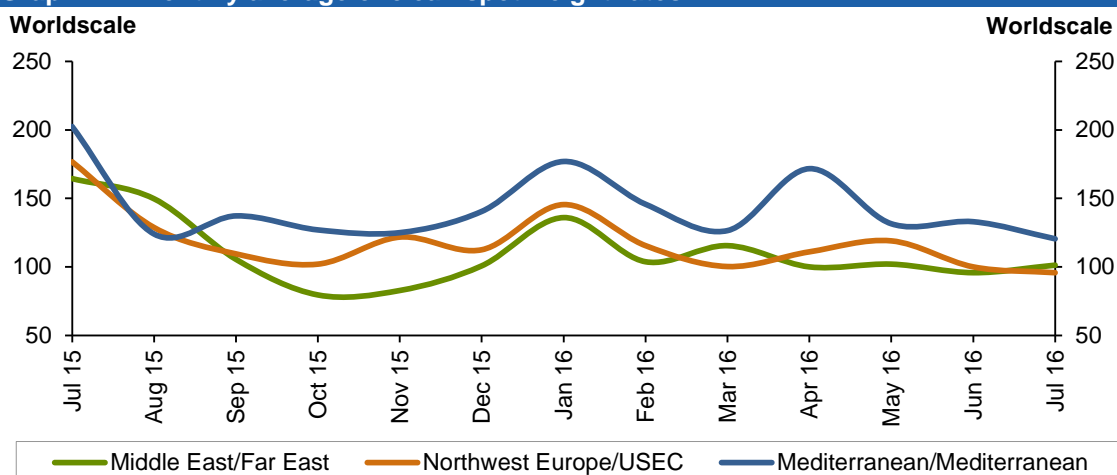
In **East of Suez**, long-range (LR) freight rates flattened at the beginning of July, following higher rates achieved at the end of June. Spot freight rates remained depressed for LR tankers loading naphtha to Japan.

Freight rates for MR vessels in the East remained primarily unchanged before improving at end of the month, with higher vessel demand led by steady fixing. Thus, freight rates for tankers operating on the Middle East-to-East route increased by 6% to

Tanker Market

average WS 101 points, showing the only positive average gain in July. Rates for the Singapore-to-East route did not follow, dropping by 4% in July compared with the previous month.

Graph 7.2: Monthly average of clean spot freight rates



Sources: Argus Media and OPEC Secretariat.

In **West of Suez**, LR vessels saw a steady flow of activity, mainly at the beginning of the month, though constant tonnage availability prevented rates from achieving any gainful changes. On the contrary, spot freight rates dropped in West of Suez as activity levels were depressed, while the position list grew.

Freight rates for MR tankers in the Atlantic were often softer, despite their occasional rise. On average, freight rates for tankers trading on the Northwest Europe-to-US East Coast route dropped by 4% to average WS 96 points. Freight rates seen on the Mediterranean-to-Mediterranean and Mediterranean-to-NWE routes went down by 9% and 8% to average WS 121 points and WS 131 points, respectively.

Table 7.3: Spot tanker product freight rates, Worldscale

| Products | Size 1,000 DWT | Worldscale | | | Change Jul 16/Jun 16 |
|--------------------------------|-------------------|------------|--------|--------|-------------------------|
| | | May 16 | Jun 16 | Jul 16 | |
| Middle East/East | 30-35 | 102 | 96 | 101 | 6 |
| Singapore/East | 30-35 | 132 | 126 | 121 | -5 |
| Northwest Europe/US East Coast | 33-37 | 119 | 100 | 96 | -4 |
| Mediterranean/Mediterranean | 30-35 | 132 | 133 | 121 | -13 |
| Mediterranean/Northwest Europe | 30-35 | 142 | 143 | 131 | -12 |

Sources: Argus Media and OPEC Secretariat.

Oil Trade

In July, preliminary data shows that **US crude oil imports** went up from the previous month to average 8.1 mb/d, an increase of 817 tb/d or 11% y-o-y. Y-t-d, US crude imports in July were 627 tb/d higher. On the contrary, **US product** monthly imports dropped last month by 99 tb/d, or 4%, to average 2.3 mb/d, while on an annual comparison, they were up by 172 tb/d, or 8%.

Japan's crude oil imports saw a drop in June for the third consecutive month, falling by 192 tb/d, or 6%, to average 3.1 mb/d. Similarly, product imports dropped in June by 85 tb/d to average 412 tb/d, reflecting a loss of 17% m-o-m and 146 tb/d from last year.

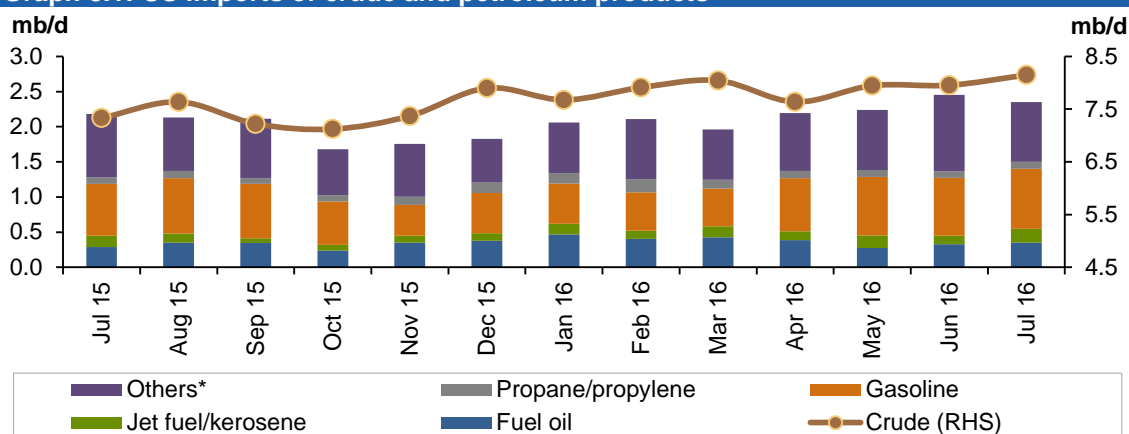
China's crude imports dropped in June for the second consecutive month, decreasing by 140 tb/d, or 2%, to average 7.5 mb/d, while y-o-y, they were 276 tb/d, or 4%, higher than the year before. China's product imports were down by 130 tb/d from a month ago, however they remained above last year's level by 27 tb/d to average 1.3 tb/d.

In June, India's crude imports increased by 172 tb/d, or 4%, from the previous month to average 4.3 mb/d, while they reflected an annual gain of 500 tb/d, or 13%. Product imports in June dropped by 119 tb/d from the previous month to average 670 tb/d, while they dropped by just 24 tb/d y-o-y.

US

In July, preliminary data shows that **US crude oil imports** increased to average 8.1 mb/d, up by 194 tb/d from last month and by 817 tb/d, or 11%, from last year. Y-t-d, US crude imports in July were 627 tb/d higher.

Graph 8.1: US imports of crude and petroleum products



Note: *Others: Contains natural gas liquids, liquefied refinery gases (LRG's), other liquids and all finished petroleum products except gasoline, jet fuel/kerosene, fuel oil and propane/propylene.

Sources: US Energy Information Administration and OPEC Secretariat.

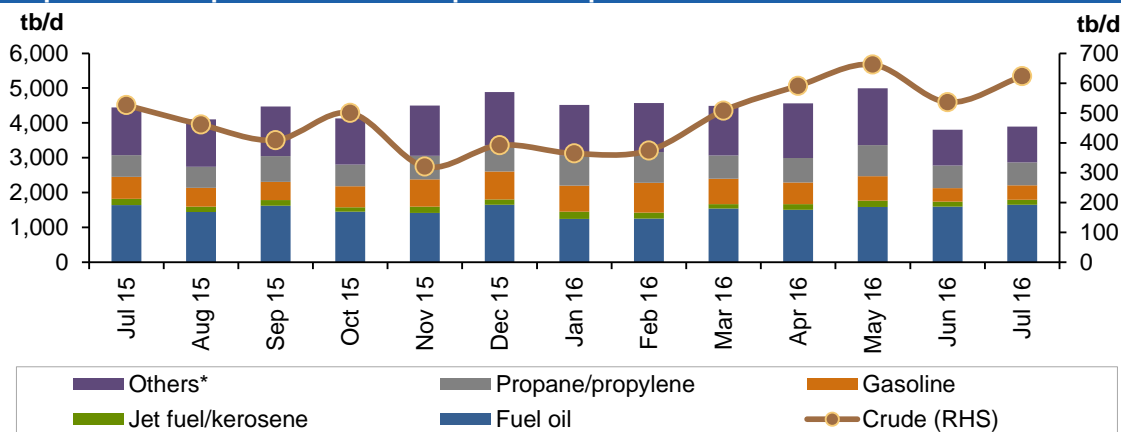
US monthly product imports dropped last month by 99 tb/d, or 4%, to average 2.3 mb/d, while y-o-y, they went up by 172 tb/d or 8%. Y-t-d, product imports increased by 2%.

In June, **US product exports** were 96 tb/d higher than a month ago to average 3.9 mb/d, while y-o-y, they were 544 tb/d, or 12%, lower than the previous year. As a

result, **US total net imports dropped 88 tb/d in July to average 6 mb/d**, however they remain above last year's level by 1.4 mb/d or 32%.

In May, the **top first and second suppliers to the US** maintained the same order as last month. Canada remained the premier crude supplier to the US, accounting for 38% of total US crude imports, despite a drop in its monthly volumes by 19 tb/d from a month ago. Saudi Arabia, which maintained its ranking as the second largest supplier to the US in May, increased its exports to the US by 31 tb/d. Venezuela came in as the third top supplier, accounting for 10% of total US crude imports, up by 11 tb/d, or 2%, from the previous month.

Graph 8.2: US exports of crude and petroleum products



Note: *Others: Contains natural gas liquids, liquefied refinery gases (LRG's), other liquids and all finished petroleum products except gasoline, jet fuel/kerosene, fuel oil and propane/propylene.
Sources: US Energy Information Administration and OPEC Secretariat.

Crude imports from OPEC Member Countries went up in May from the previous month, increasing by 315 tb/d, or 10%, accounting for 43% of total US crude imports. On the other hand, **US product imports from OPEC Member Countries** were lower by 24 tb/d, or 11%, from last month and 37 tb/d, or 13%, from last year.

Canada and Russia maintained their positions as **first and second product suppliers** to the US, accounting for 25% and 19%, respectively. Yet, while Canada's product exports to the US in May were higher by 32 tb/d, Russia's volumes were less by 28 tb/d from a month ago. South Korea came in as the third supplier, increasing its exported volumes by a slight 33 tb/d.

In May, **US crude imports** from North America averaged 3 mb/d, making North America the **top region** for US crude imports, followed by Latin America, which stood at 2.2 mb/d in May. The Middle East came in as the third region with an average of 2 mb/d, while imports from Africa were up from last month with an average of 634 tb/d. The US only imported 73 tb/d from Asia.

In **PADD 1**, the highest crude imports to the USEC were sourced from Africa and North America, which stood at 257 tb/d and 244 tb/d, respectively. Crude imports from Africa dropped by 92 tb/d from a month before, while imports from North America were higher in May than the previous month by 24 tb/d. Imports from PADD 2 remain covered from North America, which stood at 1.9 mb/d, down by 66 tb/d from the previous month. Moreover, PADD 2 imported small quantities from the Middle East in May. PADD 3 mostly sourced their imports from Latin America and the Middle East, and both sources exported higher crude to the US from a month before, by 64 tb/d and 179 tb/d, to average 1.7 mb/d and 1.3 mb/d, respectively. PADD 4, as previously, imported only

from North America and averaged 233 tb/d in May. In PADD 5, the USWC's largest imports originated from the Middle East, which exported 574 tb/d in May, followed by Latin America and North America, which exported 399 tb/d and 249 tb/d, respectively .

