OPEC

Monthly Oil Market Report

14 December 2016

Feature article:

Oil market outlook for 2017

OPEC Monthly Oil Market Report 2017

Publishing schedule for 2017

Wednesday, 18 January

Monday, 13 February

Tuesday, 14 March

Wednesday, 12 April

Thursday, 11 May

Tuesday, 13 June

Wednesday, 12 July

Thursday, 10 August

Tuesday, 12 September

Wednesday, 11 October

Monday, 13 November

Wednesday, 13 December

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Oil market highlights

Crude Oil Price Movements

Crude oil prices were volatile in November, with the OPEC Reference Basket dropping by 10% to $43.22/b. ICE Brent was down by 8.4% at $47.08/b and NYMEX WTI fell 8.4% to $45.76/b, reflecting uncertainties in the market. However, crude futures prices moved sharply higher in the first weeks of December, following OPEC and non-OPEC meetings. In November, the Brent-WTI spread averaged around $1.30/b.

World Economy

World economic growth forecasts remain unchanged at 2.9% for 2016 and 3.1% for 2017. Due to stronger-than-expected growth in 3Q16 in the US and Japan, OECD growth in 2016 was revised up from 1.6% to 1.7%, the same growth as in 2017. China's figures remain at 6.7% in 2016 and 6.2% in 2017. Growth in India for 2017 was revised down slightly to 7.1% from 7.2%, following growth of 7.5% in 2016. After two years of recession, both Russia and Brazil are forecast to recover in 2017 with growth of 0.8% and 0.4%, respectively.

World Oil Demand

World oil demand growth in 2016 has been revised up slightly to around 1.24 mb/d, following better-than-expected data from OECD Europe, to average 94.41 mb/d. In 2017, world oil demand growth is forecast at 1.15 mb/d to average 95.56 mb/d. OECD will contribute some 0.15 mb/d to oil demand growth in 2017, while non-OECD will contribute the bulk of growth with 1.00 mb/d.

World Oil Supply

Non-OPEC oil supply growth in 2017 was revised up by 70 tb/d to now stand at 0.30 mb/d, following a contraction of 0.78 mb/d in 2016. Non-OPEC supply is expected to average 56.50 mb/d in 2017. OPEC NGLs are forecast to grow by 0.15 mb/d in 2017 to average 6.43 mb/d. In November, OPEC crude oil production increased by 0.15 mb/d to average 33.87 mb/d, according to secondary sources.

Product Markets and Refining Operations

Product markets showed a mixed performance in the Atlantic Basin in November. Refining margins received support from the bottom of the barrel on the back of a tightening market. However, the sharp fall in gasoline cracks hit margins on the US Gulf Coast, while refinery margins in Europe continued to rise supported by a more balanced gasoil market. In Asia, margins strengthened on firm regional demand.

Tanker Market

Tanker market sentiment generally strengthened in November as freight rates in both dirty and clean segments of the market increased. On average, dirty tanker spot freight rates rose by 24% from the previous month on the back of improved tonnage requirement and steady activities, in combination with an occasional tightening in vessels supply. Chartering activities and sailings from several ports were reported higher during the month.

Stock Movements

OECD total commercial stocks fell in October to stand at 3,027 mb, some 302 mb above the latest five-year average. Crude and product inventories showed surpluses of 184 mb and 118 mb, respectively. In terms of forward cover, OECD commercial stocks in October stood at 65.3 days, some 6.3 days higher than the seasonal average.

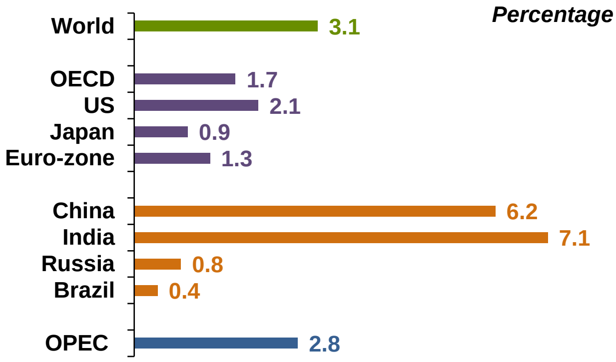
Balance of Supply and Demand

Demand for OPEC crude in 2016 is estimated to stand at 31.9 mb/d, an increase of 1.9 mb/d over 2015. In 2017, demand for OPEC crude is forecast at 32.6 mb/d, a gain of 0.7 mb/d compared to 2016.

Oil market outlook for 2017

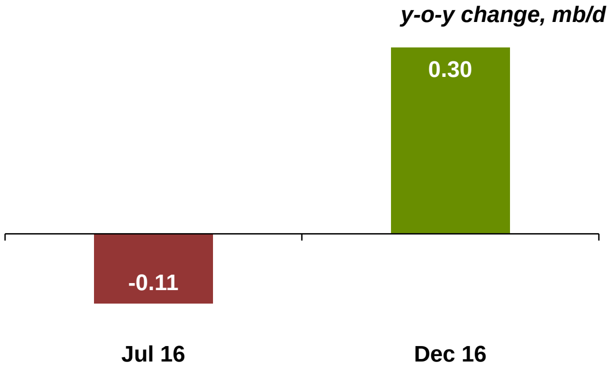
The recent pick-up in global economic activity in combination with supportive developments in the oil-market is seen leading to higher economic growth of 3.1% in 2017, following 2.9% growth in 2016. However, some downside risks prevail as policy decisions may lead to the use of stimulus measures that may lift inflation to levels higher-than-anticipated by central banks. This in turn could lead to a quicker-than-expected rise in interest rates triggering numerous repercussions on economic growth in various economies, mainly in emerging markets. Despite these uncertainties, the economic landscape is expected to improve in 2017. The OECD economies are forecast to grow at 1.7%, the same level as in 2016. Russia and Brazil are forecast to grow by 0.8% and 0.4% in 2017, respectively, after two years of recession. China and India are forecast to expand at a slightly slower pace in 2017 – at 6.2% and 7.1%, respectively, compared 6.7% and 7.5% in 2016 – growth remains encouraging (***Graph 1***).

Graph 1: Real GDP growth for selected countries in 2017



Source: OPEC Secretariat.

Graph 2: Revision to Non-OPEC supply change in 2017



Source: OPEC Secretariat.

World oil demand growth is estimated at 1.24 mb/d in 2016 supported by the transportation sector, reflecting low retail prices and better-than-anticipated vehicle sales. In the non-OECD, Other Asia and China saw solid-to-steady oil demand growth. In Latin America and the Middle East, oil requirements were lower than initial projections as slower economic developments and a high level of substitution dampened oil consumption. In 2017, world oil demand is projected to grow by 1.15 mb/d. In OECD, oil demand is projected to rise in OECD Americas, flatten in Europe and continue declining in Asia Pacific. In non-OECD, improvement in economic activities is assumed to provide support to oil demand growth, particularly in Latin America and the Middle East.

Non-OPEC oil supply in 2016 is estimated to contract by 0.78 mb/d. The main contributors to this decline are the US, China, Mexico, Colombia and other OECD Europe, while growth is anticipated to come from Russia, Brazil, Congo and the UK. Low oil prices led to a decline of 420 tb/d in US oil production. Declines are also seen coming from Colombia and China, as well as Canadian conventional crude output. In 2017, non-OPEC oil supply is projected to grow by 0.3 mb/d, despite initial projections in July 2016 for a contraction (***Graph 2***). This is mainly due to higher price expectations for 2017. The main contributors to non-OPEC supply growth are Brazil with 0.25 mb/d, Kazakhstan with 0.21 mb/d, and Canada with 0.17 mb/d. In contrast, Mexico, US, China, Colombia, and Azerbaijan are expected to show the main declines. However, this forecast remains subject to a number of uncertainties, including the pace of economic growth, potential new policies and price developments.

Based on the above forecasts, the demand for OPEC crude in 2017 is expected to stand at 32.6 mb/d, which is slightly higher than the 32.5 mb/d level referred to in the most recent OPEC Ministerial Conference. This, combined with the joint cooperation with a number of non-OPEC countries in adjusting production by around 0.6 mb/d, will accelerate the reduction of global inventories and bring forward the rebalancing of the oil market to the second half of 2017.

Crude Oil Price Movements

November was a volatile month for crude, with the OPEC Reference Basket (ORB) wiping out gains from the previous month to plunge nearly 10% to $43.22/b. Oil prices trended down sharply amid uncertainty surrounding the implementation of OPEC's Algiers Accord agreed upon in late September. A substantial increase in global oil supplies into a market already awash in crude also contributed to the decline in prices. Year-to-date, the ORB value was lower by 21.9% at $39.80/b.

After rising to 12-month-highs in October in reaction to the OPEC decision in Algiers, crude oil futures plunged in November. A sharp increase in global oil supplies was also a contributing factor. An all-time high build of 14.4 mb in US crude stocks, as well as the unexpected result of the US presidential election and the strength of the US dollar, all weighed heavily on oil prices during the month. Nevertheless, the oil complex still managed to soar more than 10%, with futures for both benchmark crudes well above $50/b late in the month following OPEC's announcement on 30 November of a supply adjustment agreement. ICE Brent ended $4.31 lower at $47.08/b for the month and 19.5% lower at $44.26/b for the year. Similarly, NYMEX WTI dropped $4.18 to $45.76/b in November and 14.3% to $42.68/b year-to-date.

The ICE Brent/NYMEX WTI (or transatlantic) spread narrowed further to $1.30/b, encouraging the US to import Brent-related grades such as West African crudes. Pressure on Brent relative to WTI has come from increasing production and exports of regional light sweet crudes as well as North Sea grades.

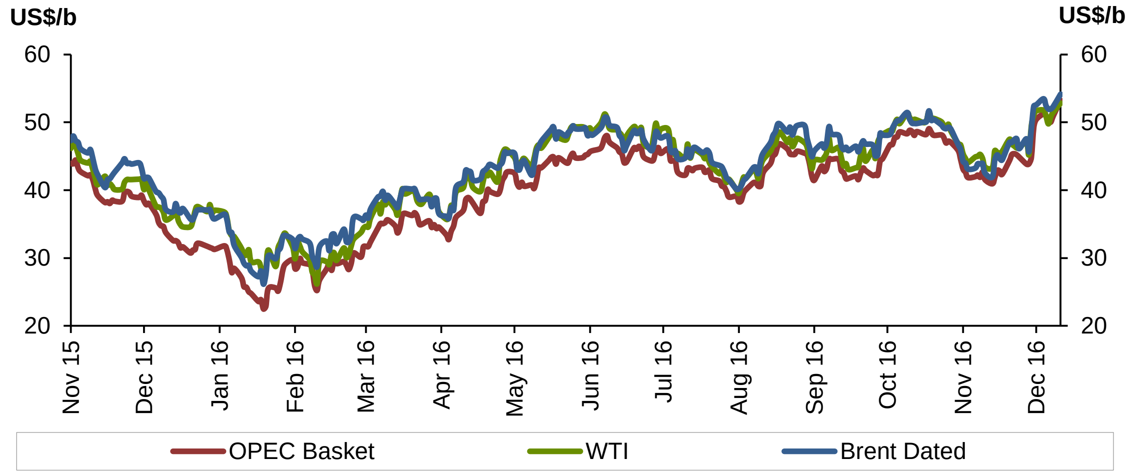
Speculators bet strongly on price declines in November. Futures and options trading data indicated that money managers had boosted short positions by record amounts throughout the month.

OPEC Reference Basket

In a very volatile month for crude oil, the ORB wiped out almost all its previous month's gains to end November close to 10% lower. Oil prices trended down sharply a few days after having reached a 15-month high in response to the OPEC decision in Algiers (the Algiers Accord) at the end of September, which was designed to bring forward market rebalancing. During the two weeks following the agreement, uncertainty regarding its implementation set off a sharp decline in oil prices. A substantial increase in global oil supplies, in a market already awash in oil, also contributed to this price drop. Oversupply in oil came from an all-time high level of output by most major crude oil producers, as well as the return of lost production from turbulent areas and from planned oil field maintenance. The surprise result of the US presidential election, and the increase in the US dollar that accompanied it, also contributed to the deterioration in oil prices seen in November.

Nevertheless, by the end of the month, the highly-anticipated announcement of a supply adjustment by OPEC of around 1.2 mb/d for the first time since 2008 – with scope for cooperation from non-OPEC – sent the oil market soaring by more than 18%, lifting the ORB value to its highest this year. On 2 December, the ORB value reached nearly $50/b for the first time since October last year.

Graph 1.1: Crude oil price movement



Sources: Argus Media, OPEC Secretariat and Platts.

On a monthly basis, the ORB plunged by $4.65 to average $43.22/b in November, down 9.7%. Compared to the previous year, the ORB was also lower by $11.17, or 21.9%, to average $39.80/b y-t-d.

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

			Change		*Year-to-date*	
	Oct 16	Nov 16	Nov/Oct	%	2015	2016
Basket	**47.87**	**43.22**	**-4.65**	**-9.7**	**50.97**	**39.80**
Arab Light	48.26	43.32	-4.94	-10.2	51.36	40.00
Basrah Light	46.79	41.97	-4.82	-10.3	49.34	38.53
Bonny Light	50.83	45.20	-5.63	-11.1	54.33	43.15
Es Sider	48.74	43.63	-5.11	-10.5	52.70	41.85
Girassol	49.37	44.95	-4.42	-9.0	54.37	42.74
Iran Heavy	47.30	42.42	-4.88	-10.3	50.39	38.52
Kuwait Export	47.04	42.14	-4.90	-10.4	49.69	38.28
Qatar Marine	48.13	44.25	-3.88	-8.1	52.23	40.49
Merey	42.36	39.37	-2.99	-7.1	42.67	32.97
Minas	45.20	40.72	-4.48	-9.9	50.63	40.35
Murban	51.19	47.25	-3.94	-7.7	55.24	43.94
Oriente	45.98	41.69	-4.29	-9.3	46.13	37.54
Rabi Light	48.15	43.92	-4.23	-8.8	54.29	41.85
Sahara Blend	49.79	45.13	-4.66	-9.4	54.12	43.44
Other Crudes						
Brent	49.74	45.13	-4.61	-9.3	53.74	42.90
Dubai	48.94	43.98	-4.96	-10.1	52.46	40.45
Isthmus	49.91	45.64	-4.27	-8.6	52.40	41.36
LLS	51.35	46.79	-4.56	-8.9	53.66	44.20
Mars	46.79	42.30	-4.49	-9.6	49.49	39.27
Urals	48.24	43.83	-4.41	-9.1	53.29	41.27
WTI	49.89	45.67	-4.22	-8.5	49.80	42.50
Differentials						
Brent/WTI	-0.15	-0.54	-0.39	-	3.94	0.40
Brent/LLS	-1.61	-1.66	-0.05	-	0.08	-1.30
Brent/Dubai	0.80	1.15	0.35	-	1.28	2.45

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

All ORB component values deteriorated over the month, along with relevant crude oil benchmarks. The related benchmarks – namely Dated Brent, WTI and Dubai – decreased in November by $4.61, $4.22 and $4.96, respectively.

The multiple-region-destination grades – Arab light, Basrah light, Iran Heavy and Kuwait Export – decreased $4.89 on average, or a hefty 10.3%, for the month to $42.46/b. The Middle Eastern spot components – Murban and Qatar Marine – saw their value deteriorate by $3.91, or 7.9%, to $45.75/b. The Latin American components of the ORB – Venezuelan Merey and Ecuador's Oriente – were down by $2.99, or 7.1%, and $4.29, or 9.3%, respectively, to average $39.37/b and $41.69/b. The value of the light sweet ORB components from West and North Africa – Saharan Blend, Es Sider, Girassol, Bonny Light and Gabon's Rabi – lost $4.81, or 9.7%, to $44.57/b. Indonesian Minas was also down 9.9%, or $4.48, for the month at $40.72/b.

On 13 December, the ORB stood at $52.39/b, $9.17 higher than its November average.

The oil futures market

Crude oil futures were volatile over much of November, driven mainly by questions regarding the implementation of the OPEC adjustment agreement. The sharp increase in oil supplies by OPEC and non-OPEC also contributed to uncertainty, as they revived concerns that the persistent oversupply seen throughout 2016 would carry on into 2017. EIA data showing a 14.4 mb increase in US crude stocks in the final week of October, the largest weekly build on record, came as a major surprise, pushing prices down further. Oil futures were also pressured by the surprise outcome of the US presidential election earlier in the month. The continued strengthening of the US dollar also kept crude oil prices under pressure.

The oil complex soared more than 10% at the end of the month, with futures for both Brent and WTI above $50/b. ICE Brent traded above $54/b, as prices continued to surge following OPEC's agreed production adjustment announced on 30 November.

ICE Brent ended November lower by $4.31, or 8.4%, to average $47.08/b for the month, while **NYMEX WTI** dropped $4.18, or 8.4%, to average $45.76/b. Compared to the same period last year, ICE Brent was $10.71, or 19.5%, lower at $44.26/b y-t-d, while NYMEX WTI declined by $7.13, or 14.3%, to $42.68/b.

Table 1.2: Crude oil futures, US$/b

			Change		*Year-to-date*	
	Oct 16	Nov 16	Nov/Oct	%	2015	2016
NYMEX WTI	49.94	45.76	-4.18	-8.36	49.81	42.68
ICE Brent	51.39	47.08	-4.31	-8.39	54.97	44.26
Transatlantic spread	1.45	1.31	-0.13	-0.02	5.16	1.59

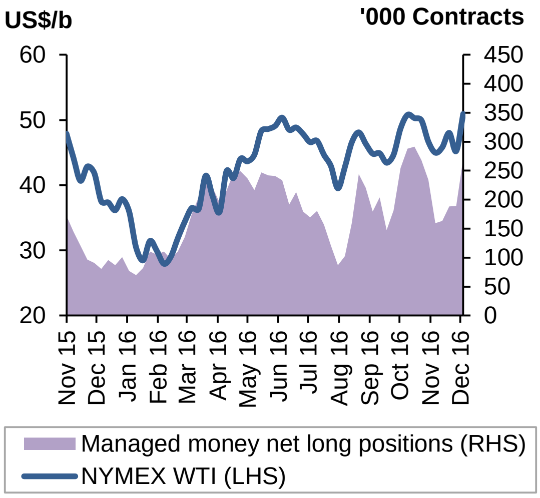
Note: Totals may not add up due to independent rounding.
Sources: CME Group, Intercontinental Exchange and OPEC Secretariat.

Crude oil futures prices improved in the second week of December, with ICE Brent standing at $55.72/b and NYMEX WTI at $52.98/b on 13 December.

Speculators showed a more bearish mood as money managers boosted short positions on crude futures contracts throughout the month. The number of short positions for WTI almost tripled over the month from 56,563 lots at the end of October to 163,232 contracts at the end of November, representing an increase of 106,669 lots. Short positions in ICE Brent crude also surged by 86,566 contracts to reach 147,427 lots, which means that shorts have increased by about 142% on the Brent side in a period of just four weeks. This has translated into a significant month-to-month decline in net long positions in both exchanges.

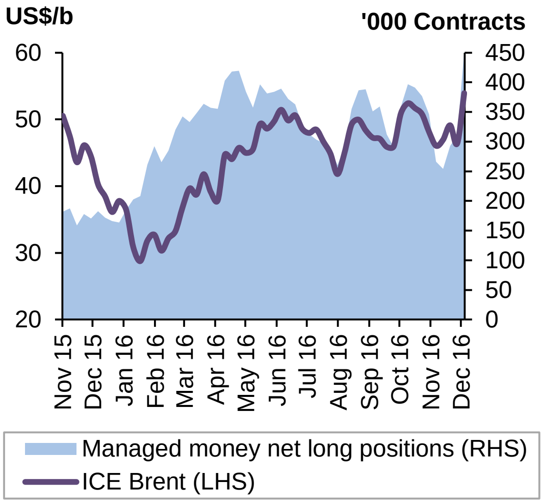
Money managers' net length in **NYMEX WTI** crude dropped 79,865 contracts, or a hefty 30%, to 188,324 contracts in the period from the end of October to end November just ahead of the OPEC meeting on 30 November. In **ICE Brent** futures and options, speculators also decreased net long positions by 83,946 contracts or 22% to 292,764 lots. The total futures and options open interest volume in the two exchanges was also lower by 2%, or 114,346 lots, to 5.43 million contracts.

Graph 1.2: NYMEX WTI price vs. speculative activity



Sources: CFTC and CME Group.

Graph 1.3: ICE Brent price vs. speculative activity



Source: IntercontinentalExchange.

During November, the average daily traded volume for NYMEX WTI contracts surged 18.9%, or 207,391 lots, to 1,303,552 contracts, while that of ICE Brent was 167,914 contracts higher, an increase of 21.9%, to 932,987 lots. The aggregate daily traded volume for both crude oil futures markets swelled 375,305 lots to 2.24 million futures contracts, representing slightly more than 2.2 billion b/d of crude oil. The total traded volume in both exchanges was significantly higher in November at 27.4 million lots for NYMEX WTI and 20.5 million contracts for ICE Brent.

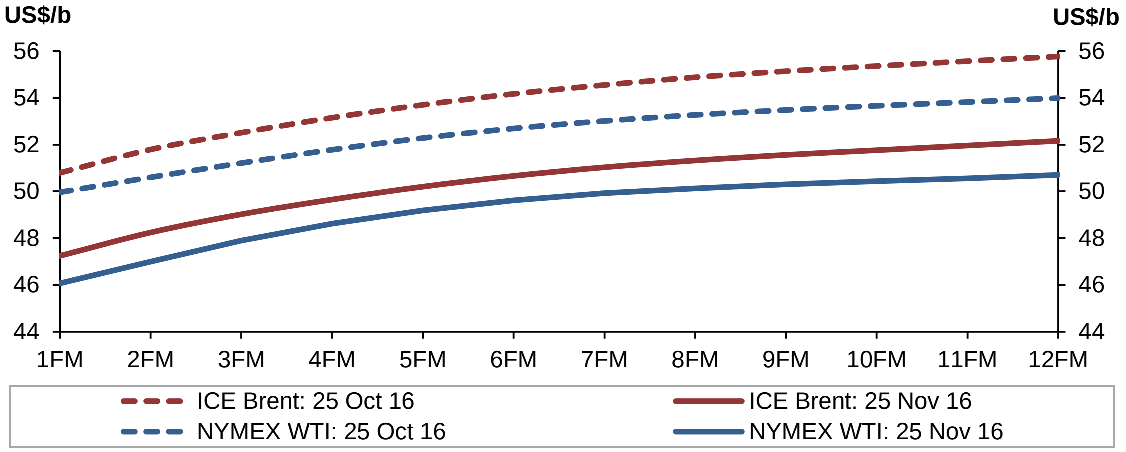
The futures market structure

Amid increasing oversupply, the market structure of Dubai flipped back to contango, while the contango in both Brent and WTI steepened. The light backwardation seen in the **Dubai** market structure in October flipped back into a deep contango on an average monthly basis, amid plentiful Mideast Gulf crude supplies and a lack of buying interest. The Dubai M1/M3 premium of 2¢/b flipped into a discount of 94¢/b.

North Sea Brent came under pressure again as the amount of North Sea crude in floating storage rose further. Rising supply of Brent, Forties, Oseberg and Ekofisk also pressured North Sea crudes. This resulted in a further widening of the Brent contango where the M1/M3 discount moved out to almost $2.05/b on average in November from $1.50/b in October.

In the **US,** the **WTI** contango worsened over the month amid a significant surprise build in US stocks as well as lower refinery crude intake. The WTI contango (M1/M3) widened 54¢ to $1.58/b

Graph 1.4: NYMEX WTI and ICE Brent forward curves



Note: FM = future month.
Sources: CME Group and Intercontinental Exchange.

The **ICE Brent/NYMEX WTI (or transatlantic) spread** narrowed once more in November. This continued to encourage crude imports of West African (WAF) crudes and other Brent-related grades to the US. Pressure on Brent relative to WTI has come from increasing production and exports of rival grades. The amount of unsold North Sea crude in floating storage also rose further. This narrow spread boosted US demand for WAF crudes. US imports of Angolan and Nigerian crude increased to 307,000 b/d and 303,000 b/d, respectively, by mid-November. The first-month ICE Brent/NYMEX WTI spread narrowed to $1.31/b in November from $1.45/b the month before.

Table 1.3: NYMEX WTI and ICE Brent forward curves, US$/b

	1FM	2FM	3FM	6FM	12FM	12FM-1FM
NYMEX WTI						
25 Oct 16	49.96	50.60	51.21	52.69	53.99	4.03
25 Nov 16	46.06	47.00	47.90	49.61	50.70	4.64
Change	**-3.90**	**-3.60**	**-3.31**	**-3.08**	**-3.29**	**0.61**
ICE Brent						
25 Oct 16	50.79	51.79	52.51	54.17	55.77	4.98
25 Nov 16	47.24	48.24	49.02	50.66	52.16	4.92
Change	**-3.55**	**-3.55**	**-3.49**	**-3.51**	**-3.61**	**-0.06**

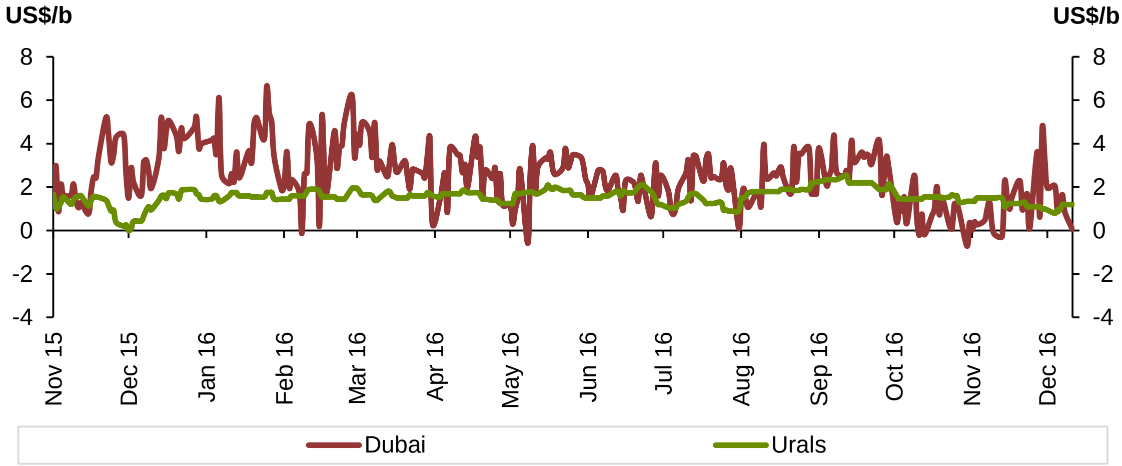
Note: FM = future month.
Sources: CME Group and Intercontinental Exchange.

The light sweet/medium sour crude spread

The sweet/sour differentials narrowed in Europe and in the US Gulf Coast (USGC), but widened in Asia.

In **Europe**, Urals medium sour crude continued to see a reduction in its discount to light sweet North Sea Brent in November on tight supply of the Russian grade. The Dated Brent-Med Urals spread narrowed to $1.30/b in November from $1.50/b in October. Sour crude supply in the Mediterranean market has been relatively tight, driving up the price of Russia's medium sour Urals grade. On the other hand, North Sea Brent was pressured by increasing supply of regional and local light sweet crudes and a growing amount of floating storage in the North Sea.

Graph 1.5: Brent Dated vs. sour grades (Urals and Dubai) spread



Sources: Argus Media, OPEC Secretariat and Platts.

In **Asia**, the ongoing narrowing trend seen in the Tapis/Dubai spread reversed course this month amid oversupply pressure from the Mideast Gulf benchmark, Dubai. Meanwhile, Asian Pacific light crudes found support from healthy regional gasoline and naphtha margins. Easing arbitrage flow of Bent-related light sweet crudes due to a wider Brent-Dubai spread in November supported an increase of the Tapis premium over Dubai. The Tapis/Dubai spread widened by 35¢ on an average monthly basis to $3.30/b. The Dated Brent/Dubai spread also widened 35¢ from its narrowest margin this year of around 80¢ to $1.15/b.

In the **USGC**, the Light Louisiana Sweet (LLS) premium over medium sour Mars was slightly lower in November at $4.50/b, down some 5¢. An increase of imported sour crudes weighed the value of medium sour grades on the USGC. However, light sweet grades were pressured by incoming Brent-related arbitrage crudes amid a narrower Brent-WTI spread.

Commodity Markets

In November, average energy commodity prices declined, led by lower crude oil prices. In the group of non-energy commodities, base metal prices experienced a broad-based advance on continuing expansion in global manufacturing and the expectation of higher infrastructure investment in the US, and agricultural prices increased on average, led by vegetable oils and oilseeds. Gold prices declined on a firming outlook for interest rate increases in the US.

Trends in selected commodity markets

During the month, interest rate expectations increased due to further confirmation of a rebound of US GDP in 3Q16 as well as the expectation of higher infrastructure investment by the upcoming administration. This has translated into appreciation of the US dollar and a sharp decline in gold prices. Meanwhile, an improving global manufacturing picture as shown by a JPM global manufacturing PMI at 52.1 versus 52.0 during the previous month, together with the aforementioned expectations of stimulus plans in the US, gave support to the largest jump in base metal prices in the last six years.

Agricultural prices found support in the group of vegetable oils and oil seeds. Palm oil increased due to a smaller-than-expected reported output – down 2.2% m-o-m and 17.5% y-o-y in Malaysia in October, as reported by the Malaysian Palm Oil Association. Support also came from a rally in soy oil following a higher-than-expected biofuels mandate in the US. This also gave some support to soybeans, in spite of forecasts for higher global end-of-season inventories, due to increased output by the US Department of Agriculture (USDA). Meanwhile, the USDA also increased its forecasts in relation to end-of-season stocks for maize, wheat and rice. Sugar prices declined by around 8% as a higher proportion of the sugarcane output of Brazil was used for sugar production – 46.8%, versus 41.7% the previous year, according to the Brazilian Sugarcane Industry Association − as the recent rally in sugar prices and the depreciation of the Brazilian real during the month increased the attractiveness of sugar over ethanol production.

Metal prices showed their best performance since 2009 on the aforementioned strong performance of global manufacturing, especially in China, where the manufacturing PMI was at 50.9 in November, versus 51.2 the previous month, showing a slight deceleration, though still expanding. Further support to metals came from the expectation of higher infrastructure investment by the new US Administration. Copper prices jumped by 15.2%, its largest jump in six years, also supported by a large drop in inventories in the LME system. Meanwhile, iron ore prices jumped by 24% due to continuing increases in steel output, which was up in October by 3.3% worldwide and by 4.0% in China, according to the World Steel Association.

In the group of **energy commodities**, crude oil declined during the month due to higher supplies, while uncertainty about the outcome of the OPEC meeting also weighed on prices. Natural gas prices declined in the US due to warmer-than-average temperatures during the month, but have jumped quickly since the beginning of December on a colder weather outlook. Meanwhile, prices advanced in Europe, mainly due to colder weather. EU-28 inventories, as reported by Gas Infrastructure Europe, were around 81% full at the end of December, versus 78.7% a year ago. Coal prices rose by 7.3%, and have almost doubled since April, mainly due to decreasing output in China, which, this year, has dropped by 10.7% in the first ten months of the year.

Table 2.1: Commodity price data

Commodity	Unit	*Monthly averages* Sep 16	Oct 16	Nov 16	*% Change* Nov/Oct	*Year-to-date* 2015	2016
World Bank commodity price indices (2010 = 100)							
Energy		58.2	63.7	59.4	-6.7	66.5	53.8
Coal, Australia	US$/mt	72.9	93.2	100.0	7.3	58.0	64.0
Crude oil, average	US$/b	45.0	49.3	45.3	-8.2	52.0	41.9
Natural gas, US	US$/mbtu	3.0	2.9	2.5	-15.2	2.7	2.4
Non-energy		81.1	80.8	83.5	3.3	83.0	80.0
Agriculture		90.5	89.5	89.9	0.4	89.6	89.1
Food		93.6	92.8	93.1	0.3	91.3	92.2
Soybean meal	US$/mt	372.0	367.0	367.3	0.1	399.9	380.9
Soybean oil	US$/mt	829.0	858.0	875.3	2.0	756.5	799.6
Soybeans	US$/mt	405.0	403.0	409.0	1.5	392.1	404.1
Grains		76.5	76.5	76.0	-0.6	89.2	82.5
Maize	US$/mt	148.4	152.3	151.8	-0.3	170.3	159.8
Wheat, US, HRW	US$/mt	150.8	151.8	150.5	-0.9	205.9	168.9
Sugar, world	US$/kg	0.5	0.5	0.4	-8.7	0.3	0.4
Base Metal		68.2	69.6	76.5	9.9	74.6	67.4
Aluminum	US$/mt	1,592.4	1,665.9	1,737.1	4.3	1,679.9	1,592.9
Copper	US$/mt	4,722.2	4,731.3	5,450.9	15.2	5,589.7	4,795.9
Iron ore, cfr spot	US$/dmtu	58.0	59.0	73.0	23.7	57.2	56.5
Lead	US$/mt	1,947.6	2,024.5	2,180.6	7.7	1,795.2	1,835.5
Nickel	US$/mt	10,191.8	10,259.7	11,128.9	8.5	12,149.4	9,470.0
Tin	US$/mt	19,499.5	20,099.8	21,126.1	5.1	16,191.6	17,636.4
Zinc	US$/mt	2,292.3	2,311.5	2,566.2	11.0	1,968.4	2,037.7
Precious Metals		104.6	99.0	97.0	-2.1	91.3	98.1
Gold	US$/toz	1,326.6	1,266.6	1,238.4	-2.2	1,168.4	1,257.3
Silver	US$/toz	19.4	17.7	17.4	-1.4	15.9	17.2

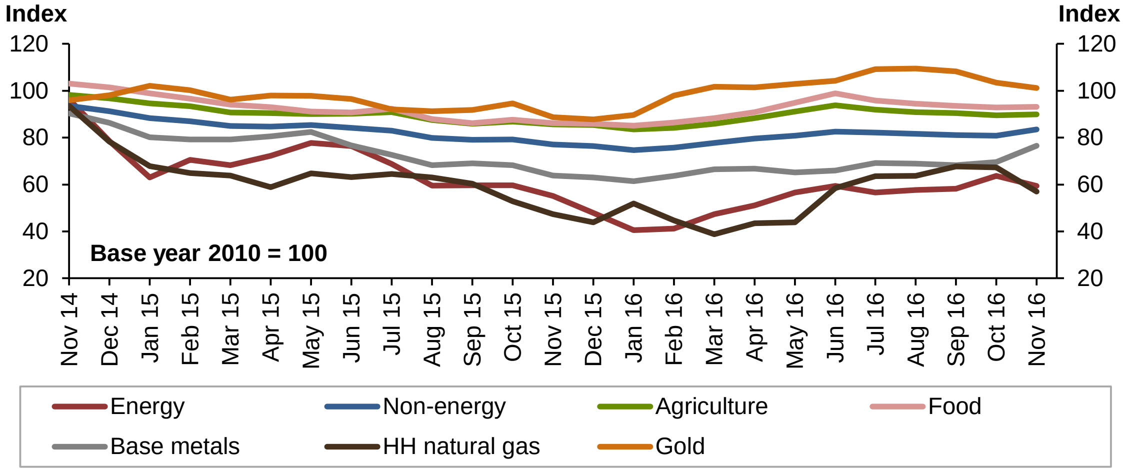
Source: World Bank, Commodity price data.

Average energy prices in October decreased by 6.7% m-o-m, led by an 8.2% decrease in average crude oil prices and a 15.2% decrease in natural gas prices m-o-m in the US. On the contrary, the average natural gas prices in Europe advanced by 14.4%, while Australian benchmark thermal coal prices advanced by 7.3%.

Agricultural prices increased by 0.4%, with a 0.3% increase in the average food prices and a 1.4% advance in raw material prices, while, at the same time, beverage prices declined by 0.9%. Among commodities that were up in prices, palm oil and natural rubber rose by 5.4% and 12.3%, respectively. Among decliners, sugar and cocoa prices were down by 8.7% and 7.8%, respectively.

Average base metal prices increased by 9.9%, the largest advance in six years, with all group components rising. Copper, aluminum and nickel prices were up by 15.2%, 4.3% and 8.5%, respectively. Average iron ore prices were up by 23.7%.

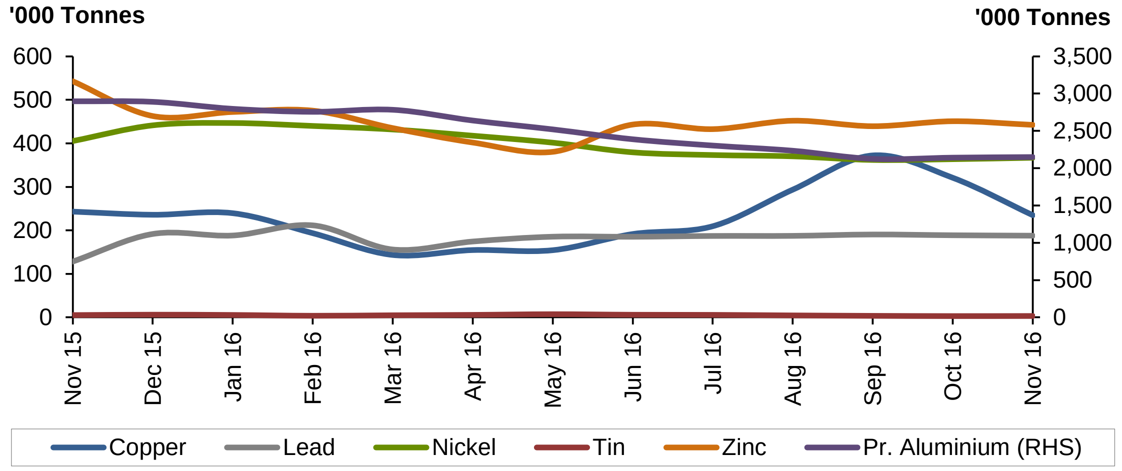
Graph 2.1: Major commodity price indices



Source: World Bank, Commodity price data.

In the group of **precious metals**, gold prices declined by 2.2% on average, but the decline was exacerbated with the US election, as expectations for higher interest rates in the US increased significantly. Meanwhile, silver prices declined by 1.4%.

Graph 2.2: Inventories at the LME



Sources: London Metal Exchange and Thomson Reuters.

In November, the **Henry Hub natural gas index** declined sharply. The average price was down 45¢, or 15.2%, to $2.50 per million British thermal units (mmbtu) after trading at an average of $2.95/mmbtu the previous month.

The US Energy Information Administration (EIA) said utilities withdrew 50 billion cubic feet (bcf) of gas to storage during the week ending 25 November. This was below median analysts' expectations of a withdrawal of around 53 bcf. Total working gas in storage stood at 3,995 bcf, or 0.6%, higher than that at the same time the previous year and 6.3% higher than the previous five-year average. The EIA noted that temperatures during the reported week averaged lower than in the previous week, although they were higher than normal throughout the Lower 48 States.

Investment flows into commodities

Open interest (OI) increased in November for selected US commodity markets such as crude oil, natural gas, copper, livestock and agriculture, while decreasing for precious metals. Meanwhile, in monthly terms, speculative net length positions increased for agriculture, copper and livestock, while declining for crude oil, natural gas and precious metals.

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

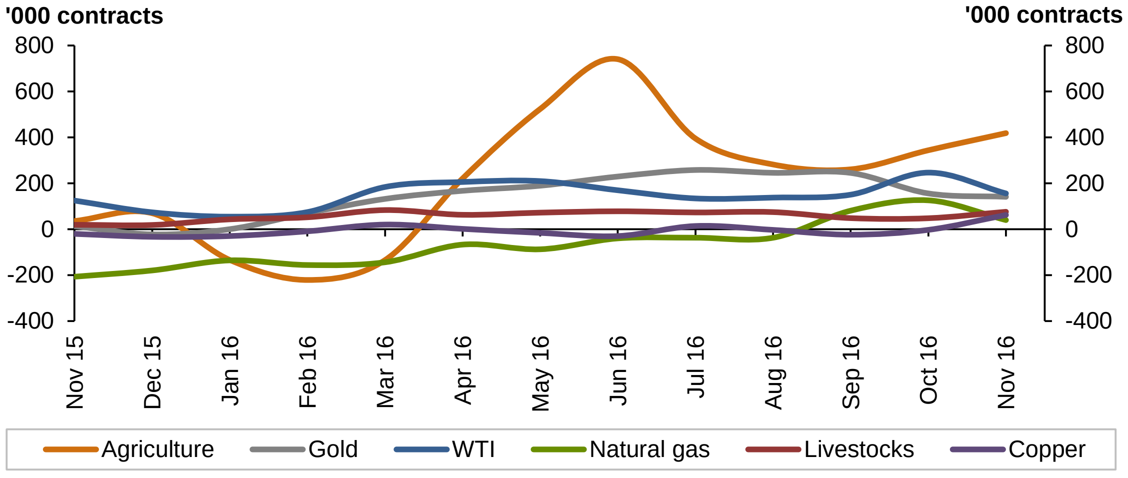
	Open interest		*Net length*			
	Oct 16	Nov 16	Oct 16	% OIV	Nov 16	% OIV
Crude oil	1,846	1,974	247	13	156	8
Natural gas	1,142	1,166	126	11	40	3
Agriculture	5,054	5,090	344	7	418	8
Precious metals	705	656	203	29	189	29
Copper	197	228	-3	-1	62	27
Livestock	543	550	48	9	76	14
Total	**9,488**	**9,665**	**965**	**68**	**941**	**89**

Source: US Commodity Futures Trading Commission.

Agriculture's OI increased by 0.7% to 5,089,938 contracts in November. Meanwhile, money managers increased net long positions by 21.7% to 418,457 lots, largely because of increasing net length in the soy complex and corn.

Henry Hub's natural gas OI increased by 2.1% m-o-m to 1,165,905 contracts in November. Money managers decreased their net length positions by 68.3% to 39,937 lots on warmer-than-normal temperatures during the month.

Graph 2.3: Speculative activity in key commodities, net length

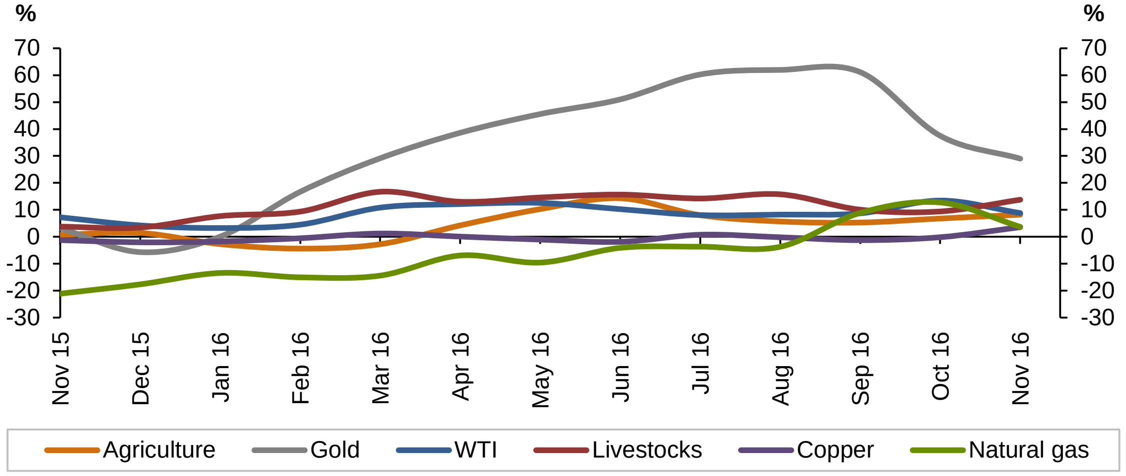


Source: US Commodity Futures Trading Commission.

Copper's OI increased by 15.8% m-o-m to 197,230 contracts in November. Money managers changed their stance to a net long position of 64,761 contracts on improving global manufacturing and a further drop in copper inventories in the LME system.

Precious metals' OI decreased by 7.3% m-o-m to 656,393 contracts in November. Money managers decreased their net long positions by 7.3% to 188,543 lots.

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



Source: US Commodity Futures Trading Commission.

World Economy

Global growth remains unchanged for 2016 and 2017 at 2.9% and 3.1%, respectively. Better-than-expected 3Q16 GDP growth in the US and Japan lifted the 2016 OECD growth forecast from 1.6% to 1.7% – which is the same level as the unchanged forecast for 2017 growth. The 2016 forecast for major emerging economies also remains at the same level as in the previous month, while India's growth forecast for 2017 was revised down slightly in anticipation of the expected somewhat negative impact from challenges arising from the announcement that the most circulated large bills would become invalid.

Russia and Brazil are forecast to move out of two years of recession in 2017 and to grow by 0.8% and 0.4%, respectively. As in other commodity producing economies, this outcome depends on commodity price levels. But recent developments in oil prices point at a positive trend. Meanwhile, China and India are forecast to expand at a slightly lower level in the next year, at 6.2% and 7.1%, respectively –compared to 2016 growth of 6.5% and 7.5% – however the level of growth remains encouraging.

Numerous uncertainties for global economic growth remain. Among these are policy issues across the globe, which bear considerable weight, as well as monetary policy decisions, which remain important in the near-term. It is expected that the US Federal Reserve (Fed) will raise interest rates in December, while the European Central Bank (ECB), the Bank of Japan (BoJ), the Bank of England (BoE) and the People's Bank of China (PBoC) will all maintain more accommodative stances.

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

	World	OECD	US	Japan	Euro-zone	China	India	Brazil	Russia
2016*	**2.9**	**1.7**	**1.6**	**0.8**	**1.6**	**6.7**	**7.5**	**-3.4**	**-0.6**
Change from previous month	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
2017*	**3.1**	**1.7**	**2.1**	**0.9**	**1.3**	**6.2**	**7.1**	**0.4**	**0.8**
Change from previous month	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0

*Note: * 2016 and 2017 = Forecast.*
Source: OPEC Secretariat.

OECD

OECD Americas

US

3Q16 GDP growth was reported to be stronger in the second of three estimates at 3.2% q-o-q on a seasonally adjusted annualized rate (SAAR), compared to an already solid first estimate of 2.9%. The most important supportive factor was ongoing solid private household consumption, which rose by 2.8% SAAR. Moreover, private investment grew by 2.1% q-o-q SAAR while exports also supported GDP significantly, growing by 10.1% q-o-q SAAR. While low 1H16 growth has kept the year's GDP growth below the 2% mark, the economy is forecast to fare better in 2017. This will certainly depend on the plans of the incoming Trump administration, which will determine if, and to what extent, the announcements made during the campaign will actually be implemented. It seems that some tax cuts are likely to materialise, while many other issues remain unclear. This could have potential implications for the Fed's monetary policies.

While so far this year the subdued development of the US economy has kept the **Fed** from further raising interest rates, it now seems likely that a rate hike will materialise in December. The Fed indicated it will do so, when appropriate. With ongoing improvements in the labour market, stronger GDP growth and inflation once again rising, as well as a more resilient situation in the major emerging economies, the current situation may offer an appropriate scenario for action. Monetary policies will most probably become an important area to monitor in the coming months. While it seems that fiscal stimulus will become the driving force to achieve higher growth in the near-term, and with monetary policies being considered as becoming less effective, this might not entirely be the case. Monetary policies will probably not be the lifeline for growth in the US economy to the same extent, anymore. This could be positive as it would lower the dependence of past years on unprecedented monetary measures. However, the current scenario of an underlying trend of rising inflation, supported by a stabilisation in the oil market and inflation-enhancing stimulus measures, may lead to quicker-than-anticipated monetary tightening. This, in turn, could have numerous repercussions on economic growth in various economies – mainly emerging markets – as well as on foreign exchange markets. In general, the impact of monetary stimulus is expected to lessen, hence, liquidity is expected to fall and, consequently, market volatility to rise. The oil market may also be impacted in various dimensions of supply and demand.

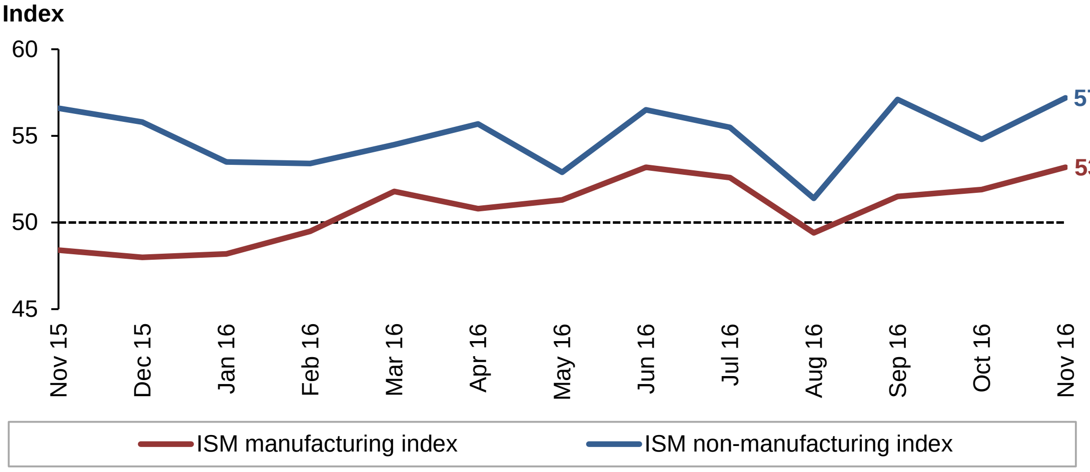
The **labour market** continued to strengthen in the latest November readings. The unemployment rate fell back to 4.6% in November, the lowest level since 2007. This implies full employment. Although the quality of the labour market may probably need to be analysed more closely, it is a considerable achievement. Non-farm payroll additions were up by 178,000 in November, after a rise of 142,000 in October. Average hourly earnings remained slightly below past improvements, but increased at a solid rate of 2.5% y-o-y.

Developments in **industrial production** remain soft and it is mainly the services sector that is supporting the US economy. Industrial production declined by 0.9% y-o-y in October, after contracting 1.0% y-o-y in September. Mining, including oil sector-related output, fell considerably again, dropping by 7.0% in October, the lowest decline level within one year and a further indication that the downward trend seems to have turned. Moreover, some improvements are filtering through, as seen in manufacturing orders, which rose for the second consecutive month by 1.3% y-o-y in October, after a rise of 1.0% in September.

The positive trend in private household consumption from recent GDP numbers was supported considerably by the latest retail sales numbers. **Retail sales** growth in October stood at 4.3% y-o-y, even higher than the already strong September level of 3.2% y-o-y. This positive trend is also visible in the Conference Board's Consumer Confidence Index, which increased strongly to a level of 107.1, the highest level since 2007. This is a strong indication that economic developments are improving.

July's **Purchasing Manager's Index** (PMI) for the manufacturing sector, as provided by the Institute of Supply Management (ISM), also indicated improvements in the underlying economy as it moved higher to reach 53.2 in November, compared to 51.9 in October. The very important services sector index moved to 57.2 from 54.8 in October.

Graph 3.1: Manufacturing and non-manufacturing ISM indices



Sources: Institute for Supply Management and Haver Analytics.

Given the better-than-expected 3Q16 performance, the **GDP growth forecast** for 2016 was lifted from 1.5% to 1.6%. More data over the coming months will provide further insight to allow a more detailed review of the US economic situation, particularly after the plans of the incoming administration become available. The 2017 growth forecast of 2.1% remains unchanged and anticipates a better momentum in the coming year, and if the current trend continues some upside potential may materialise.

Canada

Some weakness remains in the Canadian economy, but with an improving US economy – Canada's most important trading partner – and a stabilisation in oil markets, which could lead to rising growth. This turn has already materialised, as seen in a strong 3Q16 GDP growth number of 3.5% q-o-q SAAR. Also, growth in industrial production recovered significantly in September and rose by 3.4% y-o-y, after only 0.3% y-o-y only in August. Output from the mining, oil and gas sectors was the main driver with growth of 5.6% y-o-y in September. The PMI for manufacturing also improved and rose to 51.5 in November, after 51.1 in October. The GDP growth forecast remained unchanged at 1.2% for 2016. It already anticipates some improvements in 2017 with an unchanged growth rate of 1.7%. However, if the current trend continues, it may lead to an even stronger acceleration.

OECD Asia Pacific

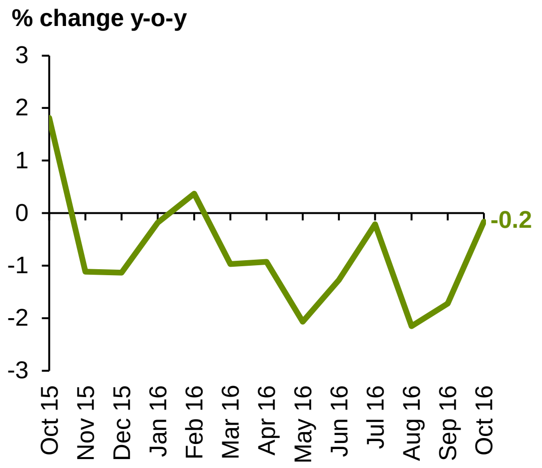
Japan

The Japanese **economy has started to improve slightly** and it seems that global improvements in 2H16 have also materialised to some extent in Japan, although exports are still in considerable decline. Government actions and domestic improvements seem to have supported the growth momentum. Industrial production rose for three consecutive months, but exports have continued their decline. Some positive momentum was reflected in the most recent 3Q16 GDP release, which showed growth of 2.2% q-o-q SAAR. Amid a partially improving trend, the economy remains challenged by a variety of factors but primarily the ongoing decline in exports. Additional developments with regard to the Japanese yen will need close monitoring in this respect. Positively, and in line with the most recent improvements in the economy, the deflationary trend has turned and the efforts of the BoJ may have been supported by the stabilisation in oil prices.