Table 8.1: US crude and product net imports, tb/d

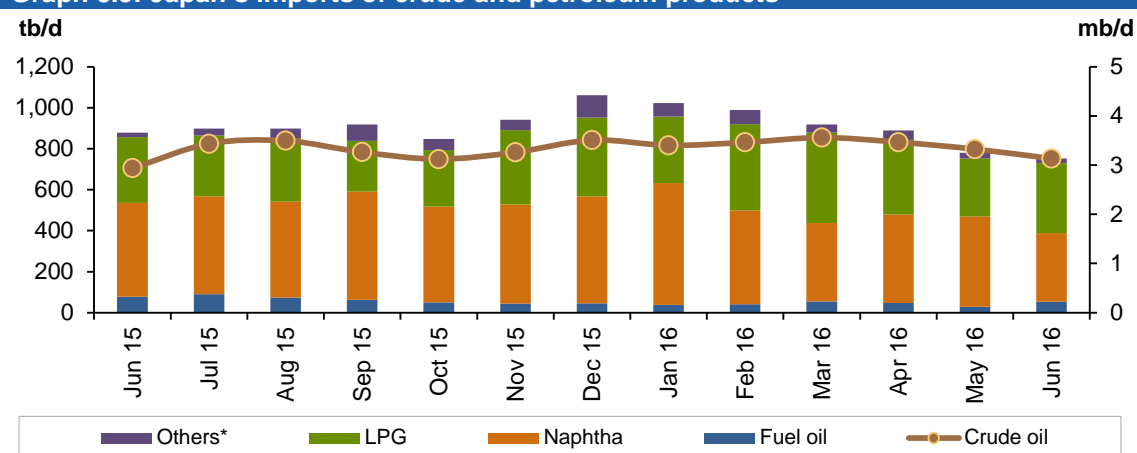
| | <u>May 16</u> | <u>Jun 16</u> | <u>Jul 16</u> | <u>Change</u> <u>Jul 16/Jun 16</u> |
|---------------------------------|---------------|---------------|---------------|---------------------------------------|
| Crude oil | 7,284 | 7,417 | 7,524 | 107 |
| Total products | -2,759 | -1,349 | -1,544 | -195 |
| Total crude and products | 4,525 | 6,068 | 5,981 | -88 |

Sources: US Energy Information Administration and OPEC Secretariat.

Japan

Japan's crude oil imports saw a drop in June for the third consecutive month, decreasing by 192 tb/d, or 6%, to average 3.1 mb/d, the lowest level since October 2015. Y-o-y, they remained above last year's level by 196 tb/d or 7%.

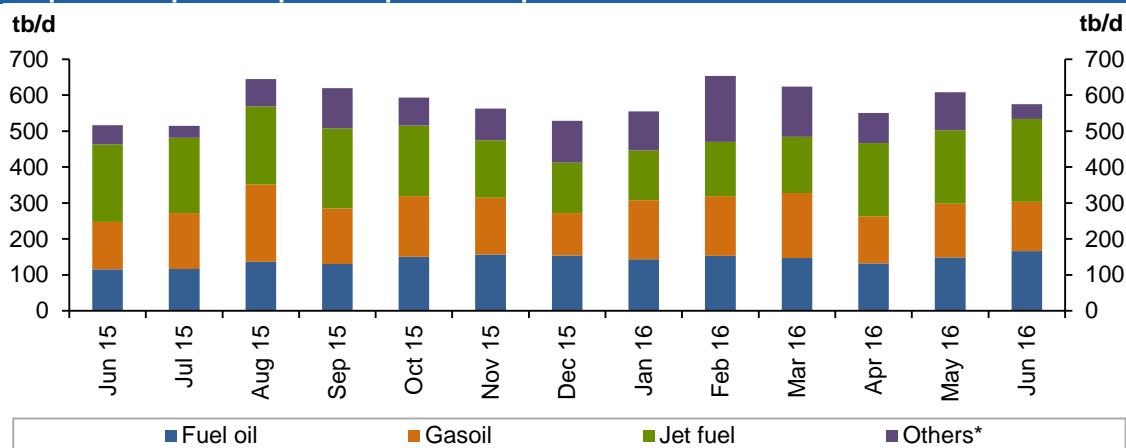
Graph 8.3: Japan's imports of crude and petroleum products



Note: *Others: Contains gasoline, jet fuel, kerosene, gasoil, asphalt and paraffin wax.

Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

As seen in the previous month, Saudi Arabia, UAE and Qatar were the **top suppliers** to Japan in June. Saudi Arabia, as in the previous month, came in as the first crude supplier to Japan, holding a share of 32% of total crude exports to Japan. UAE came in second with a share of 26% of total crude exports, while Qatar held the third position in June with a share of 10%, though volumes imported from all three top suppliers in June were lower than the previous month, dropping by 114 tb/d, 39 tb/d and 12 tb/d, respectively.

Graph 8.4: Japan's exports of petroleum products

*Others: Contains LPG, gasoline, naphtha, kerosene, lubricating oil, asphalt and paraffin wax.

Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

Similarly, **product imports** dropped in June by 85 tb/d to average 412 tb/d, reflecting a loss of 17% m-o-m and 146 tb/d from last year. At the same time, **Japan's domestic oil product sales** fell 1.4% in June from a year earlier, and its **product exports** in June went down by 33 tb/d, or 6%, to average 575 tb/d. Y-o-y, the figure shows a gain of 58 tb/d or 11%.

Accordingly, **Japan's net imports dropped in June by 243 tb/d to average 3 mb/d**, reflecting a monthly drop of 8% while remaining flat from a year before.

Table 8.2: Japan's crude and product net imports, tb/d

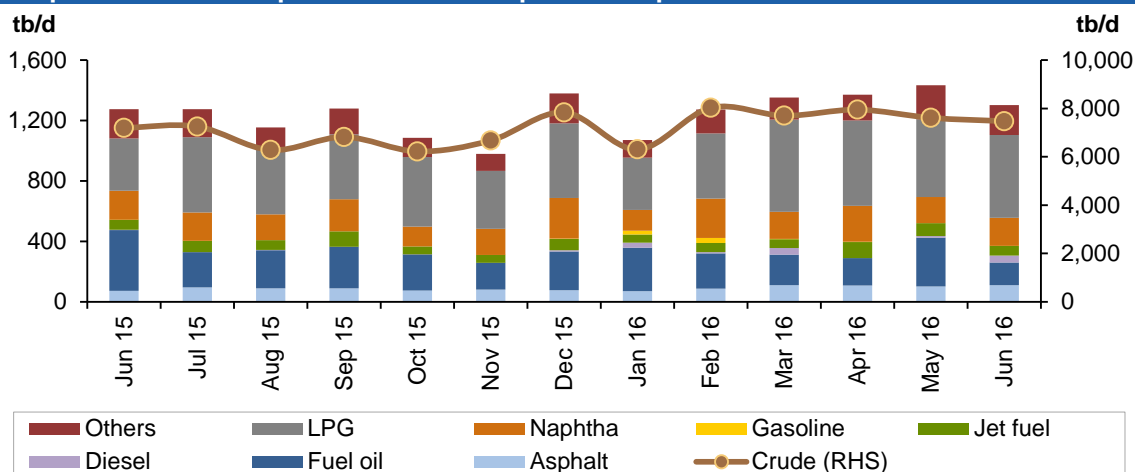
| | <u>Apr 16</u> | <u>May 16</u> | <u>Jun 16</u> | <u>Change</u> <u>Jun 16/May 16</u> |
|---------------------------------|---------------|---------------|---------------|---------------------------------------|
| Crude oil | 3,467 | 3,324 | 3,132 | -192 |
| Total products | -26 | -112 | -163 | -51 |
| Total crude and products | 3,441 | 3,212 | 2,969 | -243 |

Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

China

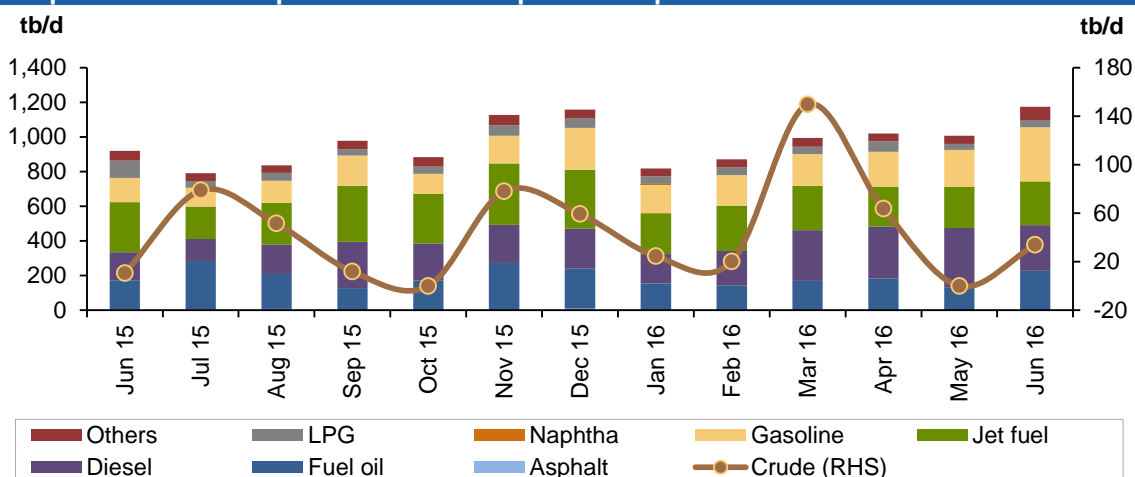
China's crude imports dropped in June for the second consecutive month, falling by 140 tb/d, or 2%, to average 7.5 mb/d, while y-o-y, they were still 276 tb/d, or 4%, higher than the previous year. Y-t-d, the figures reflected an increase of 895 tb/d or 14%.

Saudi Arabia, Russia and Angola were the **top crude oil suppliers** to China in June, accounting for 18%, 13% and 10%, respectively. Crude imports from Saudi Arabia were higher than last month by 151 tb/d, or 16%, while imports from Angola increased by 175 tb/d, or 24%, and imports from Russia were 236 tb/d, or 19%, less than the previous month. Iran came in as the fourth crude supplier after increasing its volumes from the previous month by 161 tb/d.

Graph 8.5: China's imports of crude and petroleum products

Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

China's product imports went down by 130 tb/d from a month ago, however they remained above last year's level by 27 tb/d to average 1.3 tb/d.

Graph 8.6: China's exports of crude and petroleum products

Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

In June, China only exported 34 tb/d of crude, while its product exports were 167 tb/d higher than last month to average 61.2 mb/d. Y-o-y, this reflects an increase of 255 tb/d or 28%.

As a result, China's net oil imports decreased by 472 tb/d from the previous month to average 7.6 mb/d and were down by only 26 tb/d from a year ago.

Table 8.3: China's crude and product net imports, tb/d

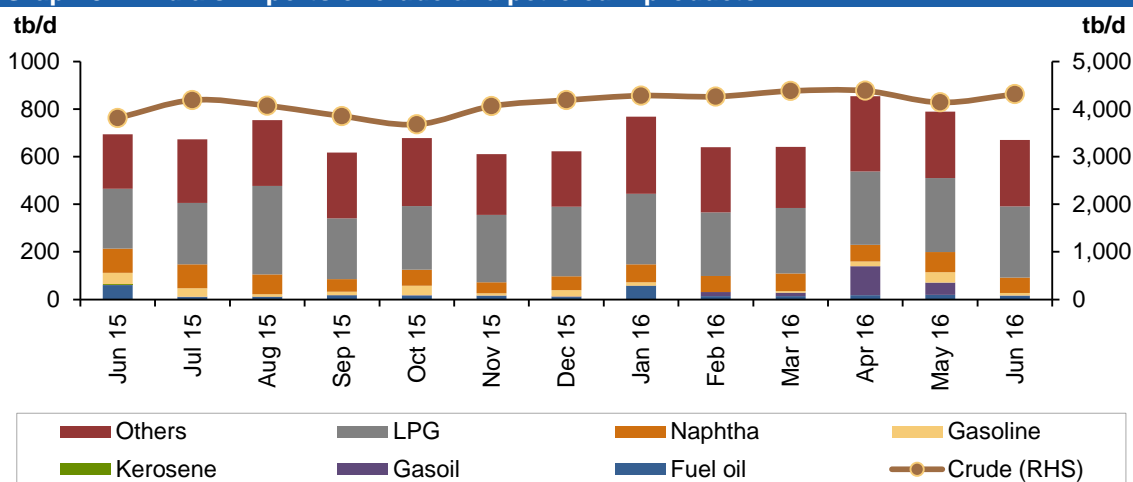
| | Apr 16 | May 16 | Jun 16 | Change Jun 16/May 16 |
|---------------------------------|--------------|--------------|--------------|-------------------------|
| Crude oil | 7,885 | 7,613 | 7,438 | -174 |
| Total products | 351 | 426 | 129 | -298 |
| Total crude and products | 8,236 | 8,039 | 7,567 | -472 |

Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

India

In June, **India's crude imports** increased by 172 tb/d, or 4%, from the previous month to average 4.3 mb/d, while y-o-y, they increased by 500 tb/d or 13%. Product imports in June dropped by 119 tb/d from the previous month to average 670 tb/d, while y-o-y, they dropped by just 24 tb/d.

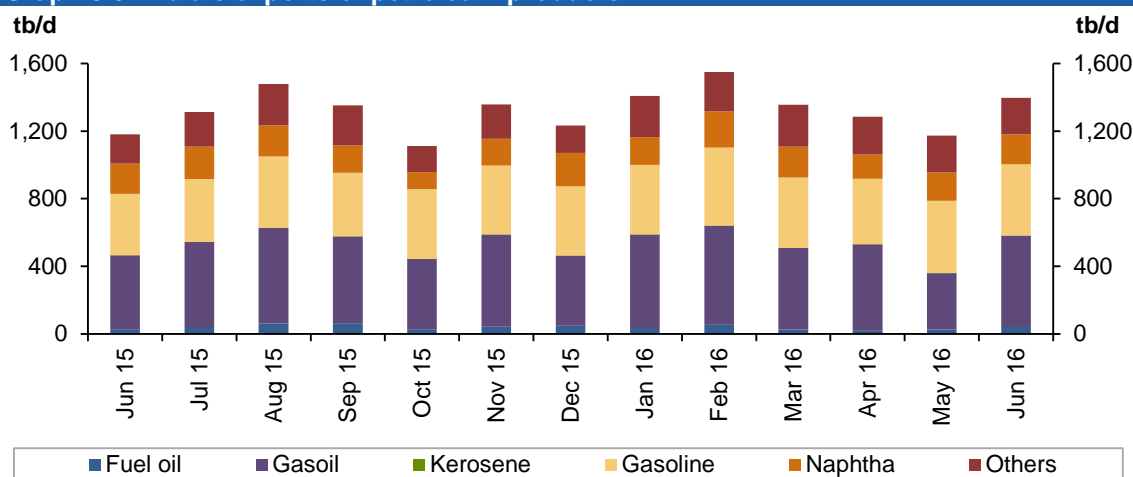
Graph 8.7: India's imports of crude and petroleum products



Sources: Petroleum Planning & Analysis Cell of India and OPEC Secretariat.

On the other hand, **India's product exports** were higher in June by 222 tb/d, or 19%, to average 1.4 mb/d, while y-o-y, they increased from last year by 215 tb/d or 18%. India's monthly product exports were mainly higher in diesel and fuel oil.

Graph 8.8: India's exports of petroleum products



Sources: Petroleum Planning & Analysis Cell of India and OPEC Secretariat.

Consequently, **India's net imports declined by 169 tb/d to average 3.6 mb/d**, reflecting a drop of 5% m-o-m and 8% y-o-y.

Table 8.4: India's crude and product net imports, tb/d

| | <u>Apr 16</u> | <u>May 16</u> | <u>Jun 16</u> | <i>Change</i> <u>Jun 16/May 16</u> |
|---------------------------------|---------------|---------------|---------------|---------------------------------------|
| Crude oil | 4,382 | 4,139 | 4,311 | 172 |
| Total products | -432 | -386 | -727 | -341 |
| Total crude and products | 3,951 | 3,753 | 3,584 | -169 |

Note: India data table does not include information for crude import and product export by Reliance Industries.

Sources: Petroleum Planning & Analysis Cell of India and OPEC Secretariat.

FSU

In June, **total crude oil exports from the FSU increased by 33 tb/d, or 1%, to average 6.8 mb/d**, while crude exports through Russian pipelines declined by 138 tb/d, or 3%, to average 4.1 mb/d.

Total shipments from the **Black Sea** increased by 102 tb/d, or 19%, to average 647 tb/d. The gains were the result of higher shipments from the Novorossiysk port terminal. Total **Baltic Sea** exports dropped by 90 tb/d in June mainly as shipments from the Primorsk port terminal were lower by 179 tb/d, however that drop was offset by increased exports from the Ust Luga port terminal, which went up by 89 tb/d. The **Druzhba pipeline's** total shipment declined by 50 tb/d to average 1 mb/d, while Kozmino shipments declined by 100 tb/d, or 15%, to average 576 tb/d.

Exports through the **Lukoil system** dropped from the previous month in the Barents Sea by a slight 13 tb/d, while exports from the Baltic Sea were stable from a month ago.

Black Sea total exports went up by 82 tb/d, where all ports showed increases except the Kulevi port terminal, which showed no exports as in the past.

In the **Mediterranean Sea**, BTC supplies showed a drop by 44 tb/d, or 6%, from the previous month to average 732 tb/d.

FSU's total product exports dropped by 59 tb/d, or 2%, from last month to average 3 mb/d. This drop came as a result of a decline seen in most product exports with the exception of fuel oil and jet fuel, which exported higher volumes than last month by 105 tb/d and 6 tb/d, respectively.

Table 8.5: Recent FSU exports of crude and petroleum products by source, tb/d

| <u>Transneft system</u> | | <u>2014</u> | <u>3Q15</u> | <u>4Q15</u> | <u>May 16</u> | <u>Jun 16</u> |
|------------------------------------|--|--------------|---------------|--------------|---------------|---------------|
| Europe | Black sea total | 605 | 653 | 622 | 545 | 647 |
| | Novorossiysk port terminal - total | 605 | 653 | 622 | 545 | 647 |
| | of which: Russian oil | 438 | 502 | 461 | 399 | 484 |
| | Others | 166 | 151 | 161 | 146 | 164 |
| | Baltic sea total | 1,304 | 1,511 | 1,632 | 1,628 | 1,538 |
| | Primorsk port terminal - total | 842 | 922 | 1,062 | 1,117 | 938 |
| | of which: Russian oil | 834 | 922 | 1,062 | 1,117 | 938 |
| | Others | 8 | 0 | 0 | 0 | 0 |
| | Ust-Luga port terminal - total | 462 | 590 | 570 | 511 | 600 |
| | of which: Russian oil | 284 | 359 | 388 | 325 | 408 |
| | Others | 177 | 231 | 182 | 186 | 192 |
| | Druzhba pipeline total | 1,005 | 1,044 | 1,047 | 1,067 | 1,017 |
| | of which: Russian oil | 973 | 1,012 | 1,015 | 1,035 | 984 |
| Others | 32 | 32 | 32 | 33 | 33 | |
| Asia | Pacific ocean total | 507 | 617 | 645 | 676 | 576 |
| | Kozmino port terminal - total | 507 | 617 | 645 | 676 | 576 |
| | China (via ESPO pipeline) total | 342 | 349 | 348 | 348 | 348 |
| China Amur | 342 | 349 | 348 | 348 | 348 | |
| Total Russian crude exports | | 3,763 | 4,174 | 4,295 | 4,265 | 4,127 |
| <u>Lukoil system</u> | | <u>2014</u> | <u>3Q15</u> | <u>4Q15</u> | <u>May 16</u> | <u>Jun 16</u> |
| Europe & N. America | Barents sea total | 120 | 161 | 157 | 164 | 151 |
| | Varandey offshore platform | 120 | 161 | 157 | 164 | 151 |
| Europe | Baltic sea total | 12 | 19 | 14 | 15 | 16 |
| | Kalinigrad port terminal | 12 | 19 | 14 | 15 | 16 |
| <u>Other routes</u> | | <u>2014</u> | <u>3Q15</u> | <u>4Q15</u> | <u>May 16</u> | <u>Jun 16</u> |
| Asia | Russian Far East total | 275 | 369 | 424 | 371 | 516 |
| | Aniva bay port terminal | 112 | 118 | 128 | 118 | 142 |
| | De Kastri port terminal | 162 | 251 | 296 | 253 | 374 |
| | Central Asia total | 228 | 199 | 183 | 182 | 179 |
| Kenkiyak-Alashankou | 228 | 199 | 183 | 182 | 179 | |
| Europe | Black sea total | 982 | 1,158 | 979 | 944 | 1,026 |
| | Novorossiysk port terminal (CPC) | 855 | 1,029 | 862 | 858 | 898 |
| | Supsa port terminal | 80 | 94 | 81 | 65 | 90 |
| | Batumi port terminal | 39 | 35 | 36 | 21 | 38 |
| | Kulevi port terminal | 9 | 0 | 0 | 0 | 0 |
| | Mediterranean sea total | 602 | 695 | 701 | 777 | 732 |
| BTC | 602 | 695 | 701 | 777 | 732 | |
| <u>Russian rail</u> | | <u>2014</u> | <u>3Q15</u> | <u>4Q15</u> | <u>May 16</u> | <u>Jun 16</u> |
| Russian rail | Russian rail | 46 | 17 | 46 | 38 | 41 |
| | of which: Russian oil | 8 | 10 | 42 | 34 | 38 |
| | Others | 38 | 7 | 4 | 4 | 4 |
| Total FSU crude exports | | 6,028 | 6,792 | 6,798 | 6,757 | 6,789 |
| <u>Products</u> | | <u>2014</u> | <u>3Q15</u> | <u>4Q15</u> | <u>May 16</u> | <u>Jun 16</u> |
| | Gasoline | 124 | 226 | 204 | 229 | 206 |
| | Naphtha | 485 | 525 | 479 | 526 | 445 |
| | Jet | 5 | 25 | 39 | 38 | 44 |
| | Gasoil | 933 | 1,113 | 1,000 | 1,010 | 993 |
| | Fuel oil | 1,487 | 1,074 | 1,052 | 1,052 | 1,157 |
| | VGO | 245 | 248 | 284 | 292 | 243 |
| Total FSU product exports | | 3,280 | 3,212 | 3,058 | 3,147 | 3,088 |
| Total FSU oil exports | | 9,308 | 10,004 | 9,856 | 9,904 | 9,877 |

Sources: Argus Nefte Transport and Argus Global Markets.

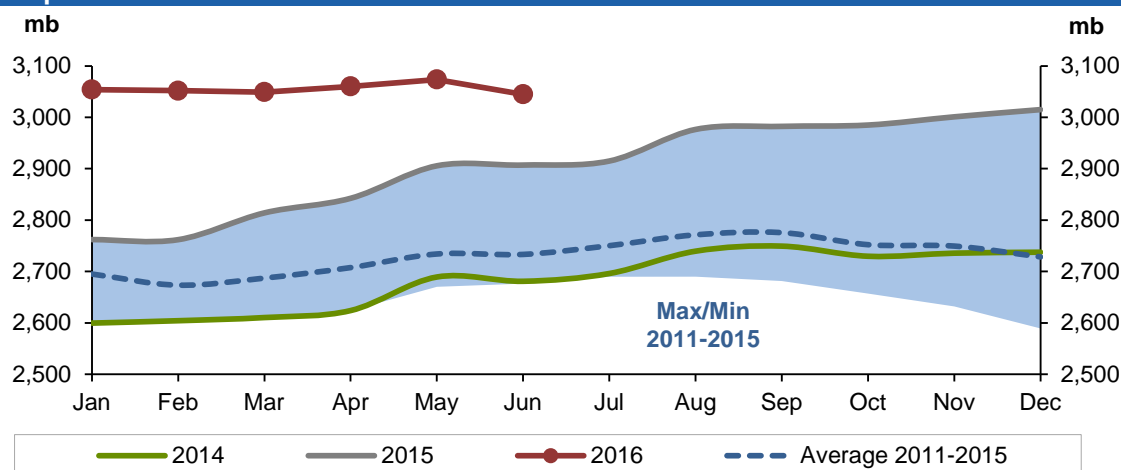
Stock Movements

OECD commercial oil stocks fell in June to stand at 3,045 mb, around 311 mb above the latest five-year average. Crude and products indicated a surplus of around 175 mb and 136 mb, respectively, above the seasonal norm. In terms of days of forward cover, OECD commercial stocks stood at 64.9 days, 6.0 days higher than the latest five-year average. Preliminary data for July shows that total commercial oil stocks in the US rose by 14.5 mb to stand at 1,390 mb, around 116 mb above the same period a year ago and 242 mb higher than the latest five-year average. Within components, crude stocks fell by 1.8 mb, while products rose by 16.3 mb. The latest information for China showed a drop of 3.1 mb in total commercial oil inventories in June to stand at 393.5 mb. Within components, crude stocks rose by 1.3 mb, while product inventories declined by 4.4 mb.

OECD

Preliminary data for June shows that **total OECD commercial oil stocks** fell by 28.9 mb to stand at 3,045 mb, around 138 mb higher than the same time one year ago and 311 mb above the latest five-year average. Within components, crude and products both fell, by 15.0 mb and 13.9 mb, respectively. OECD commercial stocks saw their build slow since the beginning of the year; during the first half of the year the OECD only added 30 mb, compared with 170 mb during the same time a year ago.

Graph 9.1: OECD's commercial oil stocks



Sources: Argus Media, Euroilstock, IEA, METI, OPEC Secretariat and US Energy Information Administration.