Inflation turned positive in October for the first time since February. It stood at 0.2% y-o-y in October, but remains far below the 2% target of the BoJ, which it is still trying to achieve. Given the recent strengthening of oil prices and the impact of again rising inflation globally, this trend may continue. When excluding the two volatile groups of energy and food, the country's core inflation figure stood also at 0.2% in October, compared to 0.1% in September. Real income continued to rise, but pay increases were at relatively low levels over the past two months, gaining 0.4% y-o-y in October and September, after reaching 0.5% y-o-y in August. The unemployment rate remained ultra-low in an extremely tight labour market, a factor that is expected to lead to continued rising income levels. In October, the unemployment rate stood at only 3.0%.

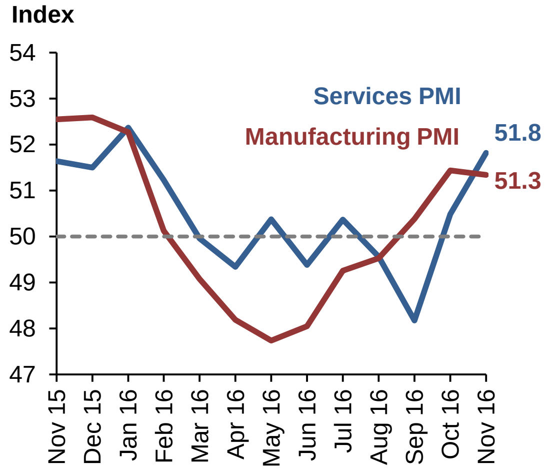
Japanese exports continued their declining trend. On a non-seasonally adjusted level, October's exports fell again, down by 10.3% y-o-y, compared to a contraction of 6.9% y-o-y in September. **Industrial production** rose for the third month in a row, up by 0.3% y-o-y in October, after hitting 1.4% y-o-y in September and 1.1% y-o-y in August. This positive trend came after 13 months of declines. However, a negative trend in manufacturing orders indicates that further challenges in the production sector lie ahead. Manufacturing orders dropped by 9.3% y-o-y in September, after seeing a decline of 4.0% y-o-y in August. The challenging environment has also been reflected in **domestic demand.** Retail trade remained negative and declined again by 0.1% y-o-y. But this area of the economy is at least also showing some improvements, as this rate of decline compares to a contraction of around 2%, on average, in the previous two months.

Graph 3.2: Japanese retail trade



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

Graph 3.3: Japanese PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

The **latest PMI numbers** provided by IHS Markit also confirmed the slight ongoing improvements. The PMI for manufacturing remained almost unchanged at 51.3 in November, only slightly lower than the 51.4 seen in October and after having reached a level of only 50.4 in September. The services sector PMI also improved to stand above the growth-indicating level of 50 for a second consecutive month, rising to 51.8 from 50.5 in October.

By considering the stronger-than-expected 3Q16 GDP growth number, the 2016 GDP growth forecast was revised up to 0.8%, from 0.7%. The 2017 growth forecast foresees a slightly better momentum at growth of 0.9%, unchanged from the previous month. Numerous challenges remain and it remains to be seen to what extent the current improvements in the global economy and the ongoing stimulus measures will be able to lift growth above current forecast levels.

South Korea

The situation in the South Korean economy remains mainly challenged by the latest political turbulences, but, unaffected by these domestic issues, exports turned significantly positive in November, when they grew by 3.7% y-o-y, the highest growth rate in more than one year. Industrial production also rose 1.7% y-o-y in October. However, the latest PMI number for the manufacturing sector in November still indicates a declining momentum in the manufacturing sector. The index stood at 48.0, below the growth-indicating level of 50, at the same level as a month earlier. While near-term developments warrant close monitoring, the GDP growth forecast for this month remains unchanged at 2.6% for 2016 and 2.5% for 2017.

OECD Europe

Euro-zone

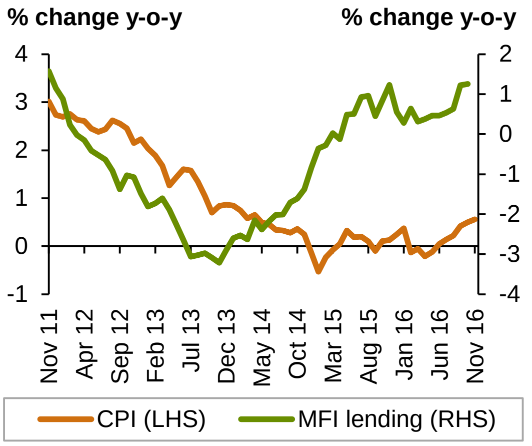
The economic situation in the **Euro-zone continues to improve** slightly. Germany and, to some extent, France remain the countries that are most supporting the recovery trend. But Spain and some peripheral economies are also enjoying a rebound from the low levels seen in past years. However, the latest data from France and Germany was mixed, and Italy, Greece and Portugal are also not doing as well. Moreover, the ECB has decided to reduce its monetary stimulus, while clearly underscoring that it will continue quantitative easing, at least for the time being. The bank confirmed that it would buy €80 billion in bonds per month until March, but added it would prolong its asset purchases until the end of 2017 at the lower rate of €60 billion. Moreover, the unemployment rate has remained below 10% now for two consecutive months. Also, banking sector-related weakness seems to have abated to some extent, while in Italy concerns about the sector have risen again, after the government's defeat in the most recent referendum about proposed constitutional changes, which led to the resignation of the Prime Minister.

Positively, 3Q16 **GDP growth** was better than expected at 0.4% q-o-q seasonally adjusted growth rate. This is up from 2Q16, when growth stood at 0.3% and only slightly below the 0.5% reached in 1Q16. Current estimates for 4Q16 are below these levels, given the most recent mixed data. In the next year, uncertainties are seen as prevailing, both economically and politically. Next year's federal government elections in France and Germany will be important in the political debate. The latest referendum on the constitution in Italy has again highlighted that the Euro-zone is in a fragile state in terms of its political development.

The latest **industrial production** figures were volatile to some extent, but have again recently offered confirmation that the business environment has improved. After a decline of 0.4% y-o-y in July, growth again rose to 2.3% y-o-y in August and 1.3% y-o-y in September. Manufacturing growth stood at a firm 1.4% in September, after rising by 2.7% y-o-y in August, while considerable support came again from mining and quarrying, with a rise of 7.2% y-o-y, after a 2.3% y-o-y rise in August. **Retail sales** growth in value terms increased as well by 2.4% in October, after a rise of 1.0% in September and August, signalling an improvement in the underlying economy. Some support may still come from slight improvements in the labour market. The **unemployment rate** in the Euro-zone continued to decline and remained below the 10.0% mark after having stood at 9.8% in October.

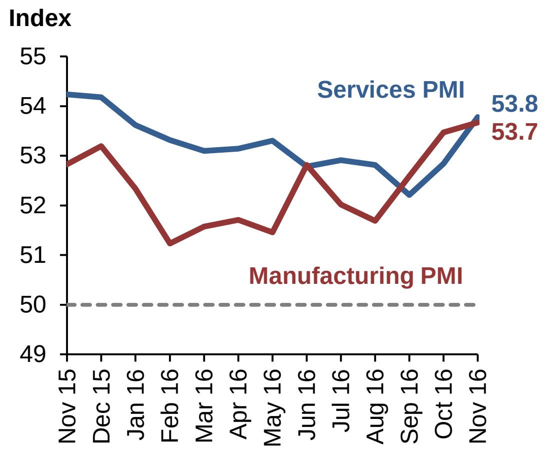
After the latest rounds of ECB stimulus, **inflation** remained low, but increased to a more considerable level, rising by 0.6% y-o-y in November after reaching 0.5% y-o-y in October. Core inflation – the CPI (excluding energy, tobacco and food) − stood at 0.8% y-o-y, the same as the previous three months. Among other reasons, this explains why the ECB has reduced its monetary stimulus programme. Moreover, the effectiveness of monetary stimulus has lately increased again. **Credit supply** figures in October stood at 1.3% y-o-y and 1.2% y-o-y in September, recovering from levels below 1% year-to-date up to September.

Graph 3.4: Euro-zone consumer price index and lending activity



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

Graph 3.5: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

The latest **PMI indicators** point to a continuation in Euro-zone improvements. The manufacturing PMI for November stood at 53.7, after October's level of 53.5. The important services PMI increased to 53.8 in November, after reaching 52.8 in October.

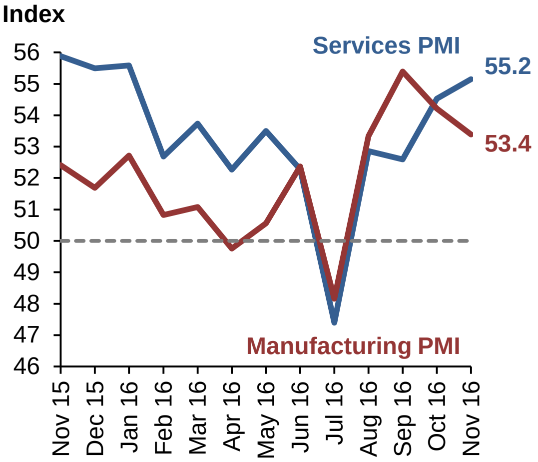
While the **recovery in the Euro-zone is ongoing**, multiple challenges remain. With this trend having been anticipated already, the GDP growth forecast numbers remain unchanged at 1.6% for 2016 and 1.3% in 2017. This lower level of growth in the coming year anticipates challenges from political developments in 2017, given key elections in France and Germany, as well as the uncertainty surrounding Brexit procedures, all of which may lead to rising uncertainty. This is to be seen in combination with some likelihood of rising inflation and, hence, a potential reduction in monetary stimulus.

UK

While the UK government has gained some clarity lately about the potential timeline of the Brexit negotiations, the procedure, content and certainly the form of the outcome remain widely unclear. This uncertainty will remain an issue for the coming months and is expected to negatively impact the economic development of the UK. Importantly, parliament has recently voted for the Brexit and endorsed the March timeline to start negotiations, hence triggering Article 50. There is still the ruling of the Supreme Court, which has to decide on the formal involvement of parliament in the negotiations. This is crucial, as the most recent vote by the House of Commons was a non-binding motion by the Labour Party. It is expected that the Supreme Court will finalise its ruling by January. If the government appeal is rejected, the Prime Minister will likely present a short bill to approve Article 50, which will have to pass through the House of Commons and the House of Lords with more room for debate. This will likely only be passed with some delays and amendments, and while it seems that the March deadline may be met, such an outcome could create further uncertainty. Most importantly, parliament will likely demand more transparency about the negotiation strategy, an element that the government does not want to provide, given its obvious sensitivity. Finally, the procedures for Scotland remain unclear.

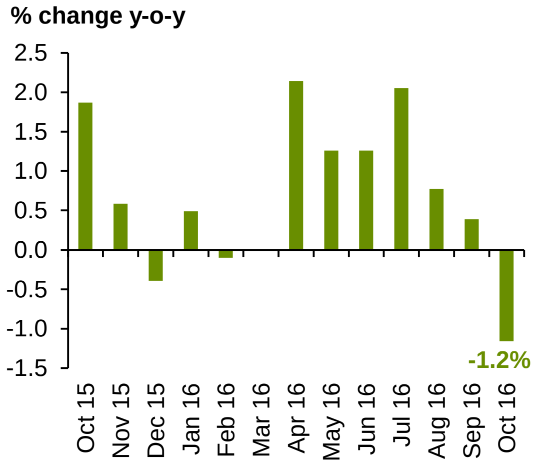
Given the latest developments, a so-called “hard exit” – contrary to a “soft exit” − still seems more likely. A hard exit would require the UK to renegotiate most of its trade agreements. While the latest performance of the UK’s economy remained strong up to now, the trend is likely to taper off as the negative implications of Brexit seem to slowly filter through to the economy.

Graph 3.6: UK PMIs



Sources: CIPS, IHS Markit and Haver Analytics.

Graph 3.7: UK industrial production



Sources: Office for National Statistics and Haver Analytics.

The **PMI for manufacturing** remained at a solid level in November of 53.4. But this is 1 index point below the October level of 54.2 and below the 55.4 of September. Positively, and more importantly for UK economic growth, the **services sector PMI** rose to 55.2 from 54.5 in October. However, the momentum in **industrial production** turned significantly negative in October, falling by 1.2% y-o-y, the largest decline since September 2013. Domestic **consumption** held up very well as retail values increased by 6.6% in October, after an already strong rise of 2.9% y-o-y in September and 4.4% y-o-y increase in August. This better-than-expected post-Brexit development has led to an again slightly upward revision in growth estimates for 2016. The forecast for 2016 has been revised up to 1.9% from 1.8%, while growth expectations for 2017 remain at 0.8%. However, the underlying assumption of a severe negative impact from Brexit on the UK economy in the short-term has not changed.

Emerging and Developing Economies

In **Brazil**, GDP contracted by 2.9% y-o-y in 3Q16 following declines of 5.4% and 3.6%, respectively, in 1Q16 and 2Q16. The slowing pace of private consumption – which accounts for nearly 65% of the GDP – was the main driver of this diminished contraction in GDP. The latest contraction in GDP during 3Q16 largely confirms the expected deceleration of 3.4% in 2016, while the slow upward trend also supports the anticipation of minor cyclical growth of 0.4% in 2017.

In **Russia**, a minor GDP contraction of 0.4% y-o-y in 3Q16 represents a continuation of an upward trend seen since the beginning of this year. This supports expectations of a much lower contraction in 2016 compared to 2015. Furthermore, strong performance by the private sector (services and manufacturing) holds promise for growth prospects in the coming couple of months, supporting an outlook of a return to GDP growth in 2017.

India's GDP growth rate in 3Q16 was 7.3%. It seems that in the short-term, the process of demonetisation has had a sharply negative effect on economic growth. On the positive side, a top EU official said investors from European countries are now bringing "white clean money" to India and suggested there was a need to resume talks on the EU-India Broad-based Trade and Investment Agreement (BTIA), popularly known as a free trade agreement. India's demand-side real GDP grew at 7.3% y-o-y during 3Q16, which was strong enough to support a fast-growing GDP. The supply-side measure of GDP showed a clear loss of momentum, with real growth slowing to 7.1% y-o-y from the 2Q16 7.3% y-o-y. As a result of the slowdown in private consumption and a likely further contraction in fixed investment, economic growth expectations have been reduced from 7.2% to 7.1% in 2017.

China's economy continued to improve in November, although it lost some momentum compared to the previous month. In real terms, Chinese investment and retail sales growth slowed in October while industry was stable, indicating a slightly slower start to the 4Q16. Inventory and employment data also showed the basis for growth is not yet solid and investors have to remain vigilant about the risk of a downturn in the coming months. The overall momentum of economic growth remained reasonable in October and November, with the momentum of Fixed Asset investment (FAI) picking up and supported by still strong real estate activity, as well as fast infrastructure investment growth. But FAI in manufacturing slowed down again in October, having accelerated in September, and remains close to its average pace in 3Q16. The outcome of the US election has created more uncertainties and challenges for China, particularly through trade channels and the export outlook, given the potential for a shift in US policy on free trade.

Table 3.2: Summary of macroeconomic performance of BRIC countries

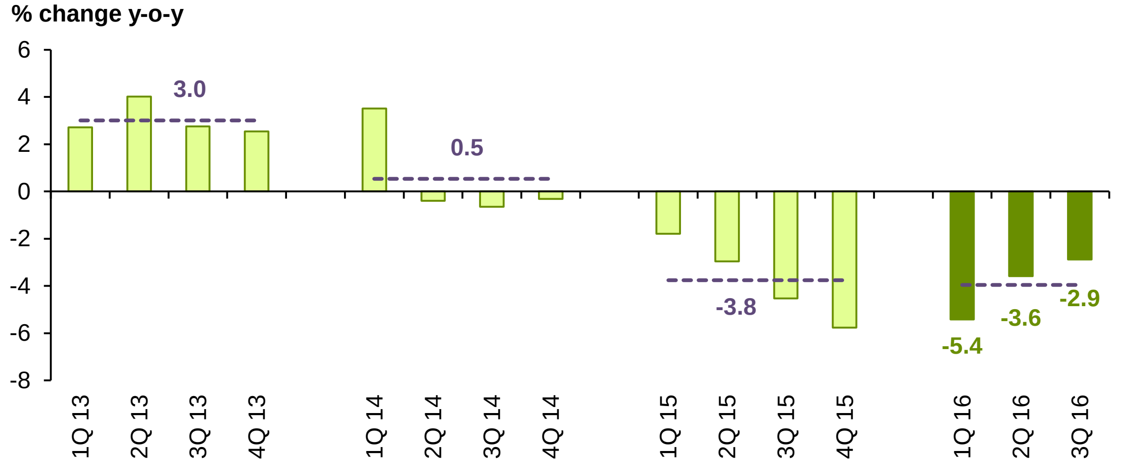
	GDP growth rate		Consumer price index, % change y-o-y		Current account balance, US$ bn		Government fiscal balance, % of GDP		Net public debt, % of GDP	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Brazil	-3.4	0.4	9.0	7.2	-16.7	-15.5	-6.4	-6.8	72.6	79.1
Russia	-0.6	0.8	7.1	5.4	33.2	54.1	-3.7	-2.9	13.2	15.3
India	7.5	7.1	5.1	5.0	-9.5	-15.2	-3.8	-3.5	51.9	51.2
China	6.7	6.2	2.1	2.0	306.8	278.7	-3.8	-4.2	20.1	24.8

Note: 2016 and 2017 = Forecast.
Sources: Consensus Economics, Economic Intelligence Unit, Financial Times, OPEC Secretariat and Oxford.

Brazil

The **GDP** of Brazil contracted by 2.9% y-o-y in 3Q16 following declines of 5.4% and 3.6%, respectively, in 1Q16 and 2Q16. A reduced slowdown in **private consumption**, which accounts for nearly 65% of GDP, was the main driver of this diminished contraction in GDP. Private consumption declined 3.4% y-o-y in 3Q16, compared with 5.8% and 4.8%, respectively, in the first two quarters. In contrast, **government consumption** decreased by 0.8% y-o-y, faster than the 0.5% y-o-y drop in the previous quarter. Changes in **trade,** while remaining supportive to growth, showed a lower increase in exports and less of a decrease in imports, compared to several previous quarters.

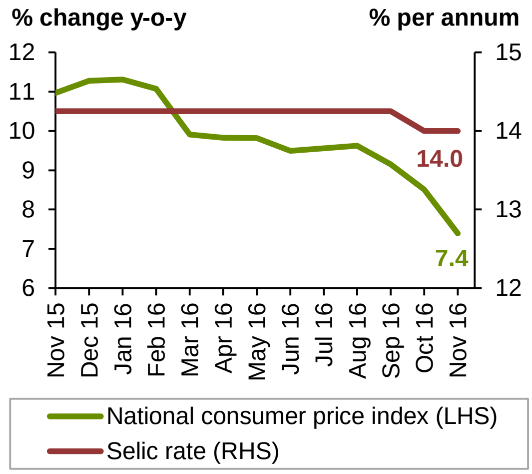
Graph 3.8: Brazilian GDP growth rate



Sources: Instituto Brasileiro de Geografia e Estatística and Haver Analytics.

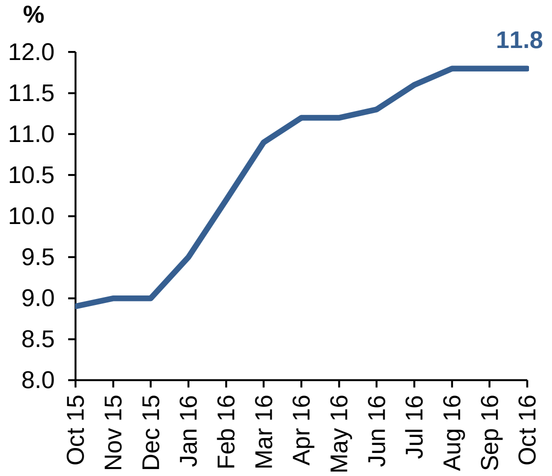
Inflation in Brazil dropped to 7.4% y-o-y in November, down from 8.5% a month earlier, and continued its slow deceleration. At the beginning of the year, inflation stood at 11.3%. Reflecting this slow easing in inflation, the central bank lowered its benchmark **interest rate** from 14.25% to 14.00% in October and to 13.73% early this month. The **consumer confidence index** dropped in November to 80.9 from 84.4 a month earlier, affected by pressures on the currency and continued political uncertainty in the country. The **real** depreciated by 4.9% m-o-m vs. the US dollar in November. The **unemployment rate** remained at a record high of 11.8% in October.

Graph 3.9: Brazilian inflation vs. interest rate



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

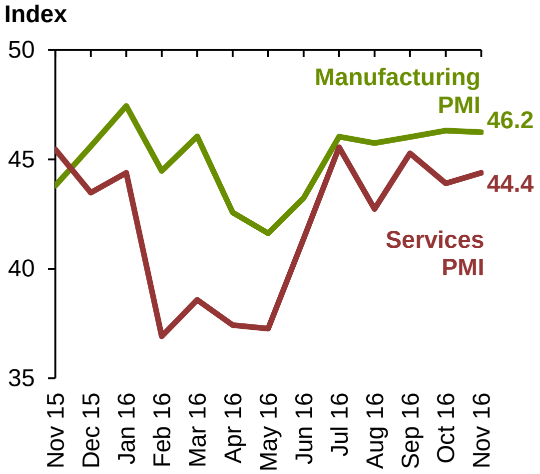
Graph 3.10: Brazilian unemployment rate



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

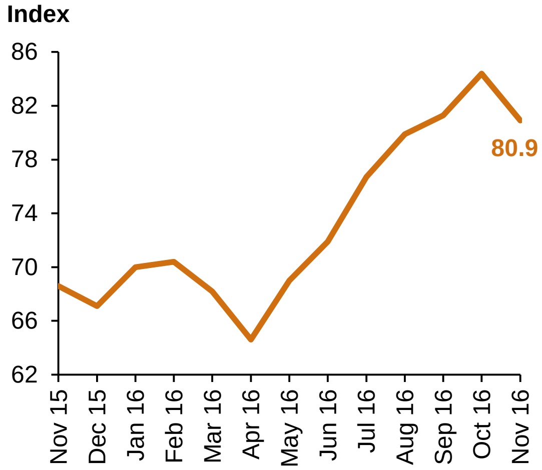
The severe **manufacturing sector** recession persisted in November with the IHS Markit manufacturing PMI now in contraction territory for 22 months in a row. The index posted 46.2 last month vs. 46.3 in October. Declines in production, new business and employment weighed on the sector.

Graph 3.11: Brazilian manufacturing and services PMIs



Sources: HSBC, IHS Markit and Haver Analytics.

Graph 3.12: Brazilian consumer confidence index



Sources: Fundação Getúlio Vargas and Haver Analytics.

The latest contraction in GDP during 3Q16 largely confirmed expectations of a deceleration of 3.4% in 2016, while the slow upward trend also supported the anticipation of minor cyclical growth of 0.4% in 2017.

Russia

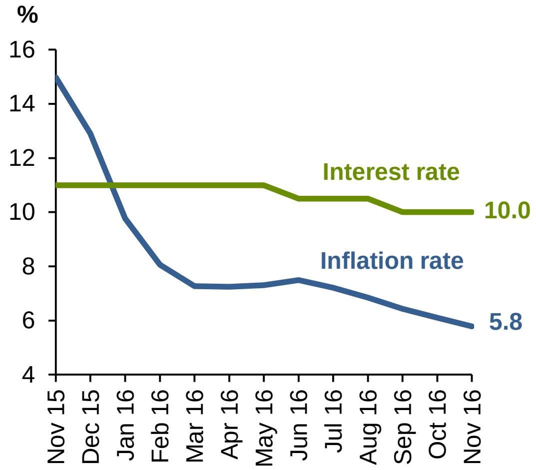
The economic deceleration continued in 3Q16, though at a rate that only confirms the clear upward trend towards growth territory. **GDP** contracted by 0.4% y-o-y in 3Q16, its smallest rate of contraction since the onset of the current recession in 1Q15. Details on the components of GDP have not yet been published.

Graph 3.13: Russian GDP growth rate

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

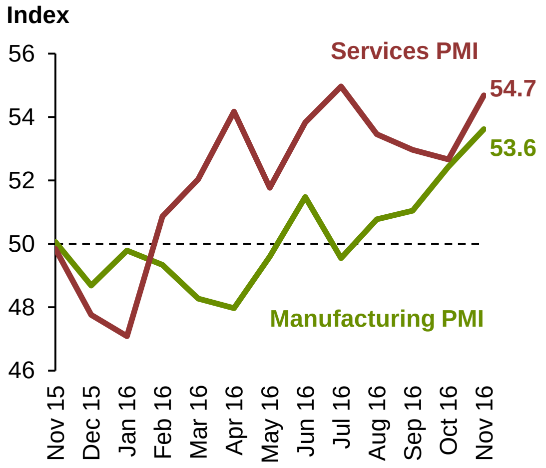
The downward trend of **inflation** continued in November with inflation posting 5.8%, its slowest rate of increase since January 2014. Following a 3% m-o-m appreciation in October, the **ruble** depreciated by 2.6% m-o-m in November. At the same time, the benchmark **interest rate** was kept unchanged at 10.0% by the central bank.

Graph 3.14: Russian inflation vs. interest rate



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

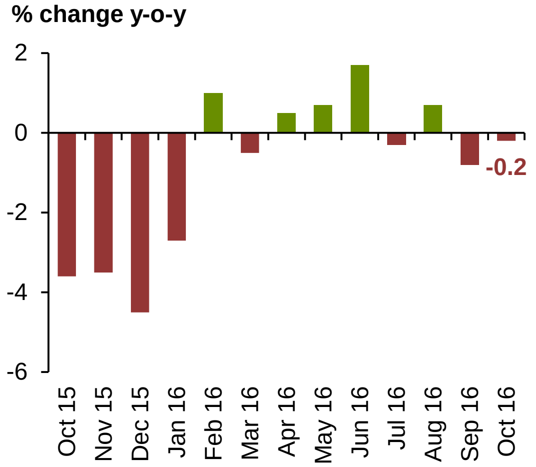
Graph 3.15: Russian PMIs



Sources: HSBC, IHS Markit and Haver Analytics.

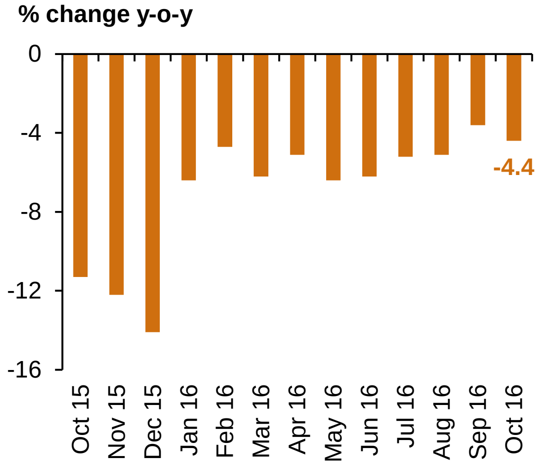
The IHS Markit Russia **manufacturing** PMI showed a strong reading in November, registering its highest level in 68 months. The index was supported by marked growth in production and new orders to post 53.6, up slightly from 52.4 in the previous month. **Industrial production** decreased by only 0.2% y-o-y in October and is expected to largely return to growth territory in the coming months. The **services sector** is also accelerating, with November's reading of the PMI at a four-month-high of 54.7. This has helped the composite output index to reach a four-year high of 55.8. The survey showed strong growth in new orders which led to faster build-up in backlogs. **Retail trade/sales** declined by 4.4% y-o-y in October and are likely to continue moving towards growth in 2017.

Graph 3.16: Russian industrial production



Sources: Federal State Statistics Service and Haver Analytics.

Graph 3.17: Russian retail sales



Sources: Federal State Statistics Service and Haver Analytics.

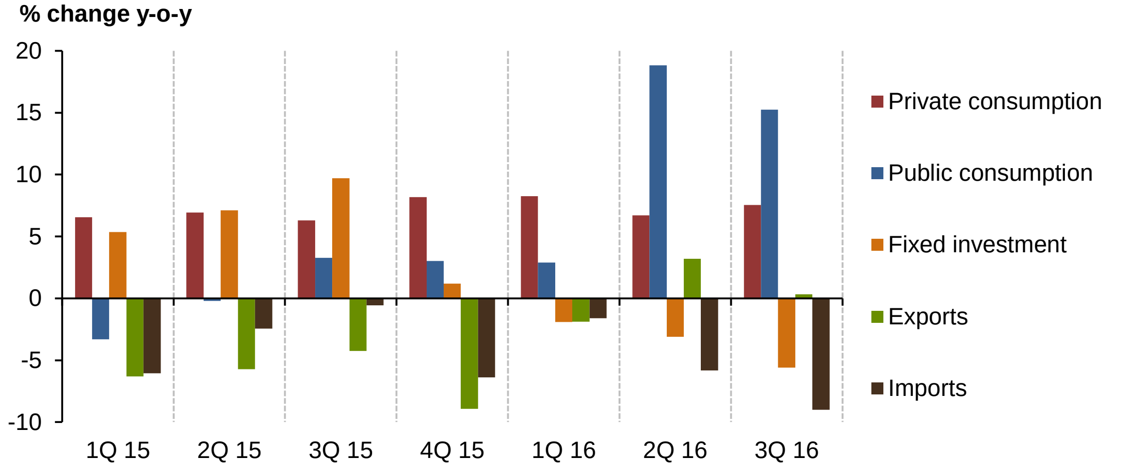
The minor **GDP** contraction of 0.4% y-o-y in 3Q16 represents a continuation of an upward trend seen since the beginning of this year, which supports expectations of a much slower contraction in 2016 compared to 2015. Furthermore, strong performance by the private sector – services and manufacturing – holds promising prospects for growth in the coming couple of months, backing the outlook of a return to GDP growth in 2017.

India

India's economy has seen a marginal acceleration in growth in 3Q16, registering 7.3%. In comparison, **GDP growth** expanded by 7.1% in 2Q16 and at 7.6% in 1Q16. India's demand-side GDP grew at 7.3% y-o-y during 3Q16, which was strong enough to support the fast-growing GDP.

Private demand offers the greatest hope for a return to stronger growth. Also, a reasonable summer monsoon season has supported rural household spending. It seems the recovery in private consumption was insufficient for offsetting the deepening contraction in real fixed investment, which fell for the third consecutive quarter, down about 5.6% y-o-y. In addition, weak capacity utilisation and difficult access to finance sources have continued to weigh on the investment decisions of businesses, while any additional boost to public investment has hit budgetary constraints.

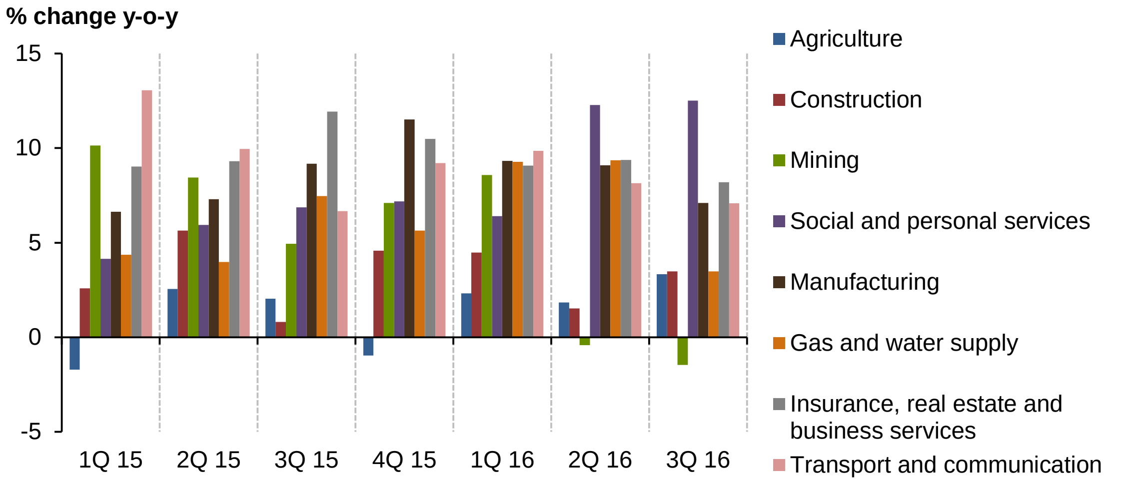
Graph 3.18: Indian GDP growth by demand side



Sources: Central Statistics Office and Haver Analytics.

The **supply-side** measure of GDP showed a loss of momentum, with real growth slowing to 7.1% y-o-y from 2Q16, when it was 7.3% y-o-y and consistent with the demand-side.

Graph 3.19: Indian GDP growth by supply side

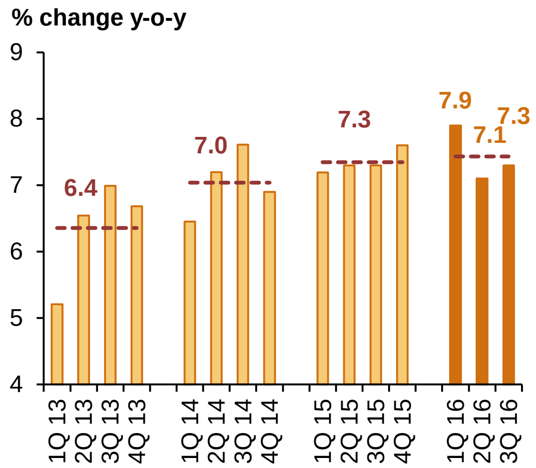


Sources: Central Statistics Office and Haver Analytics.

Agriculture showed a recovery for the first time in two years. The only other positive spot on the supply side was faster growth in construction, which was up 3.5% y-o-y following a 1.5% y-o-y expansion in 2Q16, supported by ongoing infrastructure projects such as railroads, as well as a slight gain in real estate activity following new rules for quicker settlements of housing disputes adopted in August. The rest of industrial sector activity has been weak since the June quarter, with mining and quarrying sliding further into contraction.

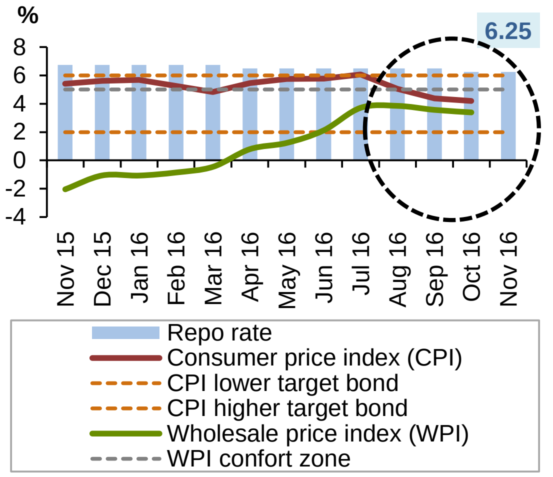
In terms of inflation, India's **CPI** decreased to 4.20% y-o-y in October from 4.39% y-o-y a month earlier. It was the lowest inflation rate since September 2015, as food costs rose at a slower pace. Also, WPI decreased to 3.53% y-o-y in October from 3.66% y-o-y in the previous month.

Graph 3.20: Indian GDP growth



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

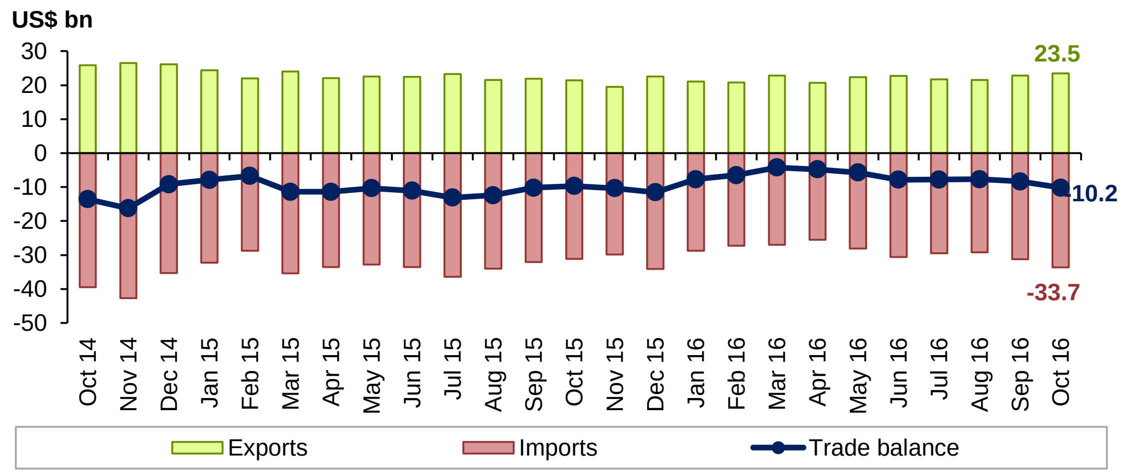
Graph 3.21: Indian inflation vs. repo rate



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

The **trade** deficit in India widened 4% y-o-y to $10.2 billion in October. **Exports** went up 9.6% to $23.5 billion, the highest level since March 2015. **Imports** increased 8.1% to $33.7 billion, the highest level since August last year. **Gold purchases** jumped 108.4% to $3.5 billion and oil imports increased 3.98% to $7.14 billion in October.

Graph 3.22: Indian trade balance



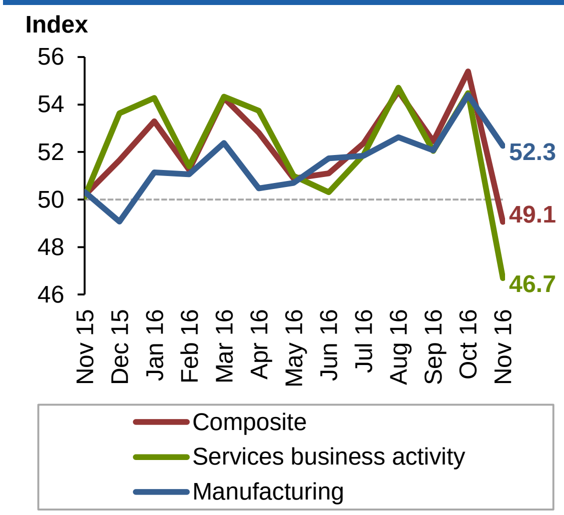
Sources: Ministry of Commerce and Industry and Haver Analytics.

The Reserve Bank of India (RBI) followed the Indian government's decision on 8 November for a crackdown on 'black', or unaccounted-for, money and replaced old INR 500 and INR 1,000 notes. It also imposed an incremental cash reserve ratio, protecting Indian bank liquidity against expected future withdrawals. Citing a "surge in deposits" and "large excess liquidity in the system" because of India's ongoing exchange of banknotes, the RBI on 26 November introduced an incremental cash reserve ratio of 100% to be applied to the increase in deposits between 16 September and 11 November. Ahead of its monetary policy review scheduled for 9 December (and the next review of this ratio), the RBI has asked banks to deposit these funds with it for two weeks beginning 26 November as a "purely temporary measure", while the standard cash reserve ratio remains at 4%. The incremental cash reserve ratio is designed to absorb surplus liquidity arising from the return of physical cash to the banking system and will not earn interest. The demonetisation of INR 500 and INR 1,000 bills has led to a large increase of deposits, which has boosted the liquidity of banks temporarily. However, it seems in the short-term that the effect of this on economic growth could be sharply negative, owing in part to the poor implementation of the demonetisation process.

Fiscal policy will most likely become more expansionary as the government finds more space for spending, given an expected increase in tax collection, as some undisclosed income is expected to be declared following the demonetization process. Monetary policy is also likely to remain expansionary, with as much as 50 basis points (bp) in policy rate cuts still anticipated before April 2017. A reduction in the amount of currency in circulation and weaker domestic demand are seen further easing inflation, which could open more room for policy easing. A temporary hike in bank liquidity could also drive short-term interest rates down, helping to revive credit growth. However, the outlook for monetary policy involves significantly more risk. The reasons behind the RBI's further monetary policy actions are:

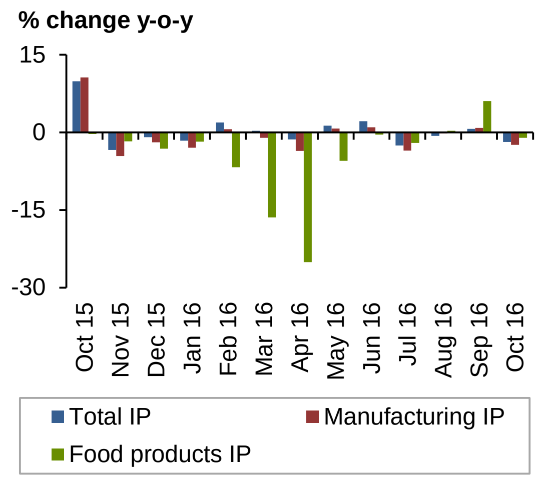
- Growing pressure on the Indian rupee, following the strengthening of the US dollar after the US presidential election and the anticipated interest rate hikes by the US Federal Reserve, which could make it more difficult for the RBI to cut rates for much longer.
- The RBI's own behaviour appears to have become less predictable in September, with the bank arguably delaying actions and providing an inconsistent response to the effects of demonetisation on banks, all of which calls its future actions into question.

Graph 3.23: Indian PMIs



Sources: Nikkei, IHS Markit and Haver Analytics.

Graph 3.24: Indian industrial production breakdown



Sources: Central Statistical Organisation of India and Haver Analytics.

November's data highlighted an eleventh consecutive month of improvements in manufacturing conditions across India, with the country's **PMI** registering 52.3. However, down from October's 22-month high of 54.4, the latest reading pointed to a modest overall upturn. PMI data for November showed that the sudden withdrawal of high-value banknotes in India caused problems for manufacturers, as cash shortages hampered growth of new work, buying activity and production. However, whereas some may have anticipated an outright downturn, the sector held its ground and remained in an expansionary mode.

GDP growth expectations for 2016 have been kept unchanged at 7.5%. But given some downward pressures, such as a slowdown in private consumption and a likely further contraction in fixed investment, growth expectations have been reduced from 7.2% to 7.1% for 2017.

China

China's overall economic growth momentum remained reasonable in both October and November, with FAI momentum picking up and supported by still-strong real estate activity, as well as fast infrastructure investment growth. FAI in manufacturing slowed again in October, having accelerated a month earlier, but remains close to its average pace in 3Q16. While the growth in housing sales slowed last month, following housing purchase restrictions introduced by local governments in more than 20 cities in early October, housing starts picked up. With construction on existing projects picking up the pace as well, real estate FAI growth rose further. However, it seems the GDP growth outlook for next year is more uncertain. FAI growth accelerated for a second month, but remains well below growth rates considered 'slow' only a year ago. It must be stressed that the slightly faster growth in headline FAI is entirely due to faster investment growth in services, while industrial and construction sector investments continue to slow. Within the secondary sector, mining investment continued to contract by 20.9%, while manufacturing investment was unchanged at 3.1% and utilities investment slowed to 13.9% (from 16.1% last month). Initial data indicates that the utilities investment slowdown has been concentrated in power and heat supply. Lastly, construction sector investment growth slowed even further from a flat 0% in September to a 5% decline in October.

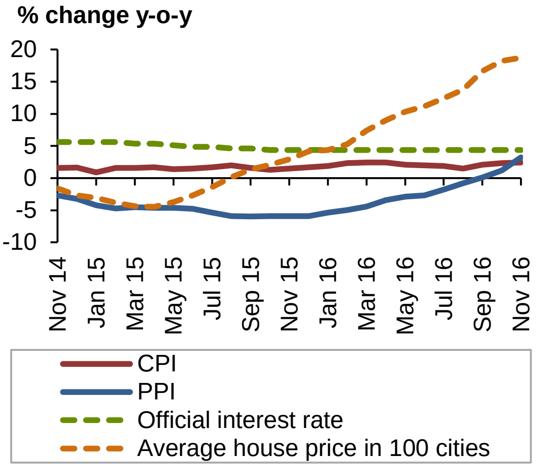
The recent US election has created more uncertainties and challenges for China, particularly from trade channels and the export outlook, given a shift in US policy on free trade. Meanwhile, a sharply strengthening US dollar is putting pressure on the yuan and could accelerate foreign exchange capital outflows. In real terms, Chinese investment and retail sales growth slowed in October, while industry was stable, indicating a slightly slower start to 4Q16.

In terms of foreign investment, China intends to attract such flows to support GDP growth next year. For this reason, China's Ministry of Finance relaxed its norms for foreign investments flowing into the country's free trade zones (FTZs). Until now, foreign investment had been restricted to four initial FTZs. The relaxation of rules in FTZs for manufacturing activities is likely to represent a precursor to the extension of such rules' relaxation to the higher value-added services sector. The government has committed to encouraging economic diversification to this sector.

Aggregate financing only totalled CN¥896.3 billion in October, compared with a 12-month average of CN¥1.4 trillion or a September level of CN¥1.7 trillion. One of the primary reasons for the decline in lending in recent months was related to lower Chinese yuan-denominated loan issuance, although most categories experienced lower flows of net new financing compared with the prior month. A three-month moving average of new financing growth rose to 34.7% y-o-y, a seven-month high, while broad money supply growth accelerated to 11.6%, a four-month high. In the first case, this primarily reflected a weak base in the prior year, rather than particularly high lending levels in October. Aggregate financing only totalled CN¥896.3 billion in October, compared with a 12-month average of CN¥1.4 trillion or a September level of CN¥1.7 trillion.

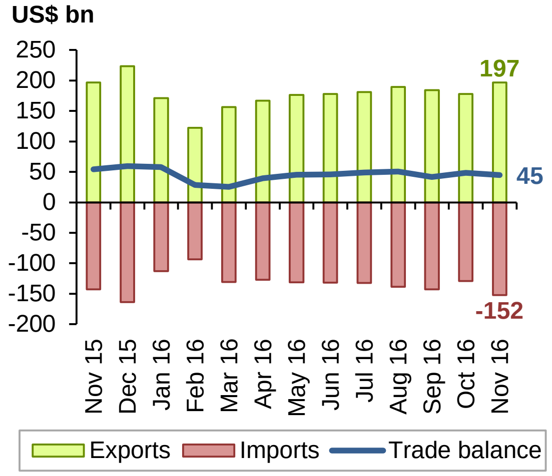
China's **CPI** rose 2.1% y-o-y in October of 2016, compared to a 1.9% rise in September, which was in line with market expectations. It was the highest inflation rate since April, as the politically sensitive food prices category increased by 3.7%, while non-food costs rose at a slower 1.7 %. The **PPI** accelerated further in October, rising by 1.2% y-o-y compared to an increase of 0.1% in September, in large part driven by gains in the prices of steel and coal. Rising output prices in industry will continue to boost nominal sales revenue and profit growth, and reduce the need of industrial enterprises for external financing. The average prices of new homes in 70 Chinese cities went up 12.3% y-o-y in October of 2016, compared to an 11.2% rise in September. It was the 13th straight monthly gain and the fastest rise on record.

Graph 3.25: Chinese CPI and PPI



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

Graph 3.26: Chinese trade balance



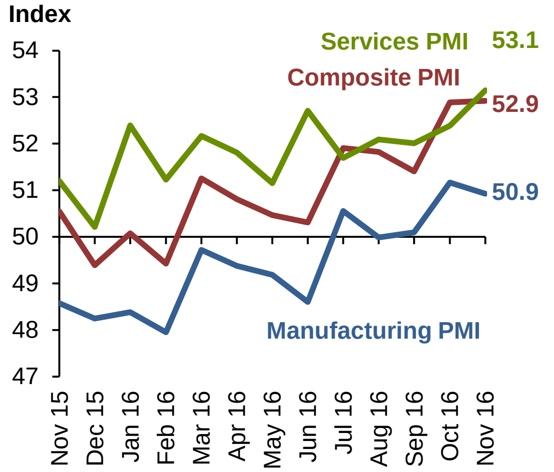
Sources: China Customs and Haver Analytics.

China's **trade** surplus was $45 billion in November of 2016, compared to a surplus of $54 billion a year earlier. In November, **exports** increased 10.7% y-o-y to $197 billion, following a drop in October. **Imports** increased by 17.8% to $152 billion, compared to a 9.4% fall in October.

The **Caixin China General Manufacturing PMI** came in at 50.9 in November, down from October's 51.2. It marked the second-highest reading in two years, indicating that the manufacturing industry has continued to pick up steam. The health of the sector has now strengthened in each of the past three months, which marks the longest period of improvement since late-2014. Chinese manufacturers noted a further rise in production volumes during November, stretching the current sequence of expansion to five months.

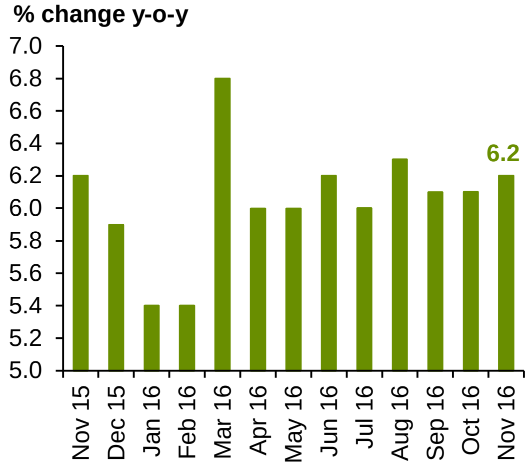
Under headline stability, mining sector output fell back into contraction, while overall manufacturing and utilities output grew at a slightly faster pace. Initial data indicates that overall light manufacturing output was stable. Meanwhile, the heavy manufacturing sectors remained stable and improved slightly, while **industrial production** was unchanged in October, expanding by 6.1%.

Graph 3.27: Chinese PMIs



Sources: Caixin, IHS Markit and Haver Analytics.

Graph 3.28: Chinese industrial production



Sources: China National Bureau of Statistics and Haver Analytics.

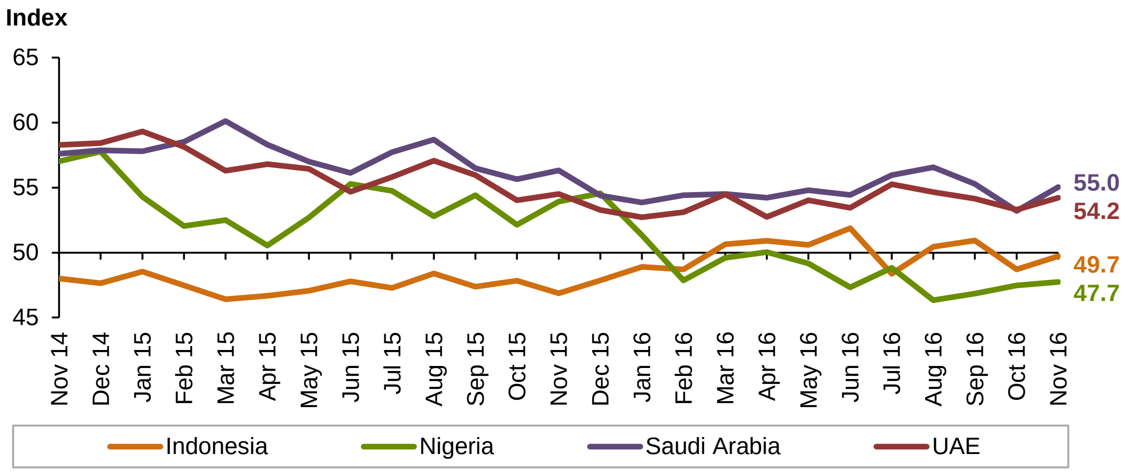
China's **GDP growth** expectations were kept unchanged at 6.7% in 2016 and 6.2% in 2017.

OPEC Member Countries

The economy of **Saudi Arabia** expanded 1.4% y-o-y in 2Q16 with the gross value added in the oil sector growing 1.6% y-o-y and in the non-oil sector rising 0.4% y-o-y, according to the Saudi General Authority for Statistics. The long series of growth in the country's non-oil private sector gained more strength in November, with the Emirates NBD Saudi Arabia PMI increasing to 55.0, up from 53.2 in October. Faster growth in new orders and output, which have led to an increase in purchasing activity, all supported the sector.

In **Algeria**, GDP grew by 3.4% y-o-y in 2Q16. According to the Office National des Statistiques, the real economy grew by 4.0%, while the "non-productive economy" increased by 3.5%. Agriculture, forestry and fishing sector expanded by 5.3% in 2Q16, up from 4.8% in 1Q16.

Graph 3.29: PMIs of Indonesia, Nigeria, Saudi Arabia and UAE



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

The economy of **Indonesia** grew 5.0% y-o-y in 3Q16. Private consumption expenditure rose 5.0% y-o-y, while general government consumption expenditure dropped by nearly 3.0% y-o-y. The exports of goods and services fell by 6.0% and imports also declined 3.9%. Floods in parts of Indonesia, which disrupted supply chains, were largely responsible for the manufacturing sector remaining in contraction last month, according to the Nikkei Indonesia manufacturing PMI.

Following two consecutive quarters of contraction, the economy of **Nigeria** shrank by 2.3% y-o-y in 3Q16, according to the country's National Bureau of Statistics. The Stanbic IBTC Bank Nigeria PMI highlighted that contraction in the private sector eased somewhat in November on renewed growth of new orders received.

In the **UAE**, the non-oil private sector witnessed the fastest increase in new business since August, which supported the PMI reading for November. The index increased to 54.2 in November, up from 53.3 in October. Price discounting and other marketing initiatives were reported as drivers behind higher new orders received.

Other Asia

In **Malaysia**, growth in GDP increased to 4.3% y-o-y in 3Q16, up from 4.0% in the previous quarter. A sharp deceleration in government expenditure growth from 6.5% in 2Q16 to 3.1% in 3Q16 was reported alongside slower growth of only 2.0% in gross fixed capital formation (GFCF) in 3Q16 compared to 6.1% in 2Q16. In contrast, net exports rebounded from a 7.0% y-o-y decline in 2Q16 to growth of 6.0% in 3Q16.

In the **Philippines**, GDP accelerated 7.1% y-o-y in 3Q16, compared to the 7.0% increase in the previous quarter. Growth in government consumption expenditure fell sharply from 13.5% y-o-y in 2Q16 to only 3.1% in 3Q16. Growth in private consumption was slightly lower in 3Q16 at 7.3% from 7.4% in the previous quarter.