OECD commercial crude stocks ended June at 1,531 mb, standing 47 mb above the same time one year earlier and more than 175 mb higher than the latest five-year average. Stocks in OECD North America and OECD Europe experienced a drop, while OECD Asia Pacific stocks saw a build.

OECD product inventories also fell in June by 13.9 mb to stand at 1,514 mb. At this level, product inventories stood 91 mb higher than a year ago at the same time and were 136 mb above the seasonal norm. All OECD regions experienced a drop.

In terms of **days of forward cover**, OECD commercial stocks fell in June by around one day to stand at 64.9 days. At this level, they were 2.6 days above the previous year in the same period and 6.0 days higher than the latest five-year average. Within

Stock Movements

the regions, OECD Americas saw 6.2 more days of forward cover than the historical average, to stand at 63.7 days in June. OECD Asia Pacific stood 4.4 days above the seasonal average to finish the month at 57.2 days. At the same time, OECD Europe indicated a surplus of 6.3 days above the seasonal norm, averaging 71.3 days.

Commercial stocks in **OECD Americas** fell in June for the second month by 21.7 mb to stand at 1,602 mb, representing a surplus of 64 mb above a year ago and 201 mb higher than the seasonal norm. Within components, crude and product stocks fell by 16.1 mb and 5.6 mb, respectively.

Crude commercial oil stocks in OECD Americas fell at the end of June, ending the month at 837 mb, which was 35 mb above the same time one year ago, and 130 mb above the latest five-year average. The fall in crude stocks came from lower domestic production combined with higher crude runs at this time of the year. US domestic crude production declined by 180,000 b/d one month ago to below 8.7 mb/d for the first time in two years.

Product stocks in OECD Americas also declined by 5.6 mb, ending June at 764 mb. Despite this drop, they indicated a surplus of 30 mb above the same time one year ago and were 71 mb higher than the seasonal norm. Higher inland consumption contributed to the decline in product inventories.

OECD Europe's commercial stocks fell by 6.8 mb in June, ending the month at 1,009 mb. At this level, they were 69 mb higher than the same time a year ago and 93 mb above the latest five-year average. Both crude and product stocks fell, by 2.1 mb and 4.7 mb, respectively.

OECD Europe's commercial crude stocks fell in June, ending the month at 425 mb, 8.3 mb above the same period a year earlier and 27 mb higher than the latest five-year average. The drop in June's crude oil stocks could be attributed to higher refinery runs compared with May, as strikes in France left throughput levels particularly low.

OECD Europe's commercial product stocks also fell by 4.7 mb to end June at 585 mb, which is 61 mb higher than a year ago at the same time and 66 mb higher than the seasonal norm. The fall was mainly driven by higher refinery output.

OECD Asia Pacific commercial oil stocks fell by 6.8 mb in June, reversing the build of the previous two months. At 434 mb, they were 4.4 mb higher than a year ago and 18 mb above the five-year average. Within the components, crude rose by 3.2 mb, while products fell by 3.6 mb. Crude inventories ended the month at 268 mb, indicating a surplus of 4.2 mb above a year ago and 18.2 mb above the seasonal norm. OECD Asia Pacific's total product inventories ended June at 165 mb, standing almost in line with the same time a year ago and the seasonal norm.

Table 9.1: OECD's commercial stocks, mb

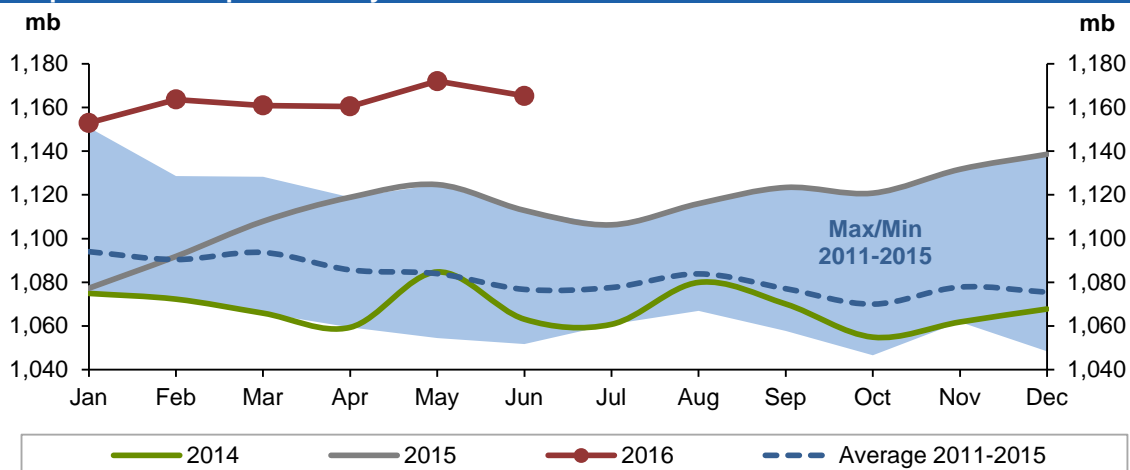
| | <u>Apr 16</u> | <u>May 16</u> | <u>Jun 16</u> | <i>Change</i> <u>Jun 16/May 16</u> | <u>Jun 15</u> |
|------------------------------|---------------|---------------|---------------|---------------------------------------|---------------|
| Crude oil | 1,552 | 1,546 | 1,531 | -15.0 | 1,484 |
| Products | 1,508 | 1,528 | 1,514 | -13.9 | 1,424 |
| Total | 3,060 | 3,074 | 3,045 | -28.9 | 2,907 |
| Days of forward cover | 66.5 | 65.9 | 64.9 | -1.0 | 62.3 |

Sources: Argus Media, Euroilstock, IEA, METI, OPEC Secretariat and US Energy Information Administration.

EU plus Norway

Preliminary data for June shows a total **European stock** draw of 6.8 mb, reversing the previous month's build of 11.6 mb to stand at 1,165 mb. At this level, they are 52.3 mb, or 4.7%, above the same time a year ago and 88.5 mb, or 8.2%, higher than the latest five-year average. Crude and product stocks declined by 2.1 mb and 4.7 mb, respectively.

Graph 9.2: EU-15 plus Norway's total oil stocks



Source: Euroilstock.

European crude inventories declined in June, reversing the stock build of the previous month to stand at 494.4 mb. This was 0.3 mb, or 0.1%, above the same period a year ago, and 23.2 mb, or 4.9%, higher than the seasonal norm. The drop in crude oil stocks came as refinery crude runs rose to 10.06 mb/d in June from 9.66 mb/d in May when a combination of seasonal declines and strikes left throughput levels particularly low.

European product stocks also fell, ending June at 670.9 mb. At this level, they were 52.1 mb, or 4.7%, above the same time a year ago, and 88.5 mb, or 8.2%, above the seasonal norm. All products experienced a stock draw, with the exception of naphtha.

Gasoline stocks fell by 2.1 mb in June to stand at 122.3 mb. Despite this stock draw, they were 2.1 mb, or 14.7%, above a year earlier, and 15.6 mb, or 14.6%, higher than the seasonal norm. The fall in gasoline stocks could be driven by higher demand in the region, along with higher exports to the region.

Distillate stocks also fell by 1.2 mb in June to stand at 443.2 mb. At this level, they were 29.9 mb, or 7.2%, higher than the same time one year ago and 56.3 mb, or 14.5%, above the latest five-year average. The fall in distillate stocks came from lower distillate supply combined with strong demand, mainly in Germany.

Residual fuel oil stocks declined by 1.8 mb in June to stand at 80.7 mb. At this level, they stood 6.1 mb, or 8.2%, above the same month a year ago, but remained 2.7 mb, or 3.3%, lower than the latest five-year average. The fall in residual fuel oil stocks was a result of higher fuel oil demand, especially in major EU bunkering markets.

Table 9.2: EU-15 plus Norway's total oil stocks, mb

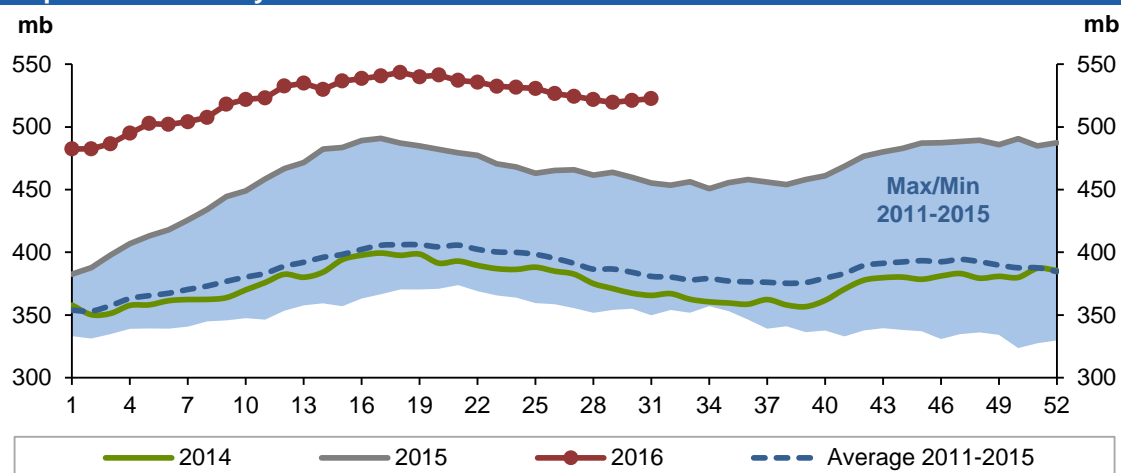
| | <u>Apr 16</u> | <u>May 16</u> | <u>Jun 16</u> | <u>Change</u> <u>Jun 16/May 16</u> | <u>Jun 15</u> |
|-----------------------|----------------|----------------|----------------|---------------------------------------|----------------|
| Crude oil | 491.9 | 496.5 | 494.4 | -2.1 | 494.1 |
| Gasoline | 122.4 | 124.4 | 122.3 | -2.1 | 107.6 |
| Naphtha | 24.6 | 24.2 | 24.6 | 0.4 | 23.3 |
| Middle distillates | 442.6 | 444.4 | 443.2 | -1.2 | 413.2 |
| Fuel oils | 79.0 | 82.6 | 80.7 | -1.8 | 74.6 |
| Total products | 668.6 | 675.6 | 670.9 | -4.7 | 618.8 |
| Total | 1,160.4 | 1,172.0 | 1,165.2 | -6.8 | 1,112.9 |

Sources: Argus and Euroilstock.

US

Preliminary data for July shows that **total commercial oil stocks** in the US rose by 14.5 mb, reversing a drop of the previous month. At 1,389.7 mb, they were around 116.3 mb, or 9.1%, above the same period a year ago and 241.6 mb, or 21%, higher than the latest five-year average. Within the components, crude stocks fell by 1.8 mb, while products rose by 16.3 mb.

Graph 9.3: US weekly commercial crude oil stocks



Sources: US Energy Information Administration and OPEC Secretariat.

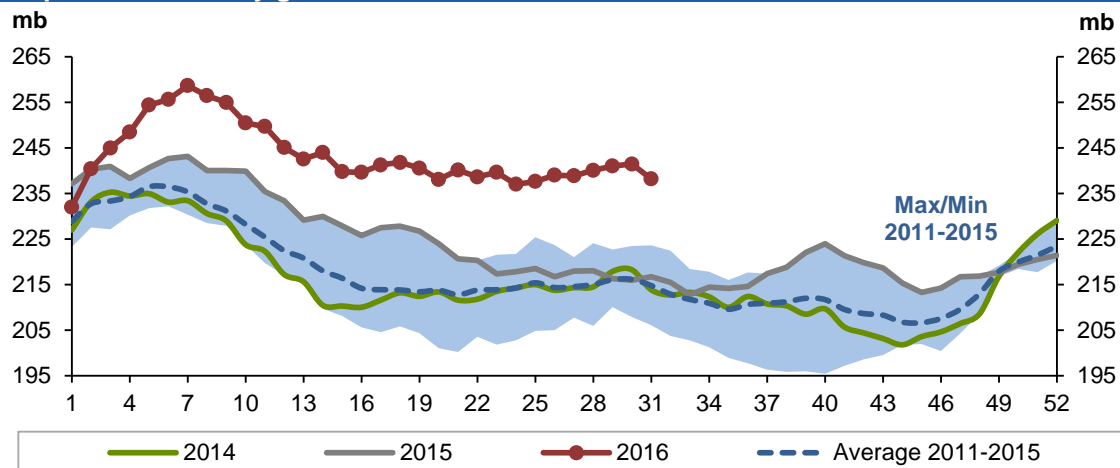
US commercial crude stocks fell in July for the second consecutive month to stand at 522.5 mb. At this level, they were 67.1 mb, or 14.7%, above the same time one year ago and 140.0 mb, or 36.6%, above the latest five-year average. The fall in crude stocks came from lower domestic production, combined with higher crude runs at this time of the year. Indeed, US crude oil refinery inputs averaged 16.7 mb/d in July, around 200,000 b/d higher than the previous month. This corresponds to a refinery utilization rate of about 92.6%, or about 0.9 percentage points (pp) higher than the previous month. In July, crude commercial inventories at Cushing, Oklahoma, stood at 64.1 mb, slightly lower than the previous month.