In **Thailand**, GDP grew 3.2% y-o-y in 3Q16. Government expenditures slumped by 5.8% y-o-y, while private consumption increased by 3.5%. Meanwhile, GFCF rose by 1.4% and exports increased by 3.4%.

Africa

The economy of **Egypt** grew by a robust pace in 2Q16. GDP expanded 4.5% y-o-y in 2Q16, following the 3.7% expansion in the previous quarter. While reported growth in the private sector slowed from 5.0% in 1Q16 to 1.7% in 2Q16, public sector consumption, climbed by 4.8% y-o-y, up from the 2.0% growth seen in the previous quarter. While the decline in exports continued, it eased to only 2.4% y-o-y from the 18.7% drop in 2Q16. Following four quarters of contraction, imports rose 6.9% y-o-y.

The GDP of **South Africa** expanded by a slightly faster pace of 1.4% in 3Q16, compared to a rise of 1.3% in 2Q16. Growth in private consumption expenditure accelerated to 1.1%, up from 0.8%. Growth in public consumption expenditure slowed to 1.1% from 1.5% and the decline in GFCF deepened even further to register a fall of 6.1% in 3Q16 from the 3.0% drop in the previous quarter. As for exports, they declined for the first time since 1Q13, dropping by 3.9% in 3Q16 from the same period last year. Imports by South Africa declined in 3Q16 for the third consecutive quarter.

Latin America

The GDP of **Argentina** dropped by 3.4% y-o-y in 2Q16 after posting minor growth of 0.4% in the previous quarter. While private consumption decreased by 0.1%, government expenditure showed a sharp drop of 2.0% y-o-y in 2Q16 from the growth of 2.6% reported in the previous quarter. The downward trend in GFCF continued for the second quarter in a row in 2Q16. Exports were also 1.9% less in 2Q16 y-o-y compared to the same period last year, whereas imports continued to grow, though at a notably slower pace of 8.7% compared to 12.6% in 1Q16.

Transition region

Growth in the economy of the **Czech Republic** slowed in 3Q16 to 1.6% y-o-y from 3.6% y-o-y in 2Q16. This came on the back of slower growth in household consumption (2.7% y-o-y), government consumption (1.6% y-o-y), GFCF (-2.8%) and exports (1.1% y-o-y).

In **Hungary**, GDP increased by 2.2% y-o-y in 3Q16, which was lower than the previous quarter's 2.8%. Collective government consumption posted a drop of 1.6% y-o-y, compared to the 6.2% growth seen in 2Q16, whereas that of households continued to grow albeit at a slower pace than in the previous quarter. Although the rate of contraction remained sizable, GFCF showed a notably slower rate of contraction in 3Q16 with 8.8% compared to the 19.7% decrease seen in 2Q16.

Oil prices, US dollar and inflation

The US dollar jumped in November against major currencies with the exception of the British pound sterling. On average, the US dollar gained 3.7% against the Japanese yen, and has increased against it by 6.1% in the last three months. The dollar gained 1.9% against the Euro in November and rose against the Swiss franc by 0.6%. In contrast, the dollar declined by 0.7% against the pound sterling due to better-than-expected economic performance since the Brexit referendum, while uncertainty remains regarding Brexit negotiations between the UK and the EU.

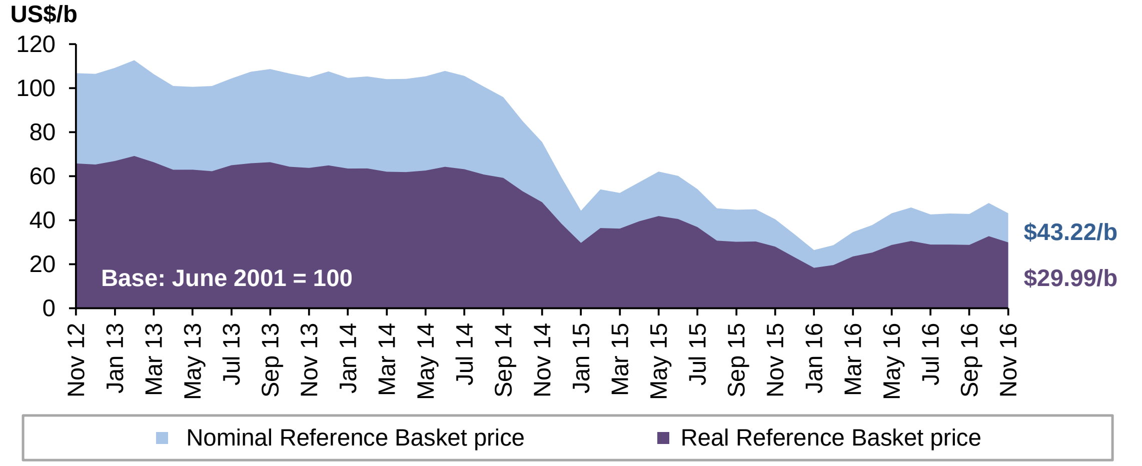
Compared with the Chinese yuan, the US dollar rose by 1.4% m-o-m on average in November, its third consecutive monthly increase. It increased by 1.3% m-o-m against the Indian rupee, its largest advance since February. Compared with the Brazilian real, the US dollar increased by 4.9% m-o-m on average and by 2.6% against the Russian ruble.

Against the currencies of the other NAFTA trading partners (Canada and Mexico), the US dollar on average ended up by 5.3% against the Mexican peso, but recovered some ground from the lows seen in the days that followed the US presidential election – partly on the uncertainty of the outlook for trade relations with the US. The Central Bank of Mexico increased interest rates by 0.5% in order to tame inflationary pressures. Meanwhile, the US dollar advanced by 1.4% against the Canadian dollar.

The US dollar increases have mainly reflected expectations for higher interest rates in in view of further confirmation of the US economy's strong performance in 3Q16, as well as continuing improvements in the labour market, and in anticipation of stimulus measures by the new US administration. At the same time, the central banks of the majority of currency counterparts are expected to remain accommodative. Market participants' expectations for an interest rate hike at the upcoming meeting of the Fed further solidified during the month.

In nominal terms, the price of the OPEC Reference Basket (ORB) decreased by $4.65, or 9.7%, from $47.87/b in October $43.22/b in November. In real terms, after accounting for inflation and currency fluctuations, the ORB decreased to $29.99/b from $32.80/b (base June 2001=100). Over the same period, the US dollar advanced by 1.2% against the import-weighted modified Geneva I + US dollar basket*, while inflation decreased by 0.1%

Graph 3.30: Impact of inflation and currency fluctuations on the spot OPEC Reference Basket price*



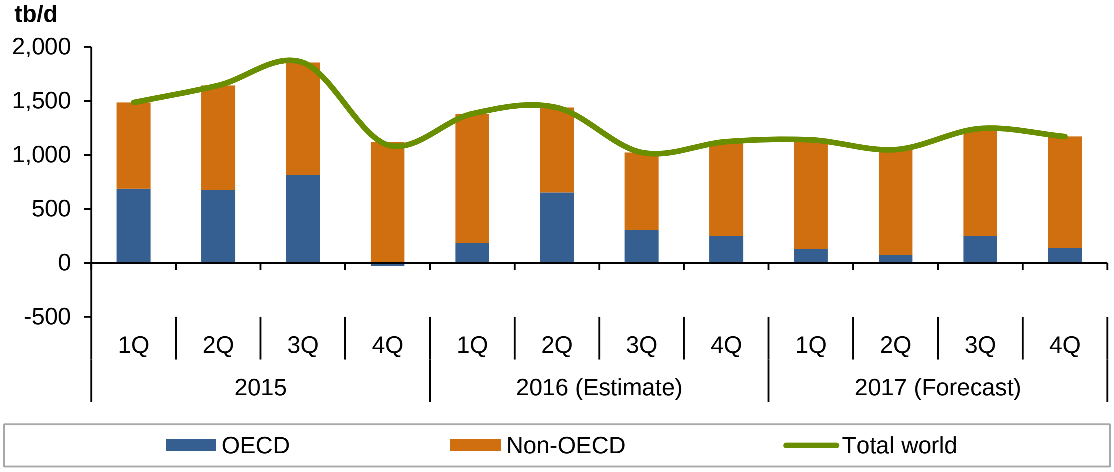
Source: OPEC Secretariat.

* *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 was revised slightly higher by 11 tb/d from the November *MOMR*, largely to reflect better-than-expected oil consumption in OECD Europe and Asia Pacific. World oil demand growth currently stands at 1.24 mb/d with total global consumption anticipated at 94.41 mb/d. In 2017, projected oil demand growth remained unchanged from last month's report at 1.15 mb/d, leading to an expected total world oil consumption of 95.56 mb/d.

Graph 4.1: Quarterly world oil demand growth



Source: OPEC Secretariat.

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

	2015	1Q16	2Q16	3Q16	4Q16	2016	Change 2016/15 Growth	%
Americas	24.60	24.57	24.70	25.13	24.80	24.80	0.20	0.82
of which US	*19.84*	*19.91*	*19.99*	*20.27*	*19.97*	*20.04*	*0.20*	*0.99*
Europe	13.73	13.63	13.90	14.33	13.75	13.90	0.18	1.27
Asia Pacific	8.03	8.57	7.63	7.67	8.11	7.99	-0.03	-0.39
Total OECD	**46.35**	**46.78**	**46.23**	**47.13**	**46.66**	**46.70**	**0.35**	**0.75**
Other Asia	12.04	12.42	12.63	12.37	12.73	12.54	0.50	4.12
of which India	*4.05*	*4.51*	*4.25*	*4.12*	*4.44*	*4.33*	*0.28*	*6.92*
Latin America	6.56	6.19	6.49	6.76	6.45	6.47	-0.09	-1.30
Middle East	7.97	7.94	7.79	8.39	7.89	8.00	0.03	0.38
Africa	3.99	4.12	4.09	4.03	4.17	4.10	0.11	2.78
Total DCs	**30.57**	**30.68**	**31.01**	**31.55**	**31.23**	**31.12**	**0.55**	**1.81**
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	10.95	10.83	11.37	11.11	11.61	11.23	0.28	2.56
Total "Other regions"	**16.25**	**16.01**	**16.39**	**16.52**	**17.42**	**16.59**	**0.34**	**2.11**
Total world	**93.17**	**93.47**	**93.62**	**95.21**	**95.31**	**94.41**	**1.24**	**1.33**
Previous estimate	93.17	93.47	93.66	95.13	95.31	94.40	1.23	1.32
Revision	0.00	0.00	-0.04	0.08	0.00	0.01	0.01	0.01

*Note: * 2016 = Estimate.*
Totals may not add up due to independent rounding.
Source: OPEC Secretariat.

Table 4.2: World oil demand in 2017*, mb/d

	2016	1Q17	2Q17	3Q17	4Q17	2017	*Change 2017/16* Growth	%
Americas	24.80	24.79	24.85	25.37	24.96	25.00	0.20	0.79
of which US	*20.04*	*20.05*	*20.09*	*20.49*	*20.12*	*20.19*	*0.15*	*0.75*
Europe	13.90	13.61	13.89	14.36	13.78	13.91	0.01	0.07
Asia Pacific	7.99	8.51	7.56	7.65	8.05	7.94	-0.06	-0.71
Total OECD	**46.70**	**46.91**	**46.30**	**47.38**	**46.79**	**46.85**	**0.15**	**0.32**
Other Asia	12.54	12.75	13.02	12.75	13.10	12.91	0.37	2.93
of which India	*4.33*	*4.66*	*4.40*	*4.32*	*4.57*	*4.49*	*0.16*	*3.63*
Latin America	6.47	6.28	6.53	6.81	6.54	6.54	0.07	1.07
Middle East	8.00	8.07	7.91	8.48	8.00	8.11	0.11	1.35
Africa	4.10	4.23	4.19	4.14	4.29	4.21	0.11	2.63
Total DCs	**31.12**	**31.32**	**31.65**	**32.18**	**31.94**	**31.77**	**0.65**	**2.10**
FSU	4.66	4.56	4.42	4.79	5.10	4.72	0.06	1.30
Other Europe	0.70	0.71	0.66	0.70	0.80	0.72	0.02	3.15
China	11.23	11.11	11.63	11.40	11.85	11.50	0.27	2.38
Total "Other regions"	**16.59**	**16.38**	**16.72**	**16.89**	**17.75**	**16.94**	**0.35**	**2.11**
Total world	**94.41**	**94.61**	**94.67**	**96.45**	**96.48**	**95.56**	**1.15**	**1.22**
Previous estimate	94.40	94.61	94.71	96.37	96.48	95.55	1.15	1.22
Revision	0.01	0.00	-0.04	0.08	0.00	0.01	0.00	0.00

*Note: * 2017 = Forecast.*
Totals may not add up due to independent rounding.
Source: OPEC Secretariat.

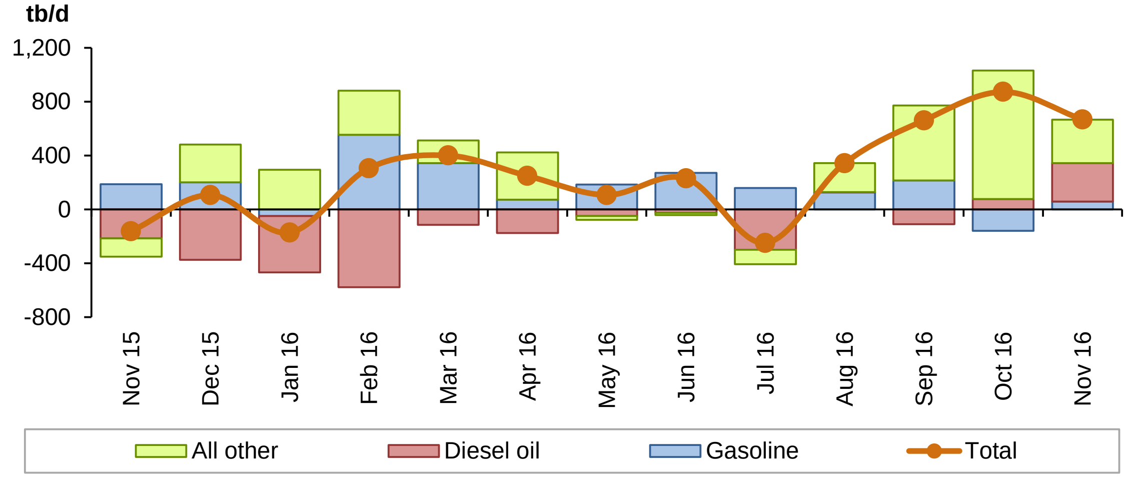
World Oil Demand for 2016 and 2017

OECD Americas

The latest available monthly **US** data for September 2016 shows solid oil demand growth compared to the same month in 2015, with all petroleum product categories registering gains, except diesel. Gasoline demand showed additions of 0.20 mb/d, or 2.2%, y-o-y, in line with the low oil price environment and increasing mileage during the same month. Consistent with healthy economic developments and, particularly, growing travel-related activity, requirements for jet fuel increased sharply y-o-y by 0.09 mb/d, or 5.9%. Supported by the petrochemical industry, propane/propylene requirements also rose sharply by 0.13 mb/d, or almost 13%, while fuel oil demand increased by 0.03 mb/d y-o-y.

Overall, improvements have been partly offset by shrinking diesel demand in the road transportation sector and predominantly as a result of lower industrial activities in the energy sector. Preliminary weekly data for October and November 2016 implies a continuation of the trend seen in September 2016, and hence overall y-o-y improvements of approximately 0.68 mb/d and 0.87 mb/d, respectively. Despite the preliminary nature of this data, this highlights continued strong US demand. Available data for eleven months in 2016 – monthly data until September and preliminary weekly data for October and November – shows US oil demand growing solidly by around 0.31 mb/d with gasoline, fuel oil, propane/propylene and jet fuel taking the largest shares in gains compared to the same period in 2015 and being partly offset by declines in the demand for diesel.

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



Source: US Energy Information Administration.

The overall risks for US oil demand developments in 2017 can be considered as balanced. Upside potential relates basically to developments in the overall economy and the price environment, while downside risks concern mainly fuel substitution, vehicle efficiencies and the increasing penetration of alternative technologies.

Table 4.3: US oil demand, tb/d

	Average January - November		Change 2016/15	
	2016	2015	tb/d	%
Propane/propylene	1,092	1,100	-7	-0.7
Gasoline	9,321	9,162	159	1.7
Diesel oil	3,867	3,991	-124	-3.1
Jet/kerosene	1,615	1,535	80	5.2
Fuel oil	372	253	119	47.3
Other products	1,092	1,100	-7	-0.7
US 50	**19,668**	**19,382**	**287**	**1.5**
US territories	**397**	**374**	**23**	**6.1**
Total	**20,065**	**19,755**	**310**	**1.6**

Source: US Energy Information Administration.

Following a sharp drop in 3Q16 and after several falling monthly figures in 1Q16 and 2Q16, **Mexican** oil demand declined strongly in October 2016 y-o-y, although with a diverse picture as far as the main product categories are concerned. Gasoline and jet fuel demand in the transportation sector grew substantially, but were more than offset by declines in LPG and diesel requirements. The risks for 2017 Mexican oil demand are rather balanced and depend mainly on the development of the overall economy and the degree of fuel substitution in the country's industrial sector.

Canada's oil demand dropped y-o-y in September. Losses in LPG and naphtha demand have been only partly offset by increasing gasoline and diesel requirements. In 2017, Canadian oil demand is projected to return to growth, with the risks being balanced.

OECD Americas oil demand in 2016 is expected to grow by 0.20 mb/d. For 2017, OECD Americas oil demand is projected to increase by 0.20 mb/d.

OECD Europe

European oil demand in September continued to be on the positive side for another month, in line with economic developments in the region and the low oil price environment. Low prices supported oil demand mainly in the road transportation sector, despite high taxation across different countries and the increasing penetration of alternative fuel vehicles. Solid oil demand growth was registered in a number of countries in the region, notably the Netherlands, Spain, Sweden and Turkey. Early indications for October 2016, however, imply losses of approximately 0.06 mb/d y-o-y in Germany, France, Italy and the UK, which represent the **European Big 4** oil consumers. Germany, Italy and France seemed to decline, while the UK grew. According to provisional figures from the European Automobile Manufacturer's Association, European auto sales interrupted their positive momentum in October 2016, with a 0.02% decrease y-o-y. Growth was nevertheless eminent in some major auto markets with auto sales growing in Italy, Spain and the UK, while sales in Germany and France were on the decline, y-o-y.

The outlook for the region's oil demand in 2017 has not changed since last month's projections and is capped with downside risks that relate mainly to factors affecting the region's oil demand. These factors include high taxation polices in oil use, particularly for private consumers, in combination with planned incentives for alternatives, fuel substitution, as well as uncertainty about the development of the economy in some countries of the region. Therefore, 2017 oil demand growth expectations are substantially lower than those observed in 2016, as some of the positive effects during the current year will most likely fade away.

Table 4.4: Europe Big 4* oil demand, tb/d

	Oct 16	Oct 15	Change	Change, %
LPG	400	393	7	1.8
Naphtha	599	583	16	2.7
Gasoline	1,090	1,110	-20	-1.8
Jet/kerosene	758	740	19	2.5
Diesel oil	3,396	3,378	18	0.5
Fuel oil	239	256	-17	-6.6
Other products	583	666	-82	-12.4
Total	**7,066**	**7,126**	**-60**	**-0.8**

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

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

OECD Europe oil demand is expected to grow by 0.18 mb/d in 2016, while 2017 oil demand is projected to be roughly at 2016 levels, growing by only 0.01 mb/d.

OECD Asia Pacific

With data up to October 2016, oil demand in **Japan** has been determined by falling requirements in the direct use of fuel and crude oil for electricity generation, as a result of increasing substitution with natural gas and coal. All of the product mix has declined during this period. LPG, jet kerosene, diesel oil and gasoline declined the least, shedding around 0.8%, 1.7%, 0.9% and 0.6% y-o-y, respectively. This pattern is expected to continue for the remainder of 2016 as substitution levels are projected to persist, affecting demand for fuel oil and direct crude for the purpose of burning. As in the recent years, the petrochemical industry has been the driver for Japanese oil demand growth, minimizing the large declines in total demand. On the other hand, Shikoku Electric Power Company has resumed commercial operations of the

890-megawatt Ikata 3 reactor after completing all regulatory safety checks. The reactor has been generating electricity since August 2016.

The outlook risks for 2017 Japanese oil demand remain skewed to the downside, largely depending on the development of the economy and the degree of fuel substitution.

Table 4.5: Japanese domestic sales, tb/d

	Oct 16	Oct 15	Change	Change, %
LPG	405	422	-17	-4.0
Naphtha	727	764	-37	-4.9
Gasoline	896	895	1	0.1
Jet/kerosene	298	288	10	15.7
Diesel oil	582	606	-24	-4.0
Fuel oil	378	389	-11	-2.9
Other products	57	58	-1	-1.3
Direct crude burning	27	95	-68	-71.2
Total	**3,371**	**3,517**	**-147**	**-4.2**

Source: Ministry of Economy Trade and Industry of Japan.

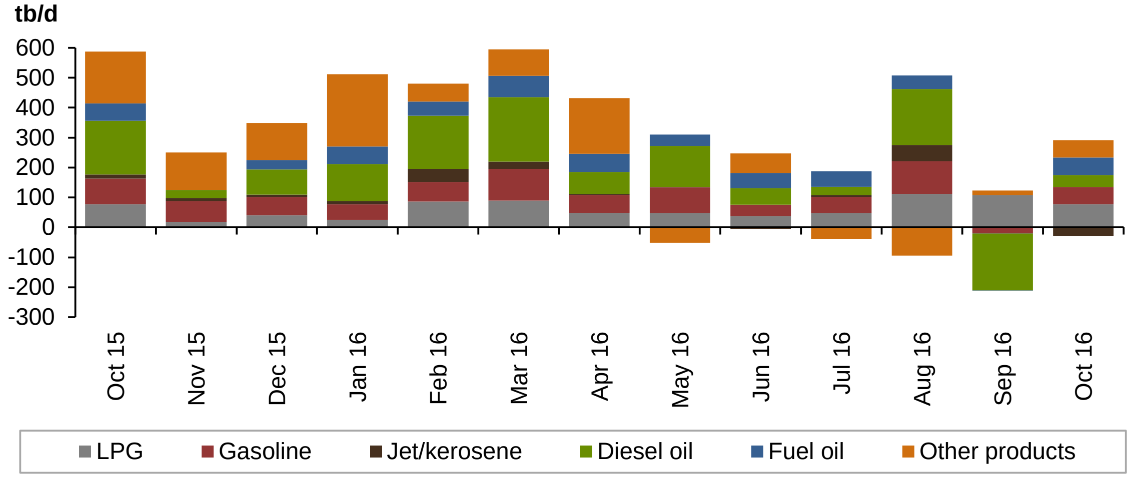
In **South Korea**, September 2016 came up with strongly increasing oil demand requirements, y-o-y. Demand in all the main petroleum product categories increased, particularly LPG and naphtha within the petrochemical and transportation sectors. Solid gains have also been observed in the demand for gasoline and diesel. Available data for nine months in 2016 implies substantial growth in South Korean oil demand of approximately 0.16 mb/d, or 6.2%, y-o-y and with the bulk of this growth being captured by petroleum products usage in the petrochemical and industrial sectors. As a result, the outlook for South Korean oil demand growth for 2017 remains skewed to the upside.

OECD Asia Pacific oil demand is expected to fall by 0.03 mb/d in 2016, while declines will continue in 2017 by 0.06 mb/d, y-o-y.

Other Asia

In October 2016, **Indian** oil demand rose by 0.26 mb/d, or around 6.5%, y-o-y. All products picked up momentum with the exception of jet/kerosene, with most gains recorded in the heavy part of the barrel.

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



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

LPG demand increased by more than 11.8% y-o-y, growing by more than 77 tb/d as governments pushed households to consume LPG instead of other fuels. This led to the development of LPG supply infrastructure projects, making more LPG available to end users at subsidized prices. Moreover, for the transportation sector, gasoline consumption increased by 10.5% y-o-y as a result of increases in vehicle sales. Overall passenger vehicle sales recorded growth of 4.5% in October with the 2-wheeler segment, which consumes gasoline as a fuel, registering a firm 8.7% rise y-o-y. Diesel oil demand also remained elevated, rising by 2.9% y-o-y as improvements across various sectors, including the construction and mining sectors, supported the uptick in diesel requirements. In contrast, jet/kerosene declined by 29 tb/d, or around 9.1%, y-o-y as slower momentum in the aviation sector dented demand slightly.

So far in 2016, Indian oil demand growth is solidly above the five year average by more than 0.17 mb/d y-t-d with LPG and gasoline demand supporting growth, primarily led by an improvement in the pace of the overall economy.

Table 4.6: Indian oil demand by main products, tb/d

	Oct 16	Oct 15	*Change*	*Change, %*
LPG	734	657	77	11.8
Gasoline	599	542	57	10.5
Jet/kerosene	294	323	-29	-9.1
Diesel oil	1,444	1,404	41	2.9
Fuel oil	347	290	58	20.0
Other products	897	839	58	6.9
Total	**4,316**	**4,054**	**262**	**6.5**

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

As for other countries in the region, oil demand was also firm during most of 2016. In **Indonesia**, oil demand has grown by around 94 tb/d, or 6.0%, y-o-y so far in 2016, in line with rising industrial and manufacturing activities and overall healthy growth in the country's economy. All the main petroleum categories saw positive growth in demand, except gasoline, which declined slightly. Strength was evident in the road transportation, residential and industrial sectors, notably the electricity generation sector, implying solid gains in requirements for LPG, jet/kerosene and diesel oil.

In **Thailand**, rising naphtha and gasoline requirements during the first nine months of 2016 were slightly offset by strongly declining LPG demand, mainly as a result of fuel substitution. Oil demand growth was generally solid in 2016 as requirements increased by more than 60 tb/d, or 5.8%, y-o-y during the first nine months of the year.

Oil demand in **Taiwan**, however, remained stagnant during the first nine months of 2016, with losses, particularly for naphtha and fuel oil. However, these losses were offset by gains, especially in LPG, gasoline and jet/fuel kerosene.

The risks for **Other Asia** oil demand growth in 2017 imply a positive outlook going forward. In India, oil demand is expected to be firm, dominated by transportation fuels, particularly gasoline, while the falling trend in fuel oil requirements in the agricultural sector as a result of fuel substitution to natural gas is projected to continue during the year.

Oil demand in the region is projected to rise by 0.50 mb/d in 2016. In 2017, it is foreseen to rise by around 0.37 mb/d.

Latin America

In **Brazil**, oil demand declined again y-oy in October, shedding around 0.22 mb/d or 8.8% y-o-y to stand at 2.32 mb/d. This decline seems to reflect the slow pace of economic activity. All products performed far lower than expected with the exception of gasoline, which continued to increase in October, rising by 30 tb/d, or 4.2%, y-o-y as the product remained a more economical choice for drivers than ethanol. Ethanol, on the other hand, fell sharply by around 0.11 mb/d, or 31.5%, y-o-y as more drivers switched away from ethanol to gasoline, taking advantage of the price differential between the two products. Moreover, diesel oil also declined during the month of October, dropping by more than 0.11 mb/d, or 10.6%, y-o-y. This sharp decline is in line with the slower economic activity in the country. Similar to last month's forecast, 2016 oil demand in Brazil is skewed to the downside as slower economic activity in the country is predicted to adversely impact oil requirements.