In contrast, **total product stocks** rose by 16.3 mb in July for the fourth consecutive month to stand at 867.2 mb. At this level, US product stocks were around 49.2 mb, or 6.0%, above the level seen at the same time a year ago, showing a surplus of 102 mb, or 14.5%, above the seasonal norm. Within products, the picture was mixed. Distillates, other unfinished products and jet fuel inventories witnessed the bulk of the stock build, while gasoline and residual fuel oil experienced a drop.

Distillate stocks rose by 4.2 mb in July, ending the month at 153.2 mb, indicating a surplus of 11 mb, or 7.7%, from the same period a year ago to stand 17.5 mb, or 12.9%, above the latest five-year average. The build in middle distillate stocks came mainly on reduced demand, which declined by more than 200,000 b/d to average 3.7 mb/d.

Jet fuel stocks also rose by 0.8 mb, ending July at 41.1 mb. At this level, jet fuel stocks stood 2.6 mb or 6.0% below the same period one year ago and were 0.5 mb or 1.3% higher than the latest five-year average

Graph 9.4: US weekly gasoline stocks



Sources: US Energy Information Administration and OPEC Secretariat.

In contrast, **gasoline stocks** fell by 0.7 mb to end the month of July at 238.2 mb, remaining 20.1 mb or 9.2% above the same period a year ago, and 21.4 mb, or 9.9%, above the latest five-year average. The fall in gasoline stocks came mainly from lower gasoline imports. Higher demand at this time of the year contributed to a further decline in gasoline inventories.

Residual fuel oil inventories also fell by 1.8 mb to 38.3 mb in July, slightly lower than the same period a year ago, but remained at 0.9 mb, or 2.5%, above the seasonal norm.

Table 9.3: US onland commercial petroleum stocks, mb

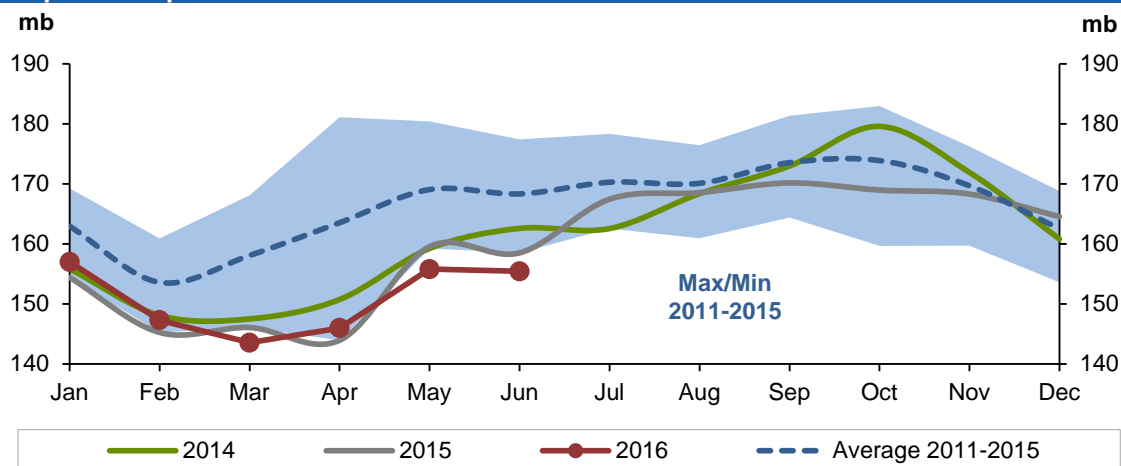
| | <u>May 16</u> | <u>Jun 16</u> | <u>Jul 16</u> | <u>Change</u> <u>Jul 16/Jul 15</u> | <u>Jul 15</u> |
|-------------------|----------------|----------------|----------------|---------------------------------------|----------------|
| Crude oil | 540.5 | 524.4 | 522.5 | -1.8 | 455.5 |
| Gasoline | 242.6 | 238.9 | 238.2 | -0.7 | 218.1 |
| Distillate fuel | 154.4 | 148.9 | 153.2 | 4.2 | 142.1 |
| Residual fuel oil | 40.4 | 40.0 | 38.3 | -1.8 | 40.0 |
| Jet fuel | 44.5 | 40.2 | 41.1 | 0.8 | 43.7 |
| Total | 1,384.1 | 1,375.2 | 1,389.7 | 14.5 | 1,273.5 |
| SPR | 695.1 | 695.1 | 695.1 | 0.0 | 695.1 |

Source: US Energy Information Administration.

Japan

In Japan, **total commercial oil stocks** rose by 5.6 mb in June for the third consecutive month to stand at 161.4 mb. With this build, Japanese commercial oil inventories stood at 2.9 mb, or 1.9%, above a year ago at the same time, but are 6.9 mb, or 4.1%, below the five-year average. Within components, crude and product stocks rose by 2.7 mb and 3.0 mb, respectively.

Graph 9.5: Japan's commercial oil stocks



Source: Ministry of Economic, Trade and Industry of Japan.

In June, Japanese commercial **crude oil stocks** rose to end the month at 95.8 mb, which is 1.9 mb, or 2.0%, below a year ago at the same time, and 6.5 mb, or 6.4%, below the seasonal norm. The build in crude stocks came on the back of lower crude throughput, which declined by 153,000 b/d, or 4.9%, to stand at 3.0 mb/d. A fall in crude oil imports of 190,000 b/d, or 5.8%, to average 3.1 mb/d limited a further build in crude oil stocks.

Japan's **total product inventories** also rose by 3.0 mb in June, to end the month at 65.6 mb. At this level, product stocks stood 4.9 mb, or 8.0%, above the same time a year ago, and showed a small deficit of 0.4 mb, or 0.6%, with the five-year average. Within products, the picture was mixed; distillate stocks experienced builds, while gasoline, naphtha and residual fuel oil inventories witnessed a drop.

Distillate stocks rose by 1.0 mb in June to stand at 27.9 mb, which was 2.5 mb, or 10%, above the same period a year ago and almost in line with the seasonal average. Within distillate components, jet fuel and gasoil inventories fell by 12.5% and 8.0%, respectively, while kerosene rose by 8.8%. A fall in jet fuel and gasoil stocks came on the back of lower output, declining by 5.1% and 4.3%, respectively. The build in kerosene was driven by a sharp reduction in domestic consumption, which declined by nearly 33% from the previous month.

In contrast, **gasoline** stocks fell by 0.4 mb to end June at 10.6 mb, which is 0.4 mb, or 3.4%, below the same time a year ago and 1.6 mb, or 13.2%, below the latest five-year average. This fall in gasoline stocks was mainly driven by lower gasoline output, which fell by 11.8%. Higher gasoline demand also contributed to this stock draw.

Naphtha inventories also fell by 2.5 mb, ending June at 9.1 mb. At this level, they were 2.5 mb, or 24%, lower than a year ago at the same time, and 1.7 mb, or 16.0%, higher than the seasonal norm. This fall was driven by higher domestic sales, up by nearly 3%. Lower output, down by 6.7%, also contributed to the stock draw of naphtha.

Total residual **fuel oil stocks** also fell by 0.2 mb in June, to stand at 12.8 mb, which was 0.4 mb, or 3.4%, higher than a year ago but 2.1 mb, or 14.2%, lower than the latest five-year average. Within fuel oil components, fuel oil A fell by 0.6%, while fuel B.C rose by 5.3%. The fall in fuel oil A stocks came from lower output, which declined by nearly 5% from the previous month. The build in fuel oil B.C stocks was due to higher output, which rose by 15%.

Table 9.4: Japan's commercial oil stocks*, mb

| | Apr 16 | May 16 | Jun 16 | Change Jun 16/May 16 | Jun 15 |
|-----------------------|---------------|---------------|---------------|---------------------------------|---------------|
| Crude oil | 88.2 | 93.2 | 96.4 | 3.2 | 97.8 |
| Gasoline | 11.3 | 11.1 | 10.8 | -0.3 | 11.0 |
| Naphtha | 9.3 | 11.6 | 8.6 | -3.0 | 12.0 |
| Middle distillates | 24.0 | 26.9 | 26.2 | -0.7 | 25.4 |
| Residual fuel oil | 13.3 | 13.0 | 13.4 | 0.4 | 12.4 |
| Total products | 57.8 | 62.6 | 59.1 | -3.6 | 60.8 |
| Total** | 146.0 | 155.8 | 155.4 | -0.4 | 158.5 |

Note: * At end of month.

** Includes crude oil and main products only.

Source: Ministry of Economy, Trade and Industry of Japan.

China

The latest information for China showed a drop of 3.1 mb in **total commercial oil inventories** in June to stand at 393.5 mb. At this level, Chinese commercial oil inventories were 18.4 mb lower than the previous year at the same time. Within components, crude stocks rose by 1.3 mb, while product inventories fell by 4.4 mb.

In June, **commercial crude stocks** rose to 231.1 mb, or 23.2 mb below the previous year at the same time. The build in crude oil commercial stocks could be attributed to higher domestic crude production, as crude runs dipped in June.

Total **product stocks** in China fell by 4.4 mb in June, ending the month at 161.1 mb, 1.9 mb lower than a year ago at the same time. Within products, gasoline and diesel stocks dropped, while kerosene stocks saw builds.

Diesel stocks fell by 4.9 mb for the fourth consecutive month, ending June at 71.1 mb. Chinese diesel stocks were 19.5 mb lower than a year ago in the same period. This fall was driven mainly by higher exports amid a reduction in diesel yield.

Gasoline stocks also dropped by 0.4 mb in June, the first fall in fourth months. At 70.1 mb, gasoline stocks are 13.7 mb above a year ago at the same time. This was driven mainly by higher exports, along with stronger apparent demand on the back of higher car sales in the country.

In contrast, **kerosene stocks** rose by 0.8 mb ending June at 19.9, which is 3.9 mb higher than the previous year at the same time.

Table 9.5: China's commercial oil stocks, mb

| | <u>Apr 16</u> | <u>May 16</u> | <u>Jun 16</u> | <i>Change</i> <u>Jun 16/May 16</u> | <u>Jun 15</u> |
|-----------------------|---------------|---------------|---------------|---------------------------------------|---------------|
| Crude oil | 229.1 | 231.1 | 232.4 | 1.3 | 248.9 |
| Gasoline | 69.6 | 70.5 | 70.1 | -0.4 | 56.4 |
| Diesel | 80.3 | 75.9 | 71.1 | -4.9 | 90.6 |
| Jet kerosene | 18.1 | 19.1 | 19.9 | 0.8 | 16.1 |
| Total products | 167.9 | 165.5 | 161.1 | -4.4 | 163.0 |
| Total | 397.0 | 396.7 | 393.5 | -3.1 | 412.0 |

Sources: China Oil and Gas Petrochemicals and OPEC Secretariat.

Singapore and Amsterdam-Rotterdam-Antwerp (ARA)

At the end of June, **product stocks in Singapore** fell by 7.5 mb, reversing the build of the previous month to stand at 50.3 mb. At this level, they were 2.9 mb, or 6.1%, above the same period a year ago. All products experienced drops.

Residual fuel oil stocks fell by 5.5 mb, reversing the build of the last two months and ending the month of June at 25.6 mb. At this level, they were 0.3 mb, or 1.0%, less than at the same time a year ago. The drop in **fuel oil stocks** did not lead to any supply constraints in the trading hub, as there is plenty of shipping and industrial fuel stored offshore in tankers. **Light distillate stocks** fell by 1.7 mb, ending the month of June at 13.2 mb, which was 1.0 mb, or 8.4%, above the same time a year ago. **Middle distillate stocks** also fell by 0.3 mb to end June at 11.6 mb, which was 1.6 mb, or 16.1%, above the previous year at the same time.

Product stocks in Amsterdam-Rotterdam-Antwerp (ARA) fell slightly by 0.2 mb to end June at 47.2 mb; this is 2.1 mb, or 4.6%, higher than the same time a year ago. Within products the picture was mixed. Fuel oil, gasoil and jet oil saw draws, while gasoline showed a stock build.