Table 4.7: Brazilian inland deliveries, tb/d

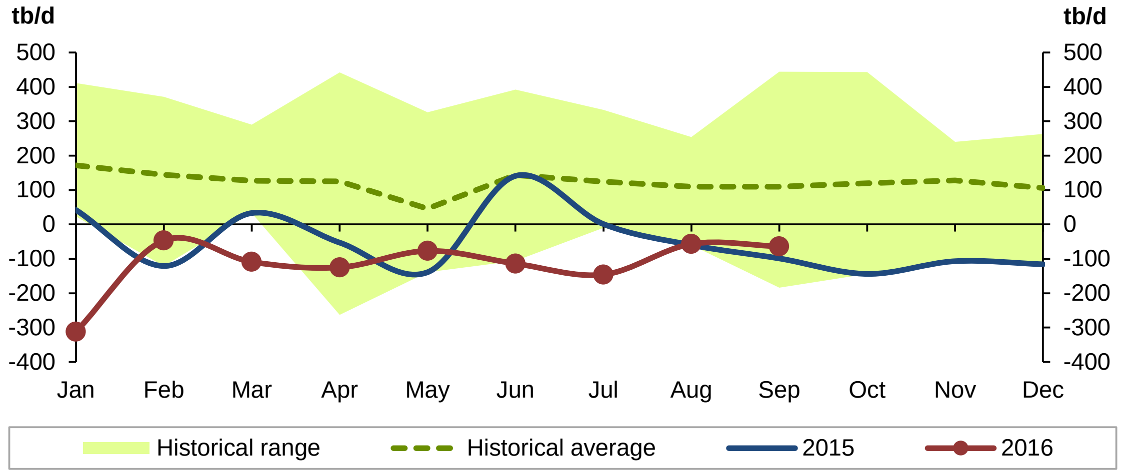
	Oct 16	Oct 15	Change	Change, %
LPG	222	224	-1	-0.6
Gasoline	736	706	30	4.2
Jet/kerosene	113	124	-12	-9.4
Diesel oil	940	1,051	-112	-10.6
Fuel oil	65	81	-17	-20.5
Alcohol	243	355	-112	-31.5
Total	**2,318**	**2,542**	**-224**	**-8.8**

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

In **Argentina**, oil demand growth levels in 2016 have been generally flat y-o-y on a cumulative basis. Product categories showing demand growth figures were LPG and fuel oil, which were counterbalanced by declines in gasoline and middle distillate requirements.

Oil demand was also on the decline during the first nine months of 2016 in **Ecuador** by 5.4% y-o-y. Middle and heavy distillate requirements fell as a result of slower economic activity in the country. Oil demand was similarly sluggish in **Venezuela** during the first nine months of 2016.

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



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

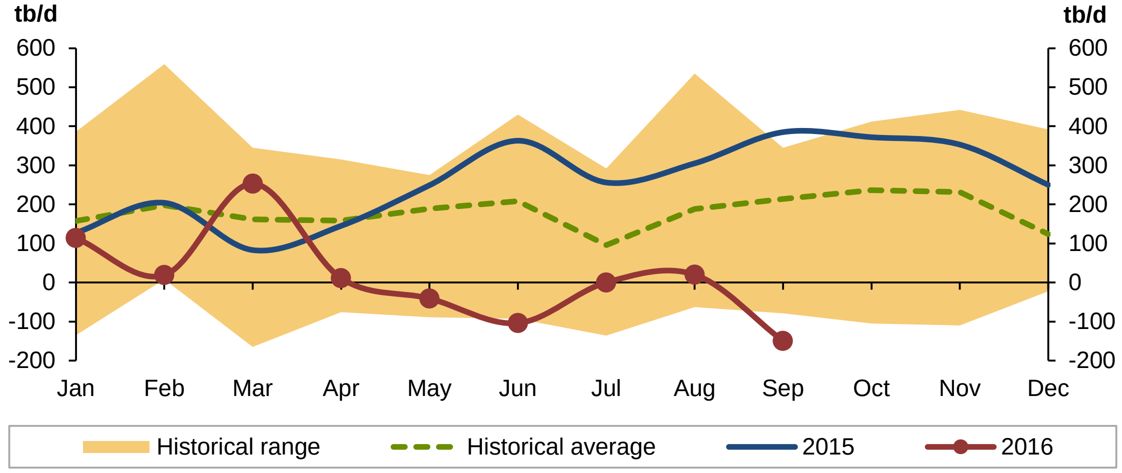
In 2017, expectations for oil demand growth in **Latin America** are similar to last month's projection with a somewhat better outlook for the economy as compared to 2016. Moreover, support should be garnered from an overall improvement in economic conditions in the region with Brazil expected to lead oil demand growth in the region.

Oil demand growth in the region is projected to decline by 0.09 mb/d during 2016, while the current outlook foresees oil demand growing by 0.07 mb/d in 2017.

Middle East

In the Middle East, slower-than-expected oil demand requirements were registered during the month of October with oil demand in **Saudi Arabia** declining sharply for the second straight month. Oil demand has now declined in eight out of ten months in 2016 in Saudi Arabia, affecting the overall Middle East oil demand picture in 2016. This decline is primarily due to the continuing decline in consumption of direct crude for burning. Focusing on product performance, LPG, gasoline and fuel oil all recorded gains of around 17%, 2% and 34% y-o-y, respectively, with fuel oil being supported by power generation consumption, especially in the western part of the country. Y-t-d, hefty declines in heavy distillates, particularly in the other products category, and direct crude burning have led to a sharp drop in overall consumption of the country of 3.3% y-o-y, or 85 tb/d. This is contrary to the average oil demand growth of around 0.12 tb/d seen during the past five years. The completion of the Wasit gas plants in March 2016 has replaced some of the direct crude burning for power generation and is expected to replace even further quantities in the near future. Air traffic activities were also slower than a year ago due to the end of the seasonal travel period, as well as the high base of comparison denting growth levels. In October 2016, total oil demand in Saudi Arabia reached 2.49 mb/d.

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



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

Oil demand also declined in **Kuwait**, particularly in relation to the other products category, dragging overall consumption lower. Oil demand dropped by 19 tb/d, or 5.8%, y-o-y. A similar trend was also observed in Iraq, where oil demand shed around 10 tb/d, or 1.5%, y-o-y in October despite solid growth for jet/kerosene. In contrast, oil demand grew solidly in **Iran** and the **UAE**. In both countries, transportation fuels, notably gasoline, dominated the increases.

In 2017, **Middle East** oil demand growth may be challenged by some downside risks, due to geopolitical turbulence in the region. Oil demand is, nevertheless, expected to grow in, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, UAE and Jordan, with transportation fuels, especially gasoline and industrial fuels, and particularly diesel and residual fuel oil, playing a significant part in the overall oil demand growth for another year.

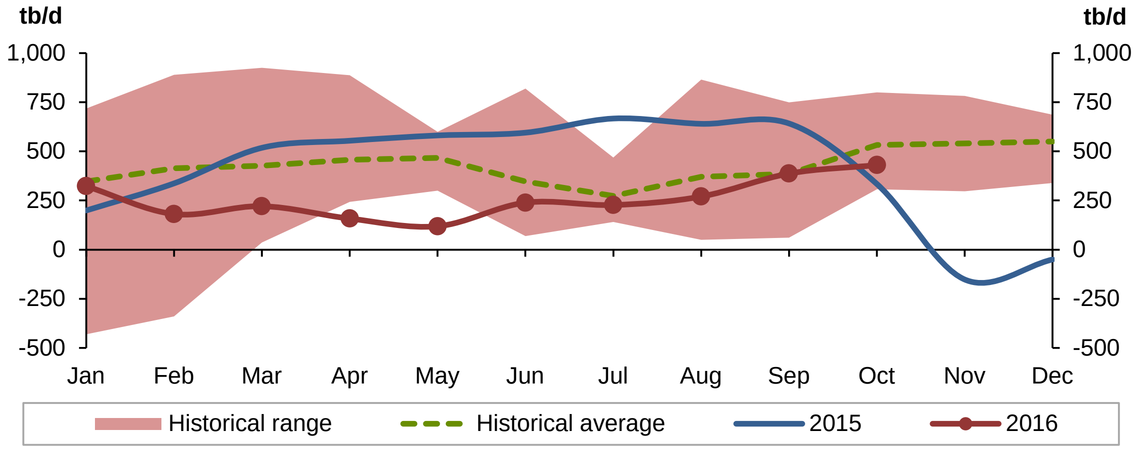
Oil demand growth in the region is projected to reach 0.03 mb/d in 2016. In 2017, it is anticipated to grow by around 0.11 mb/d.

China

Chinese oil demand grew firmly during the month of October, rising by around 0.43 mb/d, or 4.5%, returning to the robust levels of growth experienced in 3Q15 and 4Q15. This growth was determined by rising gasoline, jet/kerosene and fuel oil.

The solid increase in LPG requirements can be attributed to robust demand for winter heating in the northern part of China rather than the usual increase in demand from the petrochemical sector as some startups of planned propane dehydrogenation plants (PDH) seem to be delayed due to technical issues. LPG demand grew by 0.24 mb/d, or 17.8% y-o-y. Jet fuel rose by 97 tb/d, or 17.0%, y-o-y, driven by growth in air traffic activity and lower fares, leading to growth of more than 10% in domestic revenue per passenger kilometer. Gasoline demand was supported by vehicle sales, which increased by 20.3% y-o-y during the month of October, boosted by sport utility vehicle (SUV) sales, which rose by 43% y-o-y, according to the China Association of Automobile Manufacturers (CAAM). In October, gasoline consumption grew by around 0.14 mb/d or 5.0% y-o-y. Diesel oil also gained momentum in October, adding some 40 tb/d after a period of sharp declines. The product was supported by an increase in coal production as trucking activities improved as a result. Consumption of diesel oil is seen stabilizing going forward; however, it will remain in the negative y-o-y on an annual basis for 2016.

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.

The overall 2016 and 2017 outlooks for China are unchanged since last month's *MOMR*. In 2017, oil demand growth in China is seen to remain at a similar level as in 2016 with economic development assumed to be at similar levels to the current year. In contrast, a continuation of the fuel quality programmes, which target fewer emissions, as well as ongoing fuel substitution with natural gas and coal are also assumed in the 2017 projections.

For 2016, **Chinese** oil demand is anticipated to grow by 0.28 mb/d, while oil demand in 2017 is projected to increase again by 0.27 mb/d.

World Oil Supply

Preliminary data indicates that global oil supply increased by 0.53 mb/d m-o-m to average 96.84 mb/d in November. Non-OPEC oil supply is estimated to average 56.20 mb/d in 2016, a contraction of 0.78 mb/d over the previous year, unchanged from the last *MOMR*. For 2017, the forecast for non-OPEC oil supply growth was revised up by 70 tb/d to 0.30 mb/d. It is now expected to average 56.50 mb/d.

OPEC NGLs are expected to increase by 0.15 mb/d to average 6.43 mb/d in 2017, following growth of 0.16 mb/d in 2016. According to secondary sources, OPEC crude oil production averaged 33.87 mb/d in November, presenting an increase of 0.15 mb/d from the previous month. At the 171st Ministerial Conference, OPEC decided to implement a new OPEC-14 production target of 32.5 mb/d, effective 1 January 2017.

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

	2015	1Q16	2Q16	3Q16	4Q16	2016	*Change 2016/15* Growth	%
Americas	21.07	21.05	20.13	20.48	20.46	20.53	-0.54	-2.54
of which US	*14.04*	*13.81*	*13.68*	*13.50*	*13.48*	*13.62*	*-0.42*	*-3.02*
Europe	3.76	3.90	3.73	3.60	3.78	3.75	-0.01	-0.24
Asia Pacific	0.46	0.44	0.42	0.45	0.46	0.44	-0.02	-4.48
Total OECD	**25.29**	**25.39**	**24.28**	**24.53**	**24.69**	**24.72**	**-0.56**	**-2.23**
Other Asia	2.72	2.76	2.68	2.68	2.74	2.71	-0.01	-0.32
Latin America	5.19	4.98	5.06	5.17	5.24	5.11	-0.08	-1.46
Middle East	1.27	1.27	1.28	1.29	1.28	1.28	0.01	0.50
Africa	2.13	2.10	2.07	2.13	2.15	2.11	-0.02	-0.75
Total DCs	**11.31**	**11.10**	**11.09**	**11.27**	**11.40**	**11.22**	**-0.09**	**-0.83**
FSU	13.69	13.95	13.73	13.67	14.05	13.85	0.16	1.16
of which Russia	*10.85*	*11.07*	*10.98*	*11.02*	*11.11*	*11.05*	*0.20*	*1.84*
Other Europe	0.14	0.13	0.13	0.13	0.15	0.14	0.00	-0.76
China	4.38	4.22	4.11	4.00	4.02	4.09	-0.29	-6.70
Total "Other regions"	**18.21**	**18.31**	**17.97**	**17.81**	**18.22**	**18.08**	**-0.14**	**-0.75**
Total non-OPEC production	**54.81**	**54.80**	**53.34**	**53.60**	**54.31**	**54.01**	**-0.80**	**-1.45**
Processing gains	2.17	2.19	2.19	2.19	2.19	2.19	0.01	0.60
Total non-OPEC supply	**56.98**	**56.98**	**55.53**	**55.79**	**56.50**	**56.20**	**-0.78**	**-1.37**
Previous estimate	56.98	56.98	55.53	55.82	56.47	56.20	-0.78	-1.37
Revision	0.00	0.00	0.00	-0.03	0.03	0.00	0.00	0.00

*Note: * 2016 = Estimate.*
Source: OPEC Secretariat.

Non-OPEC supply

Non-OPEC oil supply in 2016 has decelerated sharply by 0.78 mb/d, to average 56.20 mb/d after seeing tremendous growth of 2.33 mb/d in 2014 and 1.48 mb/d in 2015. Despite the collapse of oil prices, non-OPEC oil supply grew by 2.3 mb/d during an 18-month period, from July 2014 to December 2015. From a peak output level of 57.47 mb/d in December 2015, non-OPEC supply is estimated to have fallen by some 1.9 mb/d to average 55.64 mb/d in September 2016.

The impact of low oil prices on US onshore crude oil production led to a decline of about 1.1 mb/d from March 2015 to average 7.2 mb/d in August 2016. This impact has also been seen in Canadian conventional, Brazilian, Colombian and Chinese crude oil output in the current year.

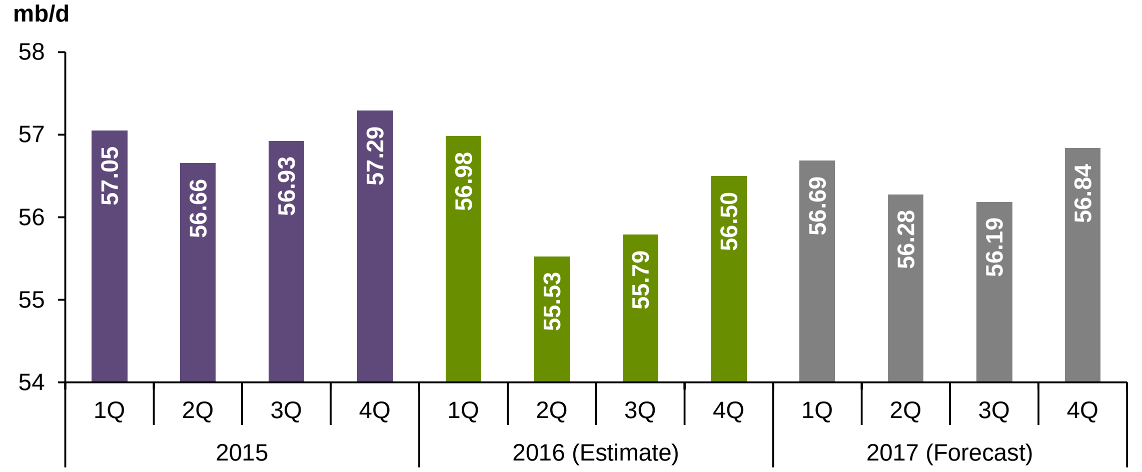
Total OECD oil supply in 2016 is estimated to decline by 0.56 mb/d to average 24.72 mb/d. Contributing to the decline will be OECD Americas, OECD Europe and OECD Asia Pacific, with -0.54 mb/d, -0.01 mb/d and -0.02 mb/d, respectively.

Total oil output from DCs will average 11.22 mb/d in 2016, a decrease of 0.09 mb/d compared with growth of 0.20 mb/d in 2015. These declines are expected to come from Other Asia with -0.01 mb/d, Latin America with -0.08 mb/d and Africa -0.02 mb/d, while oil supply from the Middle East is estimated to increase by 0.01 mb/d.

Total FSU oil supply in 2016 is expected to increase by 0.16 mb/d. Other Europe output will remain steady at 0.14 mb/d, while China's supply is expected to see a deep decline of 0.29 mb/d over the previous year.

The US, China, Mexico and Colombia saw the highest declines of all non-OPEC countries with a total of 0.95 mb/d in 2016, while Russia, Brazil, Norway, the UK and Congo were seen to be growing.

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



Source: OPEC Secretariat.

Non-OPEC oil supply in 2017 is expected to grow by 0.30 mb/d over 2016 to average 56.50 mb/d, indicating an upward revision of 70 tb/d compared with the last *MOMR*. Non-OPEC supply contraction estimations for 2016 will change to growth in 2017 for several reasons – the expectation of higher oil prices, lower declines in OECD Americas and China, as well as higher growth in Latin America, Africa and FSU. Supply growth in DCs and FSU of 0.29 mb/d and 0.26 mb/d in 2017 will be partially offset by declines in OECD and China by 0.17 mb/d and 0.10 mb/d, respectively. The forecast remains subject to growing uncertainties over the world economy and the impact on performance of non-OPEC production, including the behaviour of US tight oil production, planned production adjustments, the on-time implementation of Brazilian projects, geopolitical concerns, as well as the effects of spending revisions by international oil companies (IOCs).

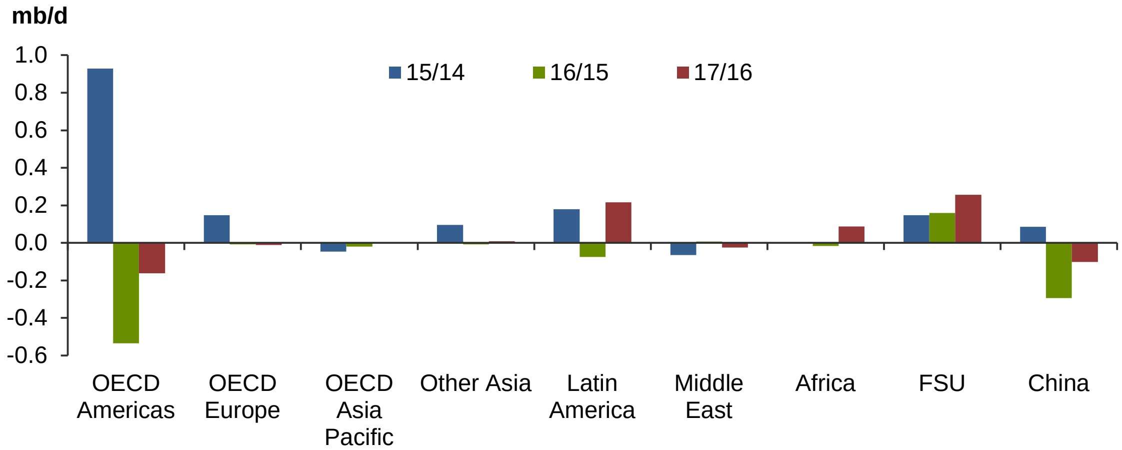
Table 5.2: Non-OPEC oil supply in 2017*, mb/d

							Change 2017/16	
	2016	1Q17	2Q17	3Q17	4Q17	2017	Growth	%
Americas	20.53	20.42	20.27	20.30	20.49	20.37	-0.16	-0.79
of which US	*13.62*	*13.44*	*13.40*	*13.43*	*13.57*	*13.46*	*-0.15*	*-1.13*
Europe	3.75	3.87	3.73	3.54	3.82	3.74	-0.01	-0.32
Asia Pacific	0.44	0.45	0.46	0.45	0.42	0.44	0.00	0.51
Total OECD	**24.72**	**24.74**	**24.46**	**24.29**	**24.72**	**24.55**	**-0.17**	**-0.69**
Other Asia	2.71	2.73	2.72	2.72	2.71	2.72	0.01	0.29
Latin America	5.11	5.27	5.29	5.33	5.42	5.33	0.22	4.21
Middle East	1.28	1.27	1.26	1.25	1.24	1.26	-0.02	-1.90
Africa	2.11	2.17	2.19	2.21	2.23	2.20	0.09	4.14
Total DCs	**11.22**	**11.44**	**11.46**	**11.51**	**11.60**	**11.50**	**0.29**	**2.55**
FSU	13.85	14.13	14.03	14.08	14.19	14.11	0.26	1.85
of which Russia	*11.05*	*11.14*	*11.12*	*11.10*	*11.14*	*11.13*	*0.08*	*0.73*
Other Europe	0.14	0.15	0.15	0.15	0.16	0.15	0.02	12.89
China	4.09	4.04	3.98	3.96	3.97	3.99	-0.10	-2.49
Total "Other regions"	**18.08**	**18.31**	**18.17**	**18.20**	**18.31**	**18.25**	**0.17**	**0.95**
Total non-OPEC production	**54.01**	**54.49**	**54.08**	**53.99**	**54.64**	**54.30**	**0.29**	**0.53**
Processing gains	2.19	2.20	2.20	2.20	2.20	2.20	0.01	0.50
Total non-OPEC supply	**56.20**	**56.69**	**56.28**	**56.19**	**56.84**	**56.50**	**0.30**	**0.53**
Previous estimate	56.20	56.67	56.17	56.09	56.79	56.43	0.23	0.40
Revision	0.00	0.02	0.11	0.10	0.05	0.07	0.07	0.12

*Note: * 2017 = Forecast, subject to review, following the most recent OPEC – non-OPEC Meetings.*
Source: OPEC Secretariat.

On a country basis, the main contributors to growth in 2017 are expected to be Brazil with 0.25 mb/d, Kazakhstan with 0.21 mb/d, Canada with 0.17 mb/d, Russia with 0.08 mb/d, Congo with 0.07 mb/d and Ghana with 0.04 mb/d. Mexico, the US, China, Colombia, and Azerbaijan are expected to show the strongest declines.

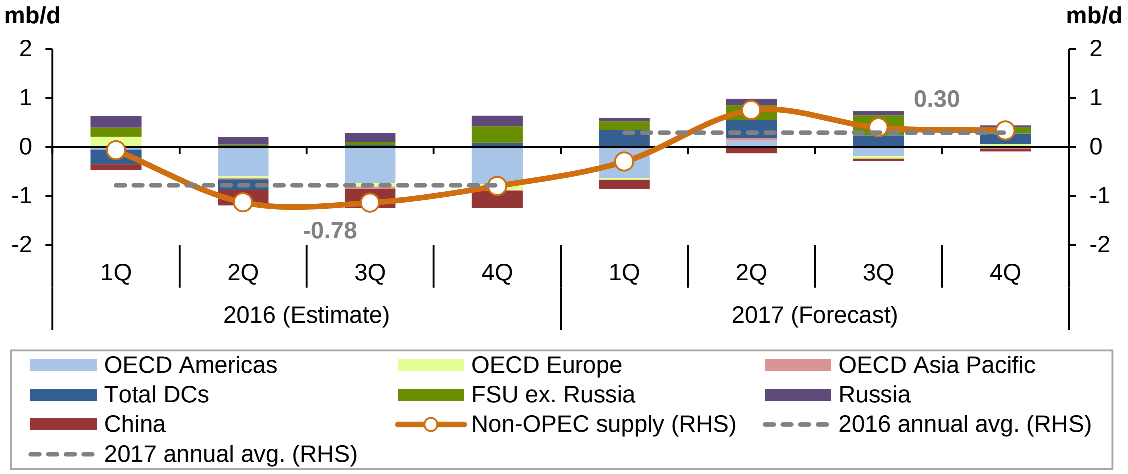
Graph 5.2: Regional non-OPEC supply growth, y-o-y



Note: 2016 = Estimate and 2017 = Forecast.
Source: OPEC Secretariat.

Key risk factors, including geopolitical tensions in some oil producing territories, technical development bottlenecks and, most importantly, oil price levels, will continue to have an impact on supply growth expectations.

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



Source: OPEC Secretariat.

Non-OPEC supply forecast comparison in 2016 and 2017 at a glance

Table 5.3: Non-OPEC supply forecast comparison in 2016* and 2017*, mb/d

Region	2016	Change 2016/15	2017	Change 2017/16
OECD Americas	20.53	-0.54	20.37	-0.16
OECD Europe	3.75	-0.01	3.74	-0.01
OECD Asia Pacific	0.44	-0.02	0.44	0.00
Total OECD	**24.72**	**-0.56**	**24.55**	**-0.17**
Other Asia	2.71	-0.01	2.72	0.01
Latin America	5.11	-0.08	5.33	0.22
Middle East	1.28	0.01	1.26	-0.02
Africa	2.11	-0.02	2.20	0.09
Total DCs	**11.22**	**-0.09**	**11.50**	**0.29**
FSU	13.85	0.16	14.11	0.26
Other Europe	0.14	0.00	0.15	0.02
China	4.09	-0.29	3.99	-0.10
Non-OPEC production	54.01	-0.80	54.30	0.29
Processing gains	2.19	0.01	2.20	0.01
Non-OPEC supply	**56.20**	**-0.78**	**56.50**	**0.30**

*Note: * 2016 = Estimate and 2017 = Forecast.*
Source: OPEC Secretariat.

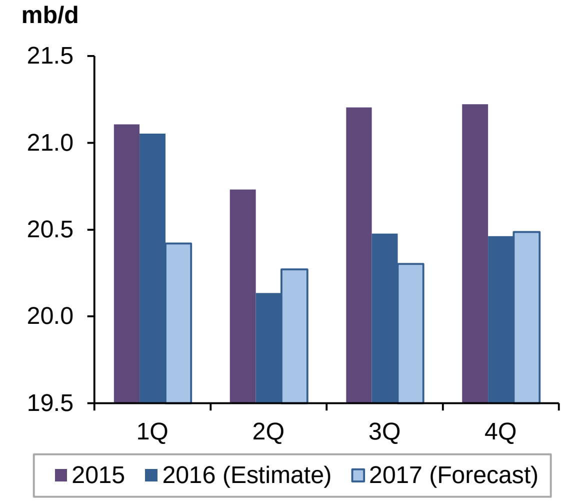
OECD

Total OECD liquids production in 2016 is estimated to contract by 0.56 mb/d to average 24.72 mb/d, unchanged from November's *MOMR*. In 2017, OECD supply is forecast to average 24.55 mb/d, representing a contraction of 0.17 mb/d.