Gasoil fell by 1.0 mb in June for the third consecutive month to stand at 23.1 mb, which is 0.8 mb, or 3.4%, below the previous year at the same time. A decline in **middle distillate stocks** could be attributed to higher domestic demand in the European region. **Fuel oil stocks** also fell by 0.5 mb in June to stand at 7.1 mb, which was 0.8 mb, or 11.7%, higher than a year ago. This fall was driven by higher exports, mainly to Asia region. In contrast, **gasoline** rose by 1.8 mb, ending June at 10.4 mb, which was 2.9 mb, or around 39% above the same month the previous year.

Balance of Supply and Demand

Demand for OPEC crude in 2016 remains unchanged from the previous report to stand at 31.9 mb/d, which is 1.9 mb/d higher than the 2015 level. In 2017, the demand for OPEC crude is projected at 33.0 mb/d, in line with last month's *MOMR* and 1.2 mb/d higher than this year.

Forecast for 2016

Demand for OPEC crude for 2016 remains unchanged from the previous month to stand at 31.9 mb/d, representing an increase of 1.9 mb/d from last year's level. Within the quarters, 2Q16 and 4Q16 remained unchanged, while 1Q16 was revised up by 0.1 mb/d. In contrast, 3Q16 was revised down by 0.1 mb/d. 1Q16 and 2Q16 rose by 1.0 mb/d and 2.3 mb/d, respectively, versus the same quarters last year; while 3Q16 and 4Q16 are estimated to show growth of 2.1 mb/d and 2.0 mb/d, respectively.

Table 10.1: Summarized supply/demand balance for 2016, mb/d

| | <u>2015</u> | <u>1Q16</u> | <u>2Q16</u> | <u>3Q16</u> | <u>4Q16</u> | <u>2016</u> |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| (a) World oil demand | 93.04 | 93.16 | 93.44 | 95.22 | 95.19 | 94.26 |
| Non-OPEC supply | 56.91 | 56.92 | 55.57 | 55.84 | 56.17 | 56.13 |
| OPEC NGLs and non-conventionals | 6.13 | 6.24 | 6.27 | 6.30 | 6.34 | 6.29 |
| (b) Total non-OPEC supply and OPEC NGLs | 63.04 | 63.16 | 61.84 | 62.14 | 62.51 | 62.41 |
| Difference (a-b) | 30.00 | 30.00 | 31.60 | 33.09 | 32.68 | 31.85 |
| OPEC crude oil production | 32.10 | 32.51 | 32.78 | | | |
| Balance | 2.10 | 2.51 | 1.17 | | | |

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Forecast for 2017

Demand for OPEC crude for 2017 remained unchanged from the previous report and is projected to increase by 1.2 mb/d to average 33.0 mb/d. Within the quarters, both the 2Q17 and 3Q17 were revised up by 0.1 mb/d, while 4Q17 was revised down by 0.1 mb/d and 1Q17 remained unchanged from the previous report. 1Q17 and 2Q17 are expected to increase by 1.8 mb/d and 0.8 mb/d, respectively, while 3Q17 and 4Q17 are projected to increase by 1.3 mb/d and 0.7 mb/d, respectively, versus the same quarters this year.

Table 10.2: Summarized supply/demand balance for 2017, mb/d

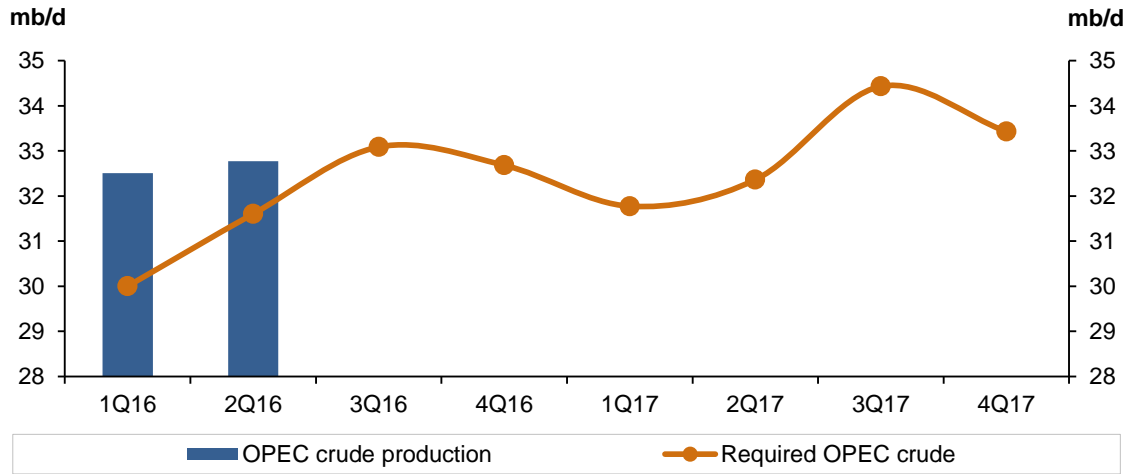
| | <u>2016</u> | <u>1Q17</u> | <u>2Q17</u> | <u>3Q17</u> | <u>4Q17</u> | <u>2017</u> |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| (a) World oil demand | 94.26 | 94.30 | 94.49 | 96.47 | 96.36 | 95.41 |
| Non-OPEC supply | 56.13 | 56.17 | 55.73 | 55.59 | 56.41 | 55.97 |
| OPEC NGLs and non-conventionals | 6.29 | 6.36 | 6.40 | 6.45 | 6.52 | 6.43 |
| (b) Total non-OPEC supply and OPEC NGLs | 62.41 | 62.52 | 62.13 | 62.04 | 62.93 | 62.41 |
| Difference (a-b) | 31.85 | 31.78 | 32.36 | 34.43 | 33.43 | 33.01 |

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Balance of Supply and Demand

Graph 10.1: Balance of supply and demand



Source: OPEC Secretariat.

Table 10.3: World oil demand and supply balance, mb/d

| | 2013 | 2014 | 2015 | 1Q16 | 2Q16 | 3Q16 | 4Q16 | 2016 | 1Q17 | 2Q17 | 3Q17 | 4Q17 | 2017 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| World demand | | | | | | | | | | | | | |
| OECD | 46.1 | 45.8 | 46.2 | 46.6 | 45.9 | 46.9 | 46.5 | 46.5 | 46.7 | 45.9 | 47.1 | 46.6 | 46.6 |
| Americas | 24.2 | 24.2 | 24.5 | 24.5 | 24.6 | 25.1 | 24.7 | 24.7 | 24.7 | 24.7 | 25.4 | 24.9 | 24.9 |
| Europe | 13.6 | 13.5 | 13.7 | 13.6 | 13.8 | 14.2 | 13.7 | 13.8 | 13.5 | 13.7 | 14.2 | 13.7 | 13.8 |
| Asia Pacific | 8.3 | 8.1 | 8.0 | 8.6 | 7.5 | 7.6 | 8.1 | 7.9 | 8.5 | 7.5 | 7.5 | 8.0 | 7.9 |
| DCs | 29.2 | 30.0 | 30.7 | 30.7 | 31.2 | 31.9 | 31.5 | 31.3 | 31.4 | 31.9 | 32.6 | 32.2 | 32.1 |
| FSU | 4.5 | 4.6 | 4.6 | 4.5 | 4.4 | 4.7 | 5.0 | 4.7 | 4.6 | 4.4 | 4.8 | 5.1 | 4.7 |
| Other Europe | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 |
| China | 10.1 | 10.5 | 10.8 | 10.7 | 11.3 | 11.0 | 11.4 | 11.1 | 11.0 | 11.6 | 11.3 | 11.7 | 11.4 |
| (a) Total world demand | 90.5 | 91.5 | 93.0 | 93.2 | 93.4 | 95.2 | 95.2 | 94.3 | 94.3 | 94.5 | 96.5 | 96.4 | 95.4 |
| Non-OPEC supply | | | | | | | | | | | | | |
| OECD | 22.2 | 24.2 | 25.2 | 25.3 | 24.3 | 24.4 | 24.5 | 24.7 | 24.6 | 24.3 | 24.1 | 24.7 | 24.4 |
| Americas | 18.2 | 20.1 | 21.0 | 21.0 | 20.1 | 20.4 | 20.4 | 20.5 | 20.3 | 20.2 | 20.2 | 20.4 | 20.3 |
| Europe | 3.6 | 3.6 | 3.8 | 3.9 | 3.8 | 3.6 | 3.7 | 3.7 | 3.8 | 3.7 | 3.5 | 3.9 | 3.7 |
| Asia Pacific | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| DCs | 10.8 | 11.1 | 11.3 | 11.1 | 11.1 | 11.3 | 11.4 | 11.2 | 11.4 | 11.4 | 11.4 | 11.5 | 11.4 |
| FSU | 13.6 | 13.5 | 13.7 | 14.0 | 13.7 | 13.6 | 13.7 | 13.8 | 13.7 | 13.6 | 13.6 | 13.7 | 13.6 |
| Other Europe | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| China | 4.2 | 4.3 | 4.4 | 4.2 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 | 4.1 | 4.1 |
| Processing gains | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Total non-OPEC supply | 53.1 | 55.4 | 56.9 | 56.9 | 55.6 | 55.8 | 56.2 | 56.1 | 56.2 | 55.7 | 55.6 | 56.4 | 56.0 |
| OPEC NGLs + non-conventional oils | 5.8 | 6.0 | 6.1 | 6.2 | 6.3 | 6.3 | 6.3 | 6.3 | 6.4 | 6.4 | 6.4 | 6.5 | 6.4 |
| (b) Total non-OPEC supply and OPEC NGLs | 59.0 | 61.4 | 63.0 | 63.2 | 61.8 | 62.1 | 62.5 | 62.4 | 62.5 | 62.1 | 62.0 | 62.9 | 62.4 |
| OPEC crude oil production (secondary sources) | 31.2 | 31.0 | 32.1 | 32.5 | 32.8 | | | | | | | | |
| Total supply | 90.2 | 92.4 | 95.1 | 95.7 | 94.6 | | | | | | | | |
| Balance (stock change and miscellaneous) | -0.4 | 0.9 | 2.1 | 2.5 | 1.2 | | | | | | | | |
| OECD closing stock levels (mb) | | | | | | | | | | | | | |
| Commercial | 2,589 | 2,738 | 3,015 | 3,049 | 3,045 | | | | | | | | |
| SPR | 1,584 | 1,580 | 1,587 | 1,593 | 1,591 | | | | | | | | |
| Total | 4,174 | 4,318 | 4,602 | 4,642 | 4,636 | | | | | | | | |
| Oil-on-water | 909 | 924 | 1,017 | 1,055 | 1,094 | | | | | | | | |
| Days of forward consumption in OECD | | | | | | | | | | | | | |
| Commercial onland stocks | 56.5 | 59.2 | 64.9 | 66.5 | 64.9 | | | | | | | | |
| SPR | 34.6 | 34.2 | 34.1 | 34.7 | 33.9 | | | | | | | | |
| Total | 91.1 | 93.4 | 99.0 | 101.2 | 98.9 | | | | | | | | |
| Memo items | | | | | | | | | | | | | |
| FSU net exports | 9.0 | 8.9 | 9.1 | 9.5 | 9.4 | 8.9 | 8.7 | 9.1 | 9.2 | 9.2 | 8.8 | 8.6 | 8.9 |
| (a) - (b) | 31.6 | 30.1 | 30.0 | 30.0 | 31.6 | 33.1 | 32.7 | 31.9 | 31.8 | 32.4 | 34.4 | 33.4 | 33.0 |