OECD Americas

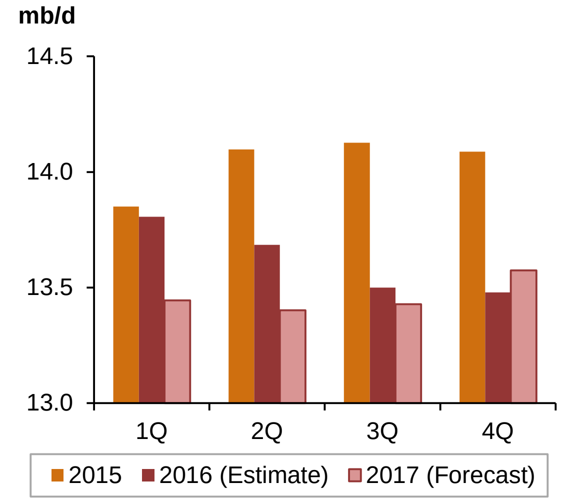
OECD Americas' oil supply in 2016 is estimated to average 20.53 mb/d, showing a decline of 0.54 mb/d y-o-y. Supply in the US and Mexico is expected to decline in 2016, while it will grow in Canada. In 2017, supply in the region is expected to decline by 0.16 mb/d, to average 20.37 mb/d. While declines are anticipated in the US and Mexico, Canada is expected to see robust growth of 0.17 mb/d.

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

According to the latest US Energy Information Administration (EIA) information, crude oil production averaged 8.58 mb/d in September, some 167 tb/d lower than in August, of which 139 tb/d is attributed to a contraction in the US Gulf of Mexico's oil output. Crude oil production in September is about 1.0 mb/d lower than its peak in April 2015. Tight crude production declined by 0.72 mb/d from its peak of 4.65 mb/d in March 2015. US total liquids supply has been declining since November 2015 from 14.16 mb/d, to average 13.56 mb/d in September 2016.

Shale drillers in the US have slashed spending and cut the number of workers this year amid the lower oil price environment. Data shows that US onshore crude oil output began to decline after reaching a peak of 9.6 mb/d in April 2015, although production in some shale patches, including Utica, Spraberry, Bonespring, Wolfcamp, Woodford and Austin Chalk, held output steady or saw minor growth. Crude oil output declined in all of the main producing states: Texas declined from 3.6 mb/d in March 2015 to average 3.16 mb/d in September 2016 and oil output decreased in North Dakota by 0.24 mb/d, from a peak of 1.2 mb/d in June 2015. In 3Q16, US liquids production declined by 0.18 mb/d q-o-q to average 13.50 mb/d, lower by 0.63 mb/d y-o-y. A further decline of 20 tb/d q-o-q is expected in 4Q16 to average 13.48 mb/d. Hence, US total oil supply is anticipated to decline by 0.42 mb/d, to average 13.62 mb/d in 2016.

US oil rig count

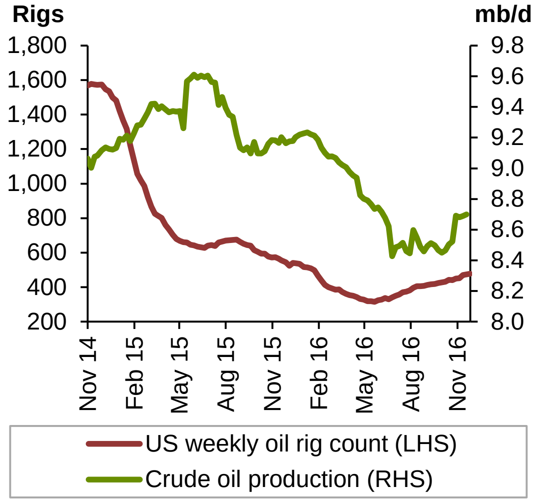
According to Baker Hughes' latest weekly report for 2 December, the total drilling rig count in the US decreased by 140 rigs, or -19% y-o-y, to 597 rigs. More than 97% of this decline came from onshore fields. Oil field rigs dropped by 12% from the same period a year earlier, while the number of active rigs in US gas fields declined by 38%. In total, there was a 14% decline in the oil rig count in tight oil regions to average 471 rigs. This was broadly in line with a decline in horizontal drilling of 15%, y-o-y.

Table 5.4: US rotary rig count on 2 December 2016

				Change		
		2015	2016*	M-o-m	Y-o-y	Y-o-y, %
Oil and gas split	**Oil**	545	477	27	-68	-12
	Gas	192	119	2	-73	-38
Location	**Onshore**	712	575	27	-137	-19
	Offshore	25	22	1	-3	-12
Basin	**Williston**	60	31	-6	-29	-48
	Eagle Ford	73	40	5	-33	-45
	Permian	217	235	17	18	8
Drilling trajectory	**Horizontal**	569	485	26	-84	-15
	Directional	64	46	-6	-18	-28
	Vertical	104	66	8	-38	-37
US total rig count		**737**	**597**	**28**	**-140**	**-19**

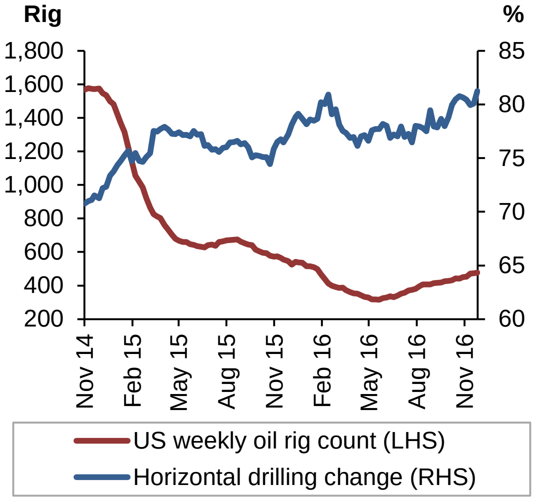
*Note: * 2016 = Forecast.*
Sources: Baker Hughes and OPEC Secretariat.

Graph 5.6: US weekly oil rig count vs. crude oil production



Sources: Baker Hughes and EIA.

Graph 5.7: US weekly oil right count vs. horizontal drilling change



Source: Baker Hughes.

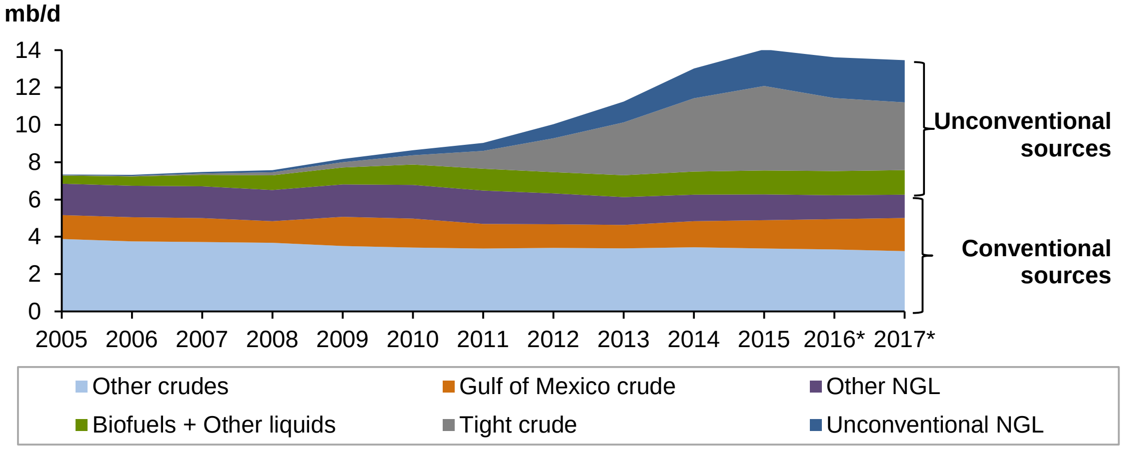
US oil and gas companies are expected to step up activity in 2017 as they start to increase their spending amid a recovery in prices. According to consultancy Deloitte, the bulk of activity will be focused on the completion business, with very little investment going into exploration. A survey by the consultancy firm of 251 oil and gas industry executives, done between June and July, shows that 43% expect an increase in upstream capital expenditures (capex) next year, while 25% expect an increase this year. About 28% expect capex levels to remain unchanged this year and 27% think they will stay flat next year. Total liquids production is forecast to pick up only marginally by the beginning of 3Q17, with minor growth of 30 tb/d, to average 13.43 mb/d, and to decline by 0.15 mb/d for the whole year to average 13.46 mb/d. Crude oil supply is forecast to decline by 0.22 mb/d in 2017 to average 8.64 mb/d, on top of the 0.56 mb/d decline in 2016. Some of the declines in onshore crude in 2017 will be offset by growth of 0.15 mb/d in the Gulf of Mexico. Nevertheless, growth in NGLs and biofuels output is expected to increase by 47 tb/d and 20 tb/d, respectively. The main component of US oil output – tight oil – is forecast to contract by 0.28 mb/d in 2017.

Table 5.5: US liquids production breakdown forecast, 2016-2017, tb/d

	2014	2015	*Change*	2016	*Change*	2017	*Change*
Tight crude	3,926	4,524	*598*	3,910	*-614*	3,628	*-282*
Gulf of Mexico crude	1,397	1,515	*118*	1,625	*110*	1,775	*150*
Other crudes	3,441	3,376	*-65*	3,324	*-52*	3,234	*-90*
Unconventional NGL	1,594	1,961	*367*	2,183	*222*	2,260	*77*
Other NGL	1,420	1,382	*-39*	1,280	*-102*	1,250	*-30*
Biofuels + Other liquids	1,238	1,283	*45*	1,295	*11*	1,315	*20*
US total supply	**13,017**	**14,041**	***1,024***	**13,617**	***-424***	**13,462**	***-155***

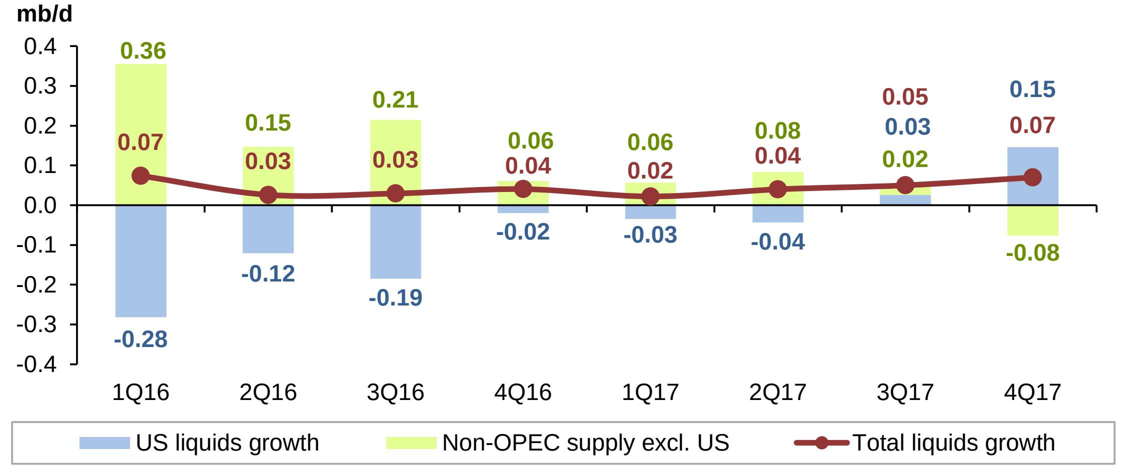
*Note: * 2016 = Estimate and 2017 = Forecast.*
Source: OPEC Secretariat.

Graph 5.8: Trend of US oil production's components, 2005-2017



*Note: * 2016 = Estimate and 2017= Forecast.*
Source: OPEC Secretariat.

Graph 5.9: US liquids vs. non-OPEC supply, q-o-q growth

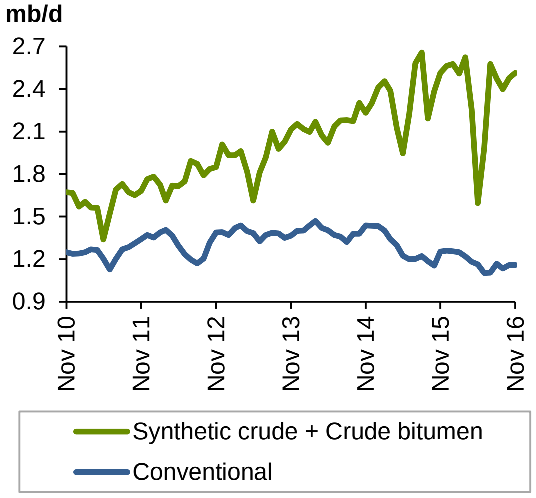


Source: OPEC Secretariat.

Canada and Mexico

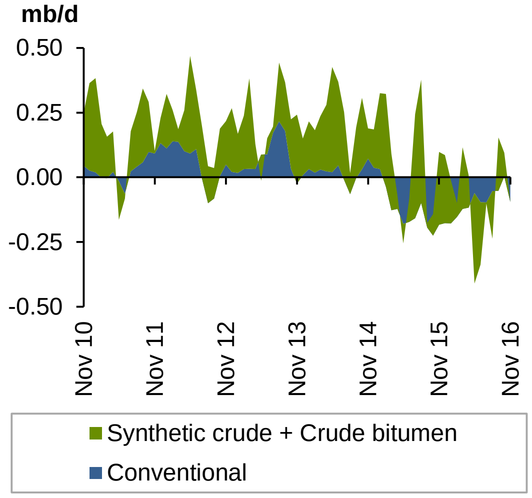
Oil supply in **Canada** is expected to increase by 10 tb/d in 2016, to average 4.43 mb/d, unchanged compared with the previous *MOMR*. Preliminary estimates place August Canadian oil output at 4.52 mb/d, some 100 tb/d lower than in July. In August, oil sands output – bitumen and synthetic crude – decreased by 0.10 mb/d to settle at 2.51 mb/d, while conventional oil increased by 64 tb/d to 1.17 mb/d. Production of NGLs declined by 68 tb/d to average 0.84 mb/d. Oil sands output is expected to increase by 0.54 mb/d q-o-q in 3Q16 to average 2.52 mb/d, as upgraders return to work and total liquids production will reach 4.51 mb/d. By adding upgraders, higher synthetic crude output is expected to be online in the coming months, but there is still a gap of about 300 tb/d to reach the previous year's level of 0.95 mb/d.

Graph 5.10: Canada production by crude type



Source: OPEC Secretariat.

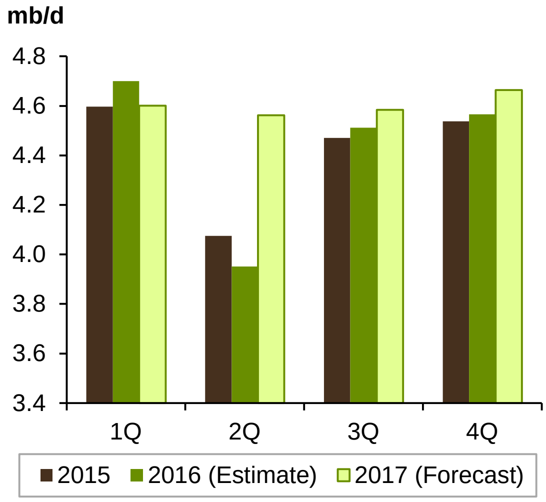
Graph 5.11: Canada production by crude type, y-o-y change



Source: OPEC Secretariat.

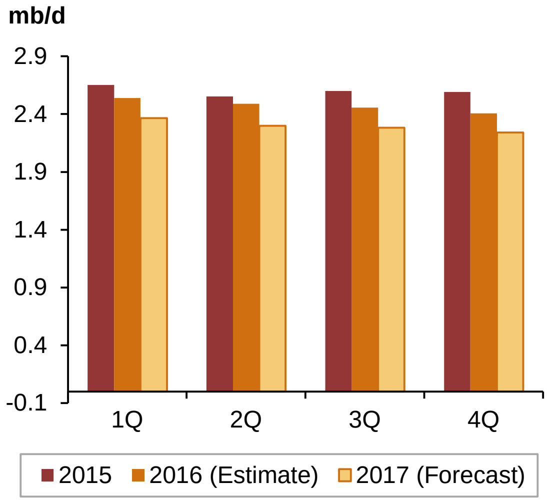
Canada is expected to be the third-largest source of non-OPEC supply growth in 2017 after Brazil and Kazakhstan, expanding by 0.17 mb/d y-o-y to 4.60 mb/d. Growth will come mainly from the ramp-up of oil sands projects (Surmont 2, Christian Lake, Sunrise and Kearl), as well as new start-ups of heavy oil thermal projects (Edam East, West and Vawm).

Graph 5.12: Canada quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.13: Mexico quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Canada's overall rig count for the week ending 2 December saw 26 more units w-o-w to reach a total of 200, all active onshore. Y-o-y, the rig count in Canada indicated an increase of 23 rigs. After decreasing to a minimum of 26 rigs at the beginning of the wildfires in Fort McMurray last May, the number of active rigs in Alberta, the main state for production of oil sands reached an average of 128 rigs, higher by 20 rigs w-o-w. The other main producing provinces are Saskatchewan and British Colombia, registering 44 and 23 rigs on 2 December, respectively.

Mexican liquids production in 2016 is expected to decline by 0.13 mb/d to average 2.47 mb/d, following a heavy annual decline of 0.20 mb/d in 2015. Oil output in 3Q16 declined by 30 tb/d to average 2.46 mb/d, q-o-q, and the preliminary oil supply for October shows another 20 tb/d of decline, m-o-m. According to this annual decline rate trend, oil production will fall by 0.18 mb/d to average 2.30 mb/d next year.

The biggest declines to date came from Cantarel and Ku-Maloob-Zap (KMZ). Following steep declines in smaller domestic fields and a cut in spending by the state energy company Pemex, Mexico plans to shut down parts of its low-profile oil fields. The Pemex budget for 2017 will fall by $4.6 bn from this year to $2.1 bn.

Mexico has held an historic first deepwater bidding round, auctioning off 10 blocks and a farm-out discovery on its side of the Gulf of Mexico. The auction featured 10 deepwater blocks in two separate basins, as well as a deepwater farm-out field containing a significant discovery belonging to Pemex.

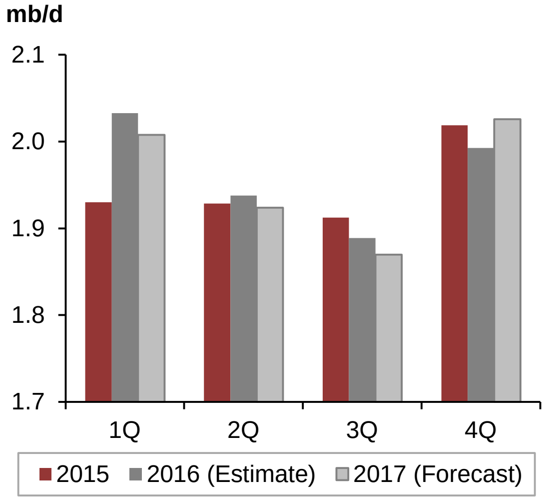
OECD Europe

Total **OECD Europe oil supply,** which grew by 0.15 mb/d to average 3.76 mb/d in 2015, is expected to see a minor decline this year – by 10 tb/d – to average 3.75 mb/d. This is due to the higher decline in mature oil fields in Norway, following lower investment in production drilling, as well as a decline of 60 tb/d in Other OECD Europe.

Norway's oil supply in 2016 is expected to grow by 20 tb/d from the previous year to average 1.96 mb/d. Preliminary production figures for October show average production of 2.10 mb/d for oil, NGLs and condensate, which is 0.49 mb/d, or more than 30%, higher than in September 2016, due to the return from maintenance.

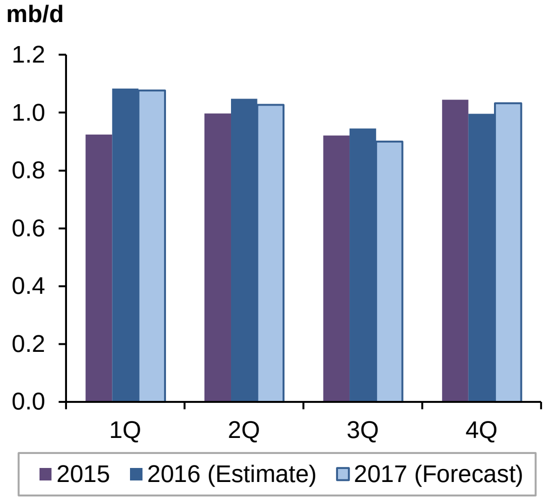
A report from the Norwegian Petroleum Directorate (NPD) has shown that daily liquid production in October averaged 1.71 mb/d of oil, 0.35 mb/d of NGLs and 33 tb/d of condensate. Crude oil production in October was higher by 22.7% from a month earlier. This was due to production at the Kårstø oil field going offline for maintenance and production at the Goliat oil field being stopped at the end of the month following gas detection in an unexpected area during a planned venting of gas, as part of a maintenance operation. Nevertheless, production has now resumed at the Goliat field in the Barents Sea following a month-long shutdown. Despite the oil output decline in September, liquids production up to the end of 3Q16 is still higher by 30 tb/d compared with the same period a year earlier. For 2017, a minor decline of 10 tb/d is forecast due to a higher decline rate outpacing growth coming from field ramp-ups.

Graph 5.14: Norway quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.15: UK quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

The **UK's** oil supply, despite higher maintenance in 2016, is anticipated to grow by 50 tb/d y-o-y to average 1.02 mb/d, with the ramp-up of new fields since 4Q15 offsetting steep underlying declines. UK efforts to maintain competitiveness are bearing fruit as last year saw UK oil output jump for the first time in 15 years, increasing by 11.5% to 0.97 mb/d. UK liquids production in October 2016 was lower by 70 tb/d, averaging 0.82 mb/d. A minor decline of 10 tb/d is anticipated for next year.

Developing Countries

Total oil production from the group of **Developing Countries (DCs)** will decline by 90 tb/d y-o-y to average 11.22 mb/d in 2016. The main reasons for this year's decline are much lower annual output in Latin America, averaging 5.11 mb/d, and, to a lesser degree, in Africa, averaging 2.11 mb/d, and Other Asia, which saw a total supply of 2.71 mb/d. Oil production in non-OPEC Middle East is predicted to increase by 10 tb/d in 2016, to average 1.28 mb/d.

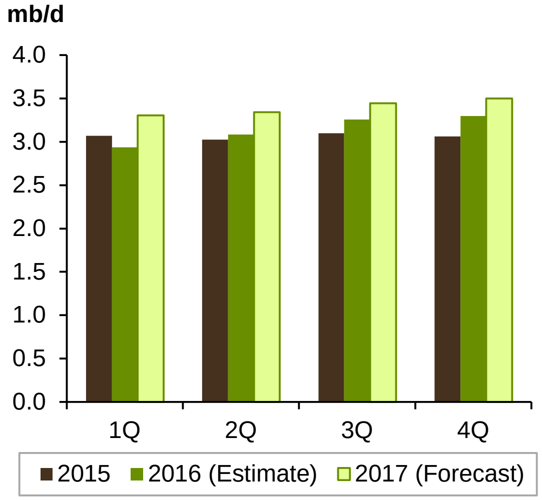
In **2017**, DC supply is forecast to grow by 0.29 mb/d, to average 11.50 mb/d. The key region is Latin America with growth of 0.22 mb/d – mainly from Brazil - to average 5.33 mb/d and, to a lesser degree, Africa, increasing by 90 tb/d – mainly from Congo and Ghana – to stand at 2.20 mb/d. Other Asia's oil supply will see minor growth of 10 tb/d to average 2.72 mb/d, while a decline of 20 tb/d is expected for the Middle East, to stand at 1.26 mb/d next year.

Latin America

Brazil's liquids supply is expected to average 3.14 mb/d in 2016, an increase of 0.08 mb/d over the previous year. Preliminary crude oil production shows a decrease of 50 tb/d, m-o-m in October to average 2.6 mb/d, based on Petrobas' trend. This was due to maintenance on different platforms and one FPSO in the Lula field. It is expected that the FPSO Cidade de Caraguatatuba will start-up in December before remarkable new capacity scheduled to start-up next year will boost the reservoir's pre-salt output.

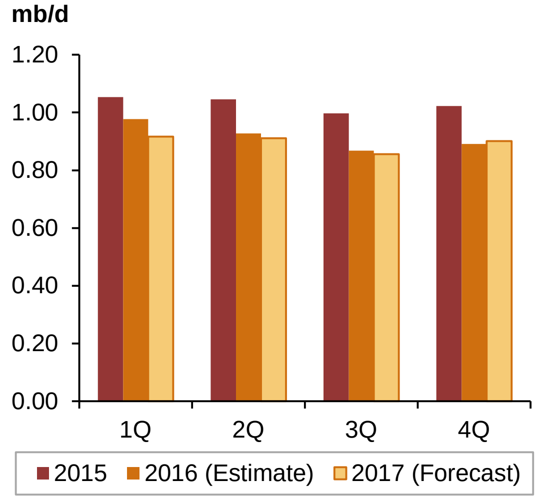
As of 2017, Brazil's Petrobras will begin seeking offers for the construction of seven new offshore oil platforms envisioned in its current investment plans. Oil production is expected to increase by 0.25 mb/d to average 3.40 mb/d when these projects materialize next year. Petrobras is seeking to ramp up production as part of a five-year, $74.1 billion capital spending plan announced in late September. It slashed investments from a prior plan by 25%, seeking to refocus on core operations.

Graph 5.16: Brazil quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.17: Colombia quarterly oil supply, 2015-2017

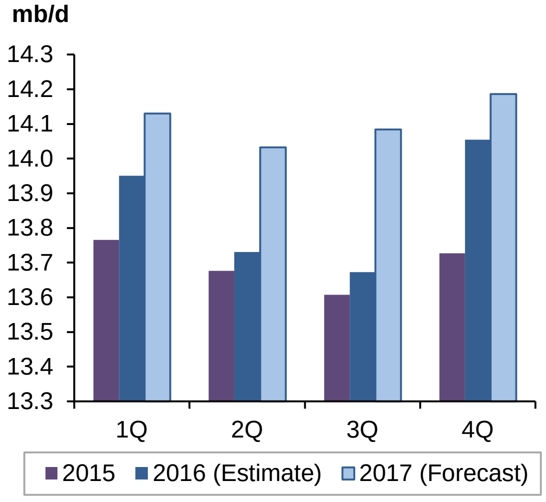


Source: OPEC Secretariat.