Note: Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 10.4: World oil demand/supply balance: changes from last month's table* , mb/d

| | 2013 | 2014 | 2015 | 1Q16 | 2Q16 | 3Q16 | 4Q16 | 2016 | 1Q17 | 2Q17 | 3Q17 | 4Q17 | 2017 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| World demand | | | | | | | | | | | | | |
| OECD | 0.1 | 0.1 | - | - | 0.2 | 0.1 | - | 0.1 | - | 0.2 | 0.1 | - | 0.1 |
| Americas | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Europe | - | 0.1 | - | - | 0.2 | - | - | 0.1 | - | 0.2 | - | - | 0.1 |
| Asia Pacific | - | - | -0.1 | -0.1 | -0.1 | - | -0.1 | -0.1 | -0.1 | -0.1 | - | -0.1 | -0.1 |
| DCs | - | - | - | - | - | - | - | - | - | - | - | - | - |
| FSU | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other Europe | - | - | - | - | - | - | - | - | - | - | - | - | - |
| China | - | - | - | - | - | - | - | - | - | - | - | - | - |
| (a) Total world demand | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | - | 0.1 | 0.1 | 0.2 | 0.1 | - | 0.1 |
| World demand growth | - | - | - | - | 0.1 | - | - | - | - | - | - | - | - |
| Non-OPEC supply | | | | | | | | | | | | | |
| OECD | - | - | - | - | 0.2 | 0.1 | - | 0.1 | - | 0.1 | - | 0.1 | - |
| Americas | - | - | - | - | 0.2 | 0.2 | - | 0.1 | - | - | - | - | - |
| Europe | - | - | - | - | 0.1 | - | - | - | - | - | -0.1 | - | - |
| Asia Pacific | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCs | - | - | - | - | 0.1 | - | - | - | - | - | - | - | - |
| FSU | - | - | - | - | -0.1 | - | - | - | - | - | - | - | - |
| Other Europe | - | - | - | - | - | - | - | - | - | - | - | - | - |
| China | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Processing gains | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total non-OPEC supply | - | - | - | - | 0.2 | 0.2 | - | 0.1 | - | 0.1 | - | 0.1 | 0.1 |
| Total non-OPEC supply growth | - | - | - | - | 0.2 | 0.2 | - | 0.1 | - | -0.1 | -0.2 | 0.1 | - |
| OPEC NGLs + non-conventionals | - | - | - | - | - | - | - | - | - | - | - | - | - |
| (b) Total non-OPEC supply and OPEC NGLs | - | - | - | - | 0.2 | 0.2 | - | 0.1 | - | 0.1 | - | 0.1 | 0.1 |
| OPEC crude oil production (secondary sources) | - | - | - | - | 0.1 | - | - | - | - | - | - | - | - |
| Total supply | - | - | - | - | 0.3 | - | - | - | - | - | - | - | - |
| Balance (stock change and miscellaneous) | -0.1 | -0.1 | - | -0.1 | 0.1 | - | - | - | - | - | - | - | - |
| OECD closing stock levels (mb) | | | | | | | | | | | | | |
| Commercial | - | - | - | -1 | - | - | - | - | - | - | - | - | - |
| SPR | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | - | - | - | -1 | - | - | - | - | - | - | - | - | - |
| Oil-on-water | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Days of forward consumption in OECD | | | | | | | | | | | | | |
| Commercial onland stocks | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SPR | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Memo items | | | | | | | | | | | | | |
| FSU net exports | - | - | - | - | -0.1 | - | - | - | - | - | - | - | - |
| (a) - (b) | 0.1 | 0.1 | - | 0.1 | - | -0.1 | - | - | - | 0.1 | 0.1 | -0.1 | - |

Note: * This compares Table 10.3 in this issue of the MOMR with Table 10.3 in the July 2016 issue.

This table shows only where changes have occurred.

Source: OPEC Secretariat.

Table 10.5: OECD oil stocks and oil on water at the end of period

| | 2012 | 2013 | 2014 | 2015 | 3Q14 | 4Q14 | 1Q15 | 2Q15 | 3Q15 | 4Q15 | 1Q16 | 2Q16 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Closing stock levels, mb | | | | | | | | | | | | |
| OECD onland commercial | 2,683 | 2,589 | 2,738 | 3,015 | 2,749 | 2,738 | 2,814 | 2,907 | 2,982 | 3,015 | 3,049 | 3,045 |
| Americas | 1,365 | 1,316 | 1,446 | 1,590 | 1,416 | 1,446 | 1,483 | 1,537 | 1,571 | 1,590 | 1,623 | 1,602 |
| Europe | 912 | 881 | 886 | 990 | 898 | 886 | 939 | 940 | 967 | 990 | 1,005 | 1,009 |
| Asia Pacific | 405 | 392 | 405 | 435 | 436 | 405 | 392 | 430 | 445 | 435 | 421 | 434 |
| OECD SPR | 1,547 | 1,584 | 1,580 | 1,587 | 1,578 | 1,580 | 1,583 | 1,585 | 1,579 | 1,587 | 1,593 | 1,591 |
| Americas | 696 | 697 | 693 | 697 | 693 | 693 | 693 | 696 | 697 | 697 | 697 | 697 |
| Europe | 436 | 470 | 470 | 473 | 469 | 470 | 470 | 471 | 467 | 473 | 477 | 473 |
| Asia Pacific | 415 | 417 | 417 | 416 | 417 | 417 | 420 | 418 | 415 | 416 | 419 | 421 |
| OECD total | 4,230 | 4,174 | 4,318 | 4,602 | 4,328 | 4,318 | 4,397 | 4,492 | 4,562 | 4,602 | 4,642 | 4,636 |
| Oil-on-water | 879 | 909 | 924 | 1,017 | 952 | 924 | 864 | 916 | 924 | 1,017 | 1,055 | 1,094 |
| Days of forward consumption in OECD | | | | | | | | | | | | |
| OECD onland commercial | 58 | 57 | 58 | 57 | 59 | 59 | 62 | 62 | 64 | 65 | 67 | 65 |
| Americas | 55 | 55 | 57 | 54 | 58 | 59 | 61 | 62 | 64 | 65 | 66 | 64 |
| Europe | 68 | 66 | 67 | 65 | 66 | 66 | 69 | 66 | 71 | 73 | 74 | 71 |
| Asia Pacific | 49 | 47 | 49 | 48 | 53 | 47 | 52 | 56 | 54 | 51 | 56 | 57 |
| OECD SPR | 34 | 33 | 34 | 35 | 34 | 34 | 35 | 34 | 34 | 34 | 35 | 34 |
| Americas | 30 | 29 | 29 | 29 | 28 | 28 | 29 | 28 | 28 | 28 | 28 | 28 |
| Europe | 30 | 31 | 32 | 35 | 35 | 35 | 35 | 33 | 34 | 35 | 35 | 33 |
| Asia Pacific | 51 | 49 | 50 | 51 | 50 | 48 | 55 | 55 | 51 | 49 | 56 | 55 |
| OECD total | 92 | 90 | 92 | 91 | 93 | 93 | 97 | 96 | 98 | 99 | 102 | 99 |

Sources: Argus Media, Euroilstock, IEA, JODI, METI, OPEC Secretariat and US Energy Information Administration.

Table 10.6: Non-OPEC supply and OPEC natural gas liquids, mb/d

| | 2013 | 2014 | 2015 | 3Q16 | 4Q16 | 2016 | Change | | | | | 2017 | Change 17/16 |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| | | | | | | | 16/15 | 1Q17 | 2Q17 | 3Q17 | 4Q17 | | |
| US | 11.2 | 13.0 | 14.0 | 13.5 | 13.4 | 13.6 | -0.4 | 13.4 | 13.3 | 13.4 | 13.5 | 13.4 | -0.2 |
| Canada | 4.0 | 4.3 | 4.4 | 4.5 | 4.5 | 4.4 | 0.0 | 4.6 | 4.5 | 4.6 | 4.6 | 4.6 | 0.1 |
| Mexico | 2.9 | 2.8 | 2.6 | 2.5 | 2.4 | 2.5 | -0.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.3 | -0.2 |
| OECD Americas* | 18.2 | 20.1 | 21.0 | 20.4 | 20.4 | 20.5 | -0.5 | 20.3 | 20.2 | 20.2 | 20.4 | 20.3 | -0.2 |
| Norway | 1.8 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 0.0 | 2.0 | 1.9 | 1.9 | 2.0 | 1.9 | 0.0 |
| UK | 0.9 | 0.9 | 1.0 | 0.9 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.8 | 1.1 | 1.0 | 0.0 |
| Denmark | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| Other OECD Europe | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.0 |
| OECD Europe | 3.6 | 3.6 | 3.8 | 3.6 | 3.7 | 3.7 | 0.0 | 3.8 | 3.7 | 3.5 | 3.9 | 3.7 | 0.0 |
| Australia | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.0 |
| Other Asia Pacific | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| OECD Asia Pacific | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.0 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 |
| Total OECD | 22.2 | 24.2 | 25.2 | 24.4 | 24.5 | 24.7 | -0.6 | 24.6 | 24.3 | 24.1 | 24.7 | 24.4 | -0.2 |
| Brunei | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| India | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | 0.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.0 |
| Malaysia | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 |
| Thailand | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 |
| Vietnam | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 |
| Asia others | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 |
| Other Asia | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 0.0 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 0.0 |
| Argentina | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.0 |
| Brazil | 2.6 | 2.9 | 3.1 | 3.2 | 3.2 | 3.1 | 0.0 | 3.3 | 3.3 | 3.4 | 3.5 | 3.4 | 0.3 |
| Colombia | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 1.0 | -0.1 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.0 |
| Trinidad & Tobago | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| Latin America others | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 |
| Latin America | 4.8 | 5.0 | 5.2 | 5.2 | 5.2 | 5.1 | -0.1 | 5.3 | 5.3 | 5.3 | 5.4 | 5.3 | 0.2 |
| Bahrain | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 |
| Oman | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0 |
| Syria | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yemen | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Middle East | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0.0 |
| Chad | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| Congo | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.1 |
| Egypt | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.0 |
| Equatorial Guinea | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 |
| South Africa | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| Sudans | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.0 |
| Africa other | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.1 |
| Africa | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 0.0 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 0.1 |
| Total DCs | 10.8 | 11.1 | 11.3 | 11.3 | 11.4 | 11.2 | -0.1 | 11.4 | 11.4 | 11.4 | 11.5 | 11.4 | 0.2 |
| FSU | 13.6 | 13.5 | 13.7 | 13.6 | 13.7 | 13.8 | 0.1 | 13.7 | 13.6 | 13.6 | 13.7 | 13.6 | -0.1 |
| Russia | 10.6 | 10.7 | 10.8 | 10.9 | 10.9 | 11.0 | 0.1 | 11.0 | 10.9 | 10.9 | 11.0 | 10.9 | 0.0 |
| Kazakhstan | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 |
| Azerbaijan | 0.9 | 0.9 | 0.9 | 0.8 | 0.9 | 0.8 | 0.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 |
| FSU others | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 |
| Other Europe | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 |
| China | 4.2 | 4.3 | 4.4 | 4.2 | 4.2 | 4.2 | -0.2 | 4.2 | 4.1 | 4.1 | 4.1 | 4.1 | -0.1 |
| Non-OPEC production | 51.0 | 53.3 | 54.7 | 53.7 | 54.0 | 53.9 | -0.8 | 54.0 | 53.5 | 53.4 | 54.2 | 53.8 | -0.2 |
| Processing gains | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 0.0 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 0.0 |
| Non-OPEC supply | 53.1 | 55.4 | 56.9 | 55.8 | 56.2 | 56.1 | -0.8 | 56.2 | 55.7 | 55.6 | 56.4 | 56.0 | -0.2 |
| OPEC NGL | 5.6 | 5.7 | 5.8 | 6.0 | 6.0 | 6.0 | 0.1 | 6.0 | 6.1 | 6.1 | 6.2 | 6.1 | 0.1 |
| OPEC non-conventional | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 |
| OPEC (NGL+NCF) | 5.8 | 6.0 | 6.1 | 6.3 | 6.3 | 6.3 | 0.2 | 6.4 | 6.4 | 6.4 | 6.5 | 6.4 | 0.1 |
| Non-OPEC & OPEC (NGL+NCF) | 59.0 | 61.4 | 63.0 | 62.1 | 62.5 | 62.4 | -0.6 | 62.5 | 62.1 | 62.0 | 62.9 | 62.4 | 0.0 |

Note: * Chile has been included in OECD Americas.

Totals may not add up due to independent rounding.

Source: OPEC Secretariat.

Table 10.7: World Rig Count

| | | | | | Change | | | | | | | Change Jul/Jun |
|-----------------------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|
| | 2012 | 2013 | 2014 | 2015 | 15/14 | 3Q15 | 4Q15 | 1Q16 | 2Q16 | Jun 16 | Jul 16 | |
| US | 1,919 | 1,761 | 1,862 | 977 | -885 | 866 | 754 | 551 | 420 | 417 | 449 | 32 |
| Canada | 364 | 354 | 380 | 192 | -188 | 191 | 169 | 172 | 49 | 64 | 95 | 31 |
| Mexico | 106 | 106 | 86 | 52 | -34 | 42 | 39 | 36 | 22 | 20 | 23 | 3 |
| Americas | 2,390 | 2,221 | 2,327 | 1,221 | -1,107 | 1,098 | 962 | 759 | 490 | 501 | 567 | 66 |
| Norway | 17 | 20 | 17 | 17 | 1 | 18 | 15 | 18 | 17 | 16 | 20 | 4 |
| UK | 18 | 17 | 16 | 14 | -2 | 13 | 12 | 9 | 9 | 10 | 10 | 0 |
| Europe | 119 | 135 | 145 | 117 | -28 | 109 | 110 | 104 | 92 | 91 | 94 | 3 |
| Asia Pacific | 24 | 27 | 26 | 17 | -9 | 16 | 15 | 10 | 6 | 4 | 4 | 0 |
| Total OECD | 2,533 | 2,383 | 2,499 | 1,355 | -1,144 | 1,222 | 1,087 | 873 | 588 | 596 | 665 | 69 |
| Other Asia | 172 | 180 | 194 | 175 | -19 | 177 | 167 | 157 | 161 | 162 | 165 | 3 |
| Latin America | 180 | 166 | 172 | 145 | -27 | 149 | 128 | 83 | 62 | 58 | 66 | 8 |
| Middle East | 136 | 102 | 108 | 102 | -6 | 100 | 106 | 98 | 92 | 92 | 91 | -1 |
| Africa | 7 | 16 | 28 | 11 | -16 | 8 | 3 | 2 | 0 | 0 | -3 | -3 |
| Total DCs | 494 | 465 | 502 | 433 | -69 | 435 | 404 | 340 | 315 | 312 | 319 | 7 |
| Non-OPEC rig count | 3,027 | 2,848 | 3,000 | 1,788 | -1,213 | 1,657 | 1,492 | 1,213 | 903 | 908 | 984 | 76 |
| Algeria | 36 | 47 | 48 | 51 | 3 | 51 | 49 | 52 | 54 | 53 | 55 | 2 |
| Angola | 9 | 11 | 15 | 11 | -4 | 8 | 11 | 9 | 9 | 9 | 5 | -4 |
| Ecuador | 20 | 26 | 24 | 12 | -12 | 12 | 4 | 3 | 3 | 5 | 4 | -1 |
| Gabon | 5 | 6 | 7 | 4 | -3 | 4 | 2 | 1 | 1 | 1 | 0 | -1 |
| Indonesia | 45 | 38 | 34 | 27 | -7 | 24 | 24 | 19 | 17 | 16 | 17 | 1 |
| Iran** | 54 | 54 | 54 | 54 | 0 | 54 | 54 | 57 | 57 | 57 | 57 | 0 |
| Iraq** | 58 | 83 | 79 | 52 | -27 | 47 | 51 | 49 | 42 | 41 | 39 | -2 |
| Kuwait** | 31 | 32 | 38 | 47 | 8 | 44 | 42 | 41 | 42 | 44 | 47 | 3 |
| Libya** | 9 | 15 | 10 | 3 | -8 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| Nigeria | 36 | 37 | 34 | 30 | -4 | 28 | 28 | 27 | 25 | 24 | 24 | 0 |
| Qatar | 8 | 9 | 10 | 8 | -3 | 7 | 6 | 7 | 7 | 7 | 7 | 0 |
| Saudi Arabia | 112 | 114 | 134 | 155 | 21 | 154 | 158 | 157 | 154 | 155 | 156 | 1 |
| UAE | 24 | 28 | 34 | 42 | 8 | 41 | 52 | 50 | 50 | 50 | 50 | 0 |
| Venezuela | 117 | 121 | 116 | 110 | -6 | 114 | 112 | 111 | 103 | 95 | 92 | -3 |
| OPEC rig count | 562 | 620 | 637 | 606 | -31 | 589 | 592 | 584 | 566 | 558 | 554 | -4 |
| Worldwide rig count* | 3,589 | 3,467 | 3,637 | 2,393 | -1,244 | 2,246 | 2,084 | 1,797 | 1,469 | 1,466 | 1,538 | 72 |
| of which: | | | | | | | | | | | | |
| Oil | 2,594 | 2,611 | 2,795 | 1,727 | -1,068 | 1,606 | 1,471 | 1,268 | 1,043 | 1,034 | 1,084 | 50 |
| Gas | 886 | 746 | 743 | 563 | -180 | 536 | 509 | 422 | 315 | 319 | 338 | 19 |
| Others | 106 | 109 | 95 | 100 | 5 | 99 | 102 | 106 | 110 | 112 | 117 | 5 |

Note: Totals may not add up due to independent rounding.

na: Not available.

Sources: Baker Hughes Incorporated & Secretariat's estimates.

* Excludes China and FSU.

** Estimated figure when Baker Hughes Incorporated did not reported the data.

Monthly Endnotes

G20 Energy Initiatives under the 2016 China Presidency

The G20 Leaders will meet on 4-5 September in Hangzhou, China, to consider the work that has been pursued this year under China's presidency. On energy, this year's work has focused its activities on a range of issues, including energy access; cleaner energy future; energy efficiency; global energy architecture; inefficient fossil fuel subsidies that encourage wasteful consumption; energy security and market transparency.

As in past years, these initiatives have been taken up by the G20 Energy and Sustainability Working Group (ESWG), which is made up of technical experts of the G20 members, working in a collaborative framework with a variety of international organizations active on energy issues, including OPEC, the International Energy Forum (IEF), the International Energy Agency (IEA), the World Bank, SE4All and the International Partnership for Energy Efficiency Cooperation (IPEEC).

This work was finalized at the G20 Energy Ministerial in Beijing on 30 June. In the Communiqué¹, the ministers welcoming the progress made under the Chinese presidency to address these energy issues, and adopted three voluntary action plans: *Enhancing Energy Access in the Asia Pacific: Key Challenges and G20 Voluntary Action Plan*; *G20 Voluntary Action Plan on Renewable Energy*; and *G20 Energy Efficiency Leading Programme*. The following are some key outcomes from the Communiqué:

Energy Access: The G20 countries reiterated their commitment to take action to ensure universal access to “affordable, reliable, and sustainable and modern energy for all”, and expanded last year's focus beyond Sub-Saharan Africa to include the Asia-Pacific region.

Cleaner Energy Future: G20 members were encouraged to explore clean energy production and consumption models appropriate to their own circumstances, and affirmed the importance of advanced and cleaner fossil fuel technologies.

Energy Efficiency: This initiative was highlighted as a long-term priority for the G20 and Members agreed to take action under the Voluntary Pillars for Energy Efficiency Cooperation, which were stated as “mutually beneficial, innovative, inclusive and sharing”.

Global Energy Architecture: Ministers recognized the contribution of G20 countries to sustaining the discussions on critical global energy issues and their effectiveness in facilitating collaboration “among a variety of international organizations, as well as welcomed efforts to expand engagement with non-members”.

Energy Security: Continued investment in energy projects was seen as “critically important” for ensuring future energy security and preventing “economically destabilizing price spikes”.

Inefficient Fossil Fuel Subsidies that Encourage Wasteful Consumption

Energy Security: Ministers welcomed the significant progress made to date and will endeavor to make further progress, while providing targeted support for the poorest.

Market Transparency: The G20 expressed its commitment to further strengthening the Joint Organisations Data Initiative (JODI) and welcomed the cooperation among the IEA, IEF and OPEC on energy outlooks and “encourage them to continue with their fruitful collaboration on market transparency and on the interactions between physical and financial markets”.

Next year's presidency will be held by Germany, with the Leader's Summit in Hamburg in July. Argentina will hold the G20 Presidency in 2018.

¹ <http://www.g20.utoronto.ca/2016/160629-energy.html>

India's tax reforms take a step forward

Long-standing efforts to overhaul India's tax system came closer to becoming a reality this month as India's upper and lower houses of parliament ratified a constitutional amendment that will replace patchwork of different national, state and local taxes with a single unified value added tax, or Goods and Services Tax (GST) that would cap rates at 18%.

Before coming into effect, the bill will still need to be approved by half of the country's 29 state legislatures and then laws and rules related to the tax will need to be passed by Parliament and state legislators. Despite these hurdles, the government has set a goal of implementing the reforms by 1 April 2017, the start of India's fiscal year.

For the last two years, India has proved to be one of the bright spots for the world economy, and these historic reforms are expected to have a positive impact. Since 2015, economic growth in the country has outpaced that of China, with growth of 7.3% in 2015 and 7.5% in 2016, compared to 6.9% and 6.5% in China for the same years.

India has also been a key contributor to oil demand growth in recent years, ranking among the top three in oil demand growth. In 2015, India's oil demand growth was 0.27 mb/d, compared to 0.37 mb/d for China and 0.29 mb/d for the US. This year, the country's oil demand growth has approached that of China at around 0.27 mb/d.

The Secretariat currently forecasts India's economic growth in 2017 at 7.2%. The country's finance ministry has estimated that, once implemented, the reforms could add 1-2 percentage points to India's economic growth. If such an improvement materializes, this should further support India's contribution to world oil demand growth.

First criminal sentencing for "spoofing" in commodity futures markets

The first person to be found guilty in a criminal case for "spoofing" commodity futures markets was sentenced to three years in prison in July. He had been convicted last November of disrupting commodity futures prices in a \$1.4 mn fraud scheme over a three month period in 2011.

Spoofing – rapidly placing large orders with the intent to cancel them, while seeking to profit from any temporary market movement from a smaller order on the other side of the market – was first banned by the US Dodd-Frank reforms of 2010. Spoofers typically seek to take advantage of algorithmic traders by misleading them about market direction.

The trader's activities were in a range of CME and ICE futures contracts including gold, soybean oil, copper, euro, and the British pound. He was found guilty of six counts of commodities fraud and six counts of spoofing. According to news reports, testimony at trial showed that the activity also extended to the ICE Brent market. Each count of spoofing carries a maximum sentence of 10 years in prison and each count of commodities fraud a maximum of 25 years. Significant criminal fines of \$250,000 and \$1 million per count, respectively, are also associated with both charges.

According to the indictment, the trader used a high-frequency trading strategy in which he would place several layers of relatively large "quote orders" on one side of the market to trick other traders into reacting to the false price and volume information. These misleading orders would be automatically cancelled in a fraction of a second

before the order could be filled. Prior to placing the quote order, he would place a considerably smaller “trade order” on the other side of the market, with the intent to profit from any market movement caused by the impact of his quote order. This activity would then be repeated – in one case some 4,000 times in a six hour period – so that the resulting minor profits would accumulate into more considerable sums.

The trader had previously settled a civil claims filed by the CFTC in 2013 by paying a \$2.8 million fine and consenting to a one-year trading ban. In the government’s sentencing filing to the court, the assistant US attorney argued that a strong sentence will require the financial industry to take more care in its trading strategies. “Traders contemplating sophisticated scams will think twice if they know that there are more significant consequences than a civil lawsuit or a regulatory action.”²

² <https://www.bridgingtheweek.com/ckfinder/userfiles/files/Coscia%20Sentencing%20US%281%29.pdf>

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OPEC Basket average price

US\$/b



down 3.16 in July

| | |
|---------------------|--------------|
| July 2016 | 42.68 |
| June 2016 | 45.84 |
| Year-to-date | 37.20 |

July OPEC crude production

mb/d, according to secondary sources



up 0.05 in July

| | |
|-----------|-------|
| July 2016 | 33.11 |
| June 2016 | 33.06 |

Economic growth rate

per cent

| | World | OECD | US | Japan | Euro-zone | China | India |
|-------------|-------|------|-----|-------|-----------|-------|-------|
| 2016 | 3.0 | 1.7 | 1.7 | 0.9 | 1.5 | 6.5 | 7.5 |
| 2017 | 3.1 | 1.7 | 2.1 | 0.9 | 1.2 | 6.1 | 7.2 |

Supply and demand

mb/d

| 2016 | | 16/15 | 2017 | | 17/16 |
|-------------------|-------------|--------------|-------------------|-------------|--------------|
| World demand | 94.3 | 1.2 | World demand | 95.4 | 1.2 |
| Non-OPEC supply | 56.1 | -0.8 | Non-OPEC supply | 56.0 | -0.2 |
| OPEC NGLs | 6.3 | 0.2 | OPEC NGLs | 6.4 | 0.1 |
| Difference | 31.9 | 1.9 | Difference | 33.0 | 1.2 |

OECD commercial stocks

mb

| | Apr 16 | May 16 | Jun 16 | Jun 16/May 16 | Jun 15 |
|-----------------------|---------------|---------------|---------------|----------------------|---------------|
| Crude oil | 1,552 | 1,546 | 1,531 | -15.0 | 1,484 |
| Products | 1,508 | 1,528 | 1,514 | -13.9 | 1,424 |
| Total | 3,060 | 3,074 | 3,045 | -28.9 | 2,907 |
| Days of forward cover | 66.5 | 65.9 | 64.9 | -1.0 | 62.3 |

Next report to be issued on 12 September 2016.