FSU, other regions

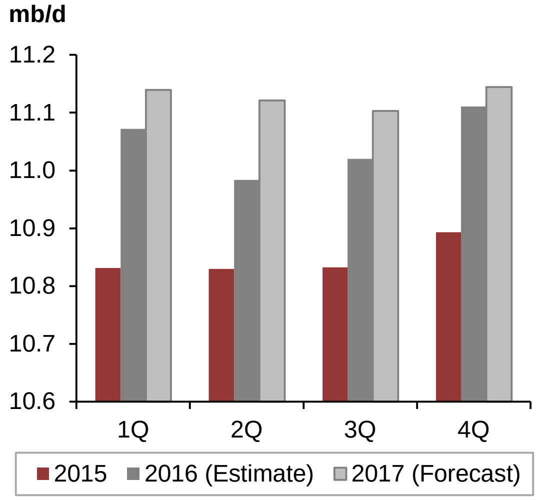
FSU's oil supply is expected to grow by 0.16 mb/d in 2016 to average 13.85 mb/d, unchanged from the previous report. In 2016, oil production in Russia and Azerbaijan will increase, while decreasing in Kazakhstan, despite the early startup of the Kashagan field in October and in FSU Others. The oil production growth forecast for 2017 was revised up this month by 70 tb/d to 0.26 mb/d.

Graph 5.18: FSU quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.19: Russia quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Russia

Russia's oil production was more or less stagnant at 11.29 mb/d in November and higher y-o-y by 0.40 mb/d. Russian oil output is expected to increase by 0.20 mb/d to average 11.05 mb/d in 2016. Russia will benefit next year from exploitation of new oil fields in Western Siberia, Eastern Siberia, the Arctic and the Caspian which started up in 2016. It is expected that these oil fields, with a total peak capacity of 0.8 mb/d, could compensate for annual decline rates in mature fields, which are estimated at 3.7%–4.0% per annum.

The Russian oil industry has managed to perform well and both investment and production are growing, despite low oil prices. Investment in the energy sector – which should rise by 15% in 2016 to 3.6 trillion rubles ($55.5 billion) – has materialized, despite the challenging market environment. Russian companies have maintained, or even increased, spending over the past two years, capitalizing on a weaker ruble. While upstream capex for the seven largest companies declined by 18% and 10% in USD terms in 2015 and 2016, respectively; in ruble terms, spending rose by 30% in 2015 and was maintained at this level in 2016.

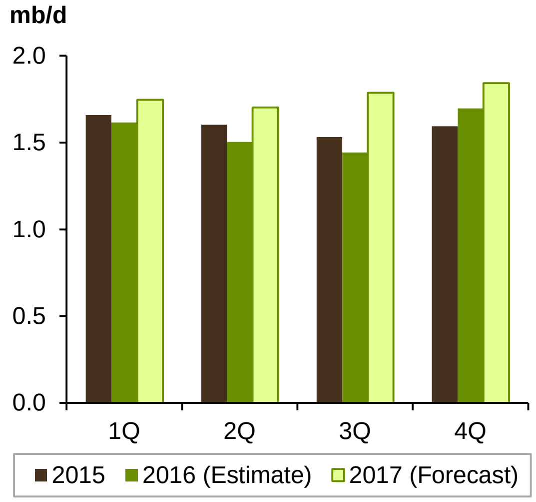
On 10 December, Russia and ten other non-OPEC producers agreed in a Ministerial Meeting with OPEC Members to adjust their production, voluntarily or through managed decline, starting from 1 January 2017 for six months, extendable for another six months, to take into account prevailing market conditions and prospects. The combined reduction target was agreed at 558 tb/d.

Caspian

Azerbaijan's oil supply is anticipated to average 0.87 mb/d, indicating minor growth of 10 tb/d in 2016. Azeri crude oil output in September decreased by 13 tb/d to average 0.76 mb/d. Hence, total oil production (crude plus NGLs) was pegged at 0.84 mb/d in September. In 3Q16, output reached 0.86 mb/d, down 20 tb/d from 2Q16. It is anticipated that oil output in the next months will increase as the deepwater Guneshli platform returns from maintenance. Nevertheless, the East Azeri platform, with 80 tb/d of capacity, was offline for most of November. A decline of 30 tb/d is predicted for 2017 to average 0.84 mb/d.

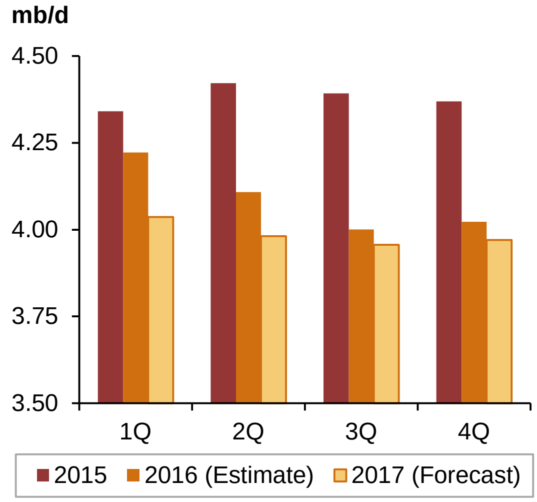
Kazakhstan's crude oil output increased by 149 tb/d m-o-m to stand at 1.38 mb/d, thus recovering from maintenance, but the main share of Kashagan's production came on stream by month-end. Thus, October monthly liquids output was higher m-o-m by 0.15 mb/d and by 0.16 mb/d y-o-y. The original ramp-up plan for 2016 was to reach 0.18 mb/d by the end of year. If this transpires, some 80 tb/d of additional capacity will be added to current production by the end of December. Kazakh oil supply in 2017 will grow by 0.21 mb/d to average 1.77 mb/d, through Kashagan's production ramp-up.

Graph 5.20: Kazakhstan quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

Graph 5.21: China quarterly oil supply, 2015-2017



Source: OPEC Secretariat.

China

China's supply is expected to contract by 0.29 mb/d over the previous year to average 4.09 mb/d in 2016. Chinese oil output decreased in October – following a minor increase in September – by more than 100 tb/d to 3.78 mb/d m-o-m. Therefore, total China liquids supply – including unconventional liquids – was at 3.88 mb/d in October. China's daily crude oil production in October fell to its lowest point in more than seven years, as producers remained reluctant to drill new wells amid tepid oil prices and as output dropped in mature oil fields.

Producers have not ramped up output even as oil prices rebounded in October. Many of them see the uptick in prices as unsustainable. However, if crude prices were between $45-50/b, then the energy giant would open new discovered reserves, according to Sinopec's chairman. Chinese domestic liquids supply dropped by 0.28 mb/d during the first three quarters of the current year to average 4.11 mb/d.

In 2017, oil production is expected to continue in the same direction, but at a slower pace, dropping by 0.10 mb/d y-o-y to an average of 3.99 mb/d. 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 expenditures, as well as output.

OPEC NGLs and non-conventional oils

OPEC NGLs and non-conventional liquids are estimated to average 6.29 mb/d in 2016, unchanged from the previous *MOMR* and representing growth of 0.16 mb/d over the previous year. In 2017, production of OPEC NGLs and non-conventional liquids is projected to average 6.43 mb/d, also unchanged and representing an increase of 0.15 mb/d over the previous year.

Table 5.6: OPEC NGLs + non-conventional oils, 2014-2017

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

Note: 2016 = Estimate and 2017 = Forecast.
Source: OPEC Secretariat.

OPEC crude oil production

According to secondary sources, OPEC crude oil production in November increased by 151 tb/d compared to the previous month to average 33.87 mb/d. Crude oil output increased the most in Angola, Nigeria and Libya, while production in Kuwait and Saudi Arabia showed the largest decline.

Table 5.8: OPEC crude oil production based on *secondary sources*, tb/d

	2014	2015	1Q16	2Q16	3Q16	Sep 16	Oct 16	Nov 16	Nov/Oct
Algeria	1,123	1,106	1,091	1,084	1,090	1,089	1,091	1,096	*5.0*
Angola	1,654	1,753	1,765	1,772	1,766	1,745	1,567	1,692	*124.8*
Ecuador	544	544	543	549	548	551	544	549	*4.7*
Gabon	222	220	222	219	220	214	204	216	*11.8*
Indonesia	695	694	717	722	753	752	750	739	*-11.5*
Iran, I.R.	2,778	2,838	3,094	3,539	3,646	3,668	3,709	3,703	*-5.7*
Iraq	3,268	3,934	4,241	4,288	4,396	4,476	4,562	4,564	*1.7*
Kuwait	2,779	2,728	2,763	2,730	2,810	2,825	2,838	2,787	*-51.3*
Libya	470	405	370	312	311	360	528	575	*47.5*
Nigeria	1,962	1,880	1,794	1,552	1,436	1,461	1,629	1,692	*62.7*
Qatar	714	666	667	662	654	638	650	652	*2.2*
Saudi Arabia	9,688	10,119	10,144	10,299	10,595	10,582	10,559	10,512	*-47.2*
UAE	2,759	2,858	2,813	2,859	2,979	2,993	3,015	2,996	*-18.7*
Venezuela	2,361	2,365	2,284	2,181	2,111	2,095	2,072	2,097	*24.8*
Total OPEC	**31,017**	**32,110**	**32,507**	**32,767**	**33,312**	**33,447**	**33,719**	**33,870**	***150.8***

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

Table 5.9: OPEC crude oil production based on *direct communication*, tb/d

	2014	2015	1Q16	2Q16	3Q16	Sep 16	Oct 16	Nov 16	Nov/Oct
Algeria	1,193	1,157	1,128	1,126	1,162	1,182	1,171	1,184	*13.0*
Angola	1,654	1,767	1,773	1,730	1,720	1,649	1,507	1,688	*181.0*
Ecuador	557	543	548	554	551	560	542	544	*2.0*
Gabon	..	..	..	..	..	..	..	..	..
Indonesia	697	690	739	739	743	742	736	..	..
Iran, I.R.	3,117	3,152	3,385	3,570	3,653	3,710	3,980	..	..
Iraq	3,110	3,504	4,598	4,523	4,666	4,774	4,776	4,800	*24.0*
Kuwait	2,867	2,859	3,000	2,934	2,969	2,970	3,000	2,900	*-100.0*
Libya	480	..	..	..	..	..	..	..	..
Nigeria	1,807	1,748	1,667	1,485	1,209	1,253	1,390	1,782	*391.9*
Qatar	709	656	675	655	644	610	639	646	*7.3*
Saudi Arabia	9,713	10,193	10,225	10,360	10,651	10,650	10,625	10,720	*95.0*
UAE	2,794	2,989	2,944	3,035	3,174	3,186	3,188	3,195	*7.0*
Venezuela	2,683	2,654	2,510	2,392	2,331	2,334	2,316	2,274	*-41.9*
Total OPEC	**..**	**..**	**..**	**..**	**..**	**..**	**..**	**..**	**..**

Note: Totals may not add up due to independent rounding.
.. Not available.
Source: OPEC Secretariat.

A new OPEC-14 production target of 32.5 mb/d as per 1 January 2017 represents a reduction of around 1.2 mb/d from October production levels.

Table 5.7: Agreed crude oil production adjustments and levels*, tb/d

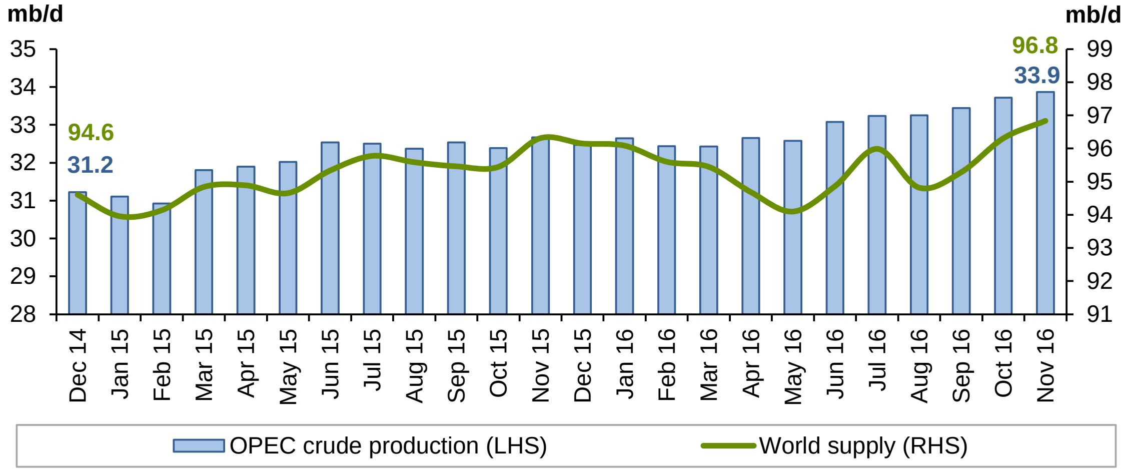
Member Country	Reference production level	Adjustment	Production level effective January 2017
Algeria	1,089	-50	1,039
Angola	1,751	-78	1,673
Ecuador	548	-26	522
Gabon	202	-9	193
Indonesia**			
Iran, I.R.	3,975	90	3,797
Iraq	4,561	-210	4,351
Kuwait	2,838	-131	2,707
Libya			
Nigeria			
Qatar	648	-30	618
Saudi Arabia	10,544	-486	10,058
UAE	3,013	-139	2,874
Venezuela	2,067	-95	1,972

Note:
** Reference base to crude oil production adjustment is October 2016 levels, except Angola for which September 2016 is used, and the numbers are from Secondary Sources, which do not represent a quota for each Member Country.*
*** Indonesia suspended its membership.*
Source: OPEC Secretariat.

World oil supply

Preliminary data indicates that global oil supply increased by 0.53 mb/d in November to average 96.84 mb/d. An increase in non-OPEC supply – including OPEC NGLs – of 0.38 mb/d and OPEC crude production of 0.15 mb/d boosted global oil output in November. The share of OPEC crude oil in total global production stood at 35.0% in November, unchanged from the month before. Estimates are based on preliminary data for non-OPEC supply, direct communication for OPEC NGLs and non-conventional liquids, and secondary sources for OPEC crude oil production.

Graph 5.22: OPEC and world oil supply

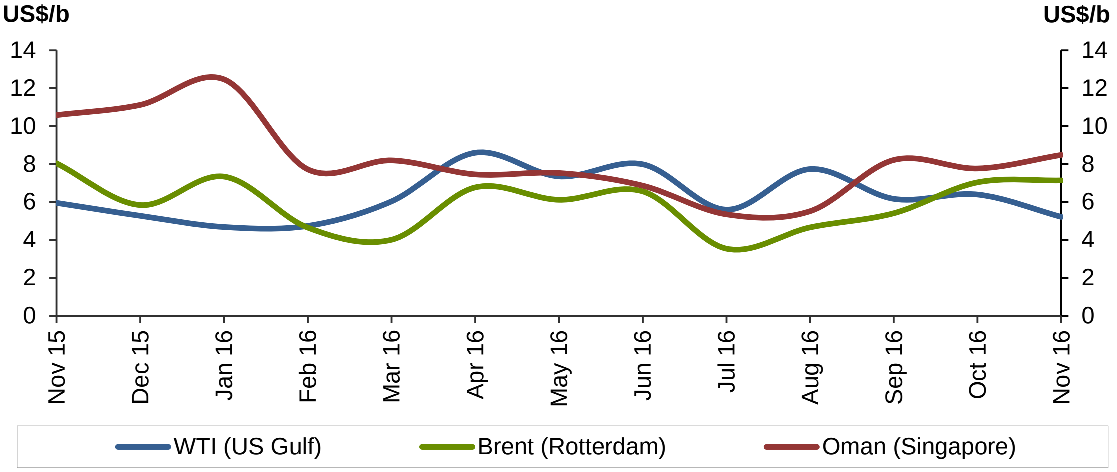


Source: OPEC Secretariat.

Product Markets and Refinery Operations

Product markets showed a mixed performance in the Atlantic Basin during November. Refining margins got some support from the positive performance at the bottom of the barrel on the back of a tightening market. However the sharp fall of the gasoline cracks impacted margins in the USGC, while in Europe, refinery margins continued to rise, supported by a more balanced gasoil market. In Asia, margins strengthened on the back of firm regional demand.

Graph 6.1: Refinery margins, 2015-2016



Sources: Argus Media and OPEC Secretariat.

US domestic gasoline demand continued showing healthy levels; however the pressure coming from the supply side with several refineries being back from maintenance and the return of the Colonial Pipeline operations caused gasoline crack spreads to suffer a sharp drop during November. This disappointing performance on the top of the barrel, along with an observed increase in inventory levels, caused US Gulf Coast (USGC) refinery margins for WTI crude to drop by more than $1 versus the previous month, to average around $5.2/b during November.

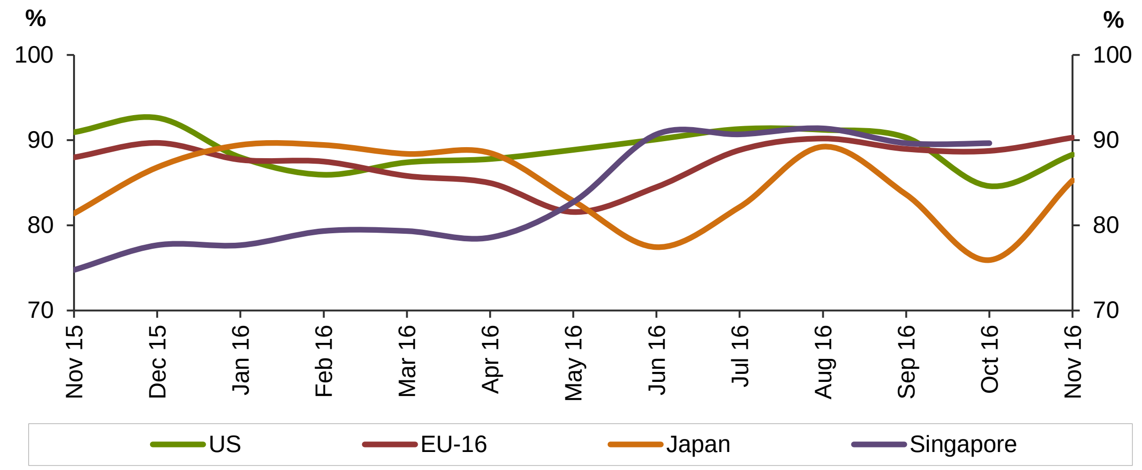
The **European** gasoil market was supported by slower inflows into the region, which, together with the positive performance seen in the fuel oil and naphtha markets, allowed the margins to continue healthy in Europe by offsetting the weakness seen in the gasoline fundamentals across the Atlantic. The refinery margin for Brent crude in Northwest Europe showed a slight gain of 20¢ versus the previous month, to average $7.2/b during November.

Asian product markets strengthened during November on the back of firm regional demand. The stronger demand reported at the top of the barrel, in addition to the market tightening at the bottom of the barrel, allowed refinery margins to continue to rise. Refinery margins in Singapore averaged around $8.5/b in November, up by 70¢ versus the previous month's level.

Refinery operations

Following the peak of the global refinery maintenance season, which had more than 6 mb/d of capacity off-line in October, throughputs have been on the rise during November. Refinery utilization in the **US** averaged around 88%, corresponding to 16.2 mb/d, up by around 650 tb/d versus the previous month, but 140 tb/d lower than in the same month a year ago. This y-o-y drop came on the back of the impact of the Colonial Pipeline outage on some refineries in the USGC, despite refinery maintenance season ending.

Graph 6.2: Refinery utilisation rates, 2015-2016



Sources: Argus Media and OPEC Secretariat.

European refinery runs averaged around 90% of capacity in November, corresponding to a throughput of 10.7 mb/d, which was around 190 tb/d higher than in the previous month and up by 280 tb/d from the same month a year ago, as refinery throughputs were on the rise following the end of the maintenance season in Europe.

In **Asia**, refinery utilization rates have been on the rise, following the peak refinery maintenance in the region. Refinery runs in India averaged almost 5 mb/d during October, around 150 tb/d higher than the previous month. Meanwhile Chinese refineries throughputs averaged over 11 mb/d during October, increasing 360 tb/d versus the previous month and hitting a new record-high level, following maintenance seen at several teapots refineries, and taking advantage of export quotas and stronger seasonal demand within the Asian region. Refinery runs in Singapore for October averaged around 90%, similar to the previous month, while Japanese throughput averaged 87% of capacity in November, 9 pp higher than the previous month, when several refineries were in maintenance.

US market

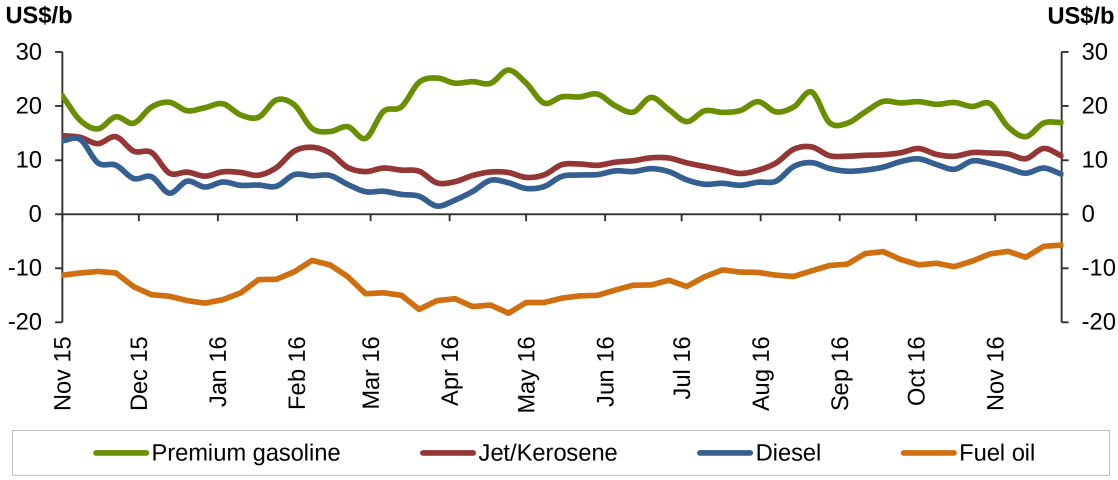
US gasoline demand stood at around 9.2 mb/d in November, approximately 80 tb/d higher than in the previous month and more than 60 tb/d higher from the same month a year earlier.

Despite healthy domestic demand, gasoline margins suffered a sharp drop during November, pressured by the supply side with several refineries being back from maintenance and the Colonial Pipeline returning to operation. Meanwhile inventories reversed their downward trend with a build of around 5 mb during November.

The gasoline crack spread showed a sharp loss of almost $4, compared with the previous month's level, to average around $17/b in November.

Further losses were avoided by high export volumes, mainly to Latin America, which helped to ease the glut of products in the USGC caused by limited operation of the Colonial Pipeline during the previous weeks.

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



Sources: Argus Media and OPEC Secretariat.

Middle distillate demand stood at around 4.0 mb/d in November, which is 80 tb/d lower than in the previous month and around 280 tb/d higher than in the same month a year earlier.

The middle distillate market continued to receive some support from higher export opportunities to Latin America and healthy domestic demand supported by the larger-than-expected harvest season. However, these factors were outweighed by increasing supplies, with the approaching end of the refinery maintenance season amid inventories on the rise. Another bearish factor has been the weakness seen in the arbitrage to Europe during the last weeks.

The USGC gasoil crack spread averaged around $8.2/b in November, losing more than $1 from the previous month's level.

At the **bottom of the barrel**, fuel oil margins strengthened on the back of a tightening market as inflows to the region slowed, mainly from Latin America. Another supporting factor has been the open arbitrage from the USGC to Asia.

Meanwhile, low-sulfur vacuum gasoil (VGO) demand is expected to rise, with several secondary units back from maintenance.

The USGC HSFO crack spread gained around $2, to average minus $7/b in November.

European market

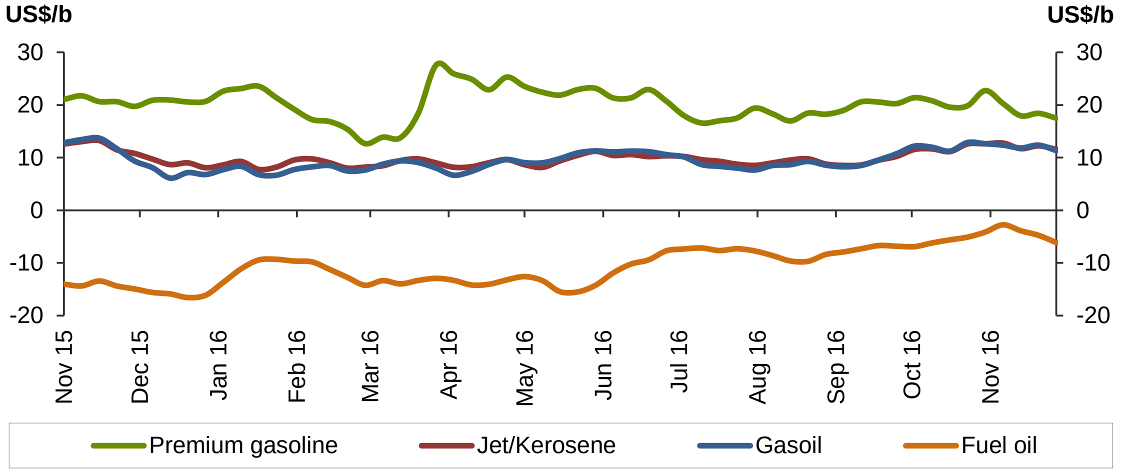
Product markets in Europe continued strengthening during November, with naphtha gaining support from stronger export opportunities. The continued recovery witnessed at the middle of the barrel on the back of a more balanced market along with a positive performance in the bottom of the barrel offset the weakness seen in gasoline fundamentals across the Atlantic.

The **gasoline** market weakened in Europe, due to the narrowing seen in transatlantic arbitrage with the Colonial Pipeline restarting operations in the US. Other bearish factors included slower export opportunities to Latin America and increasing supplies with several refineries finishing maintenance and ARA gasoline inventories increasing by almost 30% in November.

The gasoline crack spread against Brent lost around $1 from the previous month's level to average around $19.4/b during November. Losses were limited by some support coming from export opportunities to Africa and the Middle East.

The light distillate **naphtha** crack continued to strengthen, gaining almost $2/b in November on the back of stronger domestic demand with several cracker units being back from maintenance amid open arbitrage to Asia. Additional support came from increases in LPG prices, enabling naphtha to become more competitive as a petrochemical feedstock.

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



Sources: Argus Media and OPEC Secretariat.

The European **gasoil** market retained the recovery seen in the previous month on the back of support coming from continued slower inflows into the region, which has led to a more balanced market and caused ARA gasoil inventories to fall. Despite some recovery in Russian gasoil exports, this has been more than offset by reductions seen in arbitrage volumes coming from the US and the Middle East to Europe. Additional support came from healthy Latin American demand.

The gasoil crack spread against Brent crude at Rotterdam remained flat at the previous month's average of around $12/b in November. Any uptick was limited by lack of support from domestic demand so far during the winter season.

At the **bottom of the barrel**, the fuel oil market continued its recovery trend on the back of a tightening regional market amid opened arbitrage opportunities to Singapore, which has lent support with increasing export volumes, despite the rise seen recently in ARA fuel oil inventories. On the other hand, some Baltic volumes have been pulled from Asia, thus reducing inflows over the European region.

The NWE fuel oil crack gained almost $2 compared with the previous month to average around minus $4/b in November. Additional recovery in the margins could be limited in the coming weeks with several refineries back from maintenance, contributing to an increase in supplies within the region.

Asian market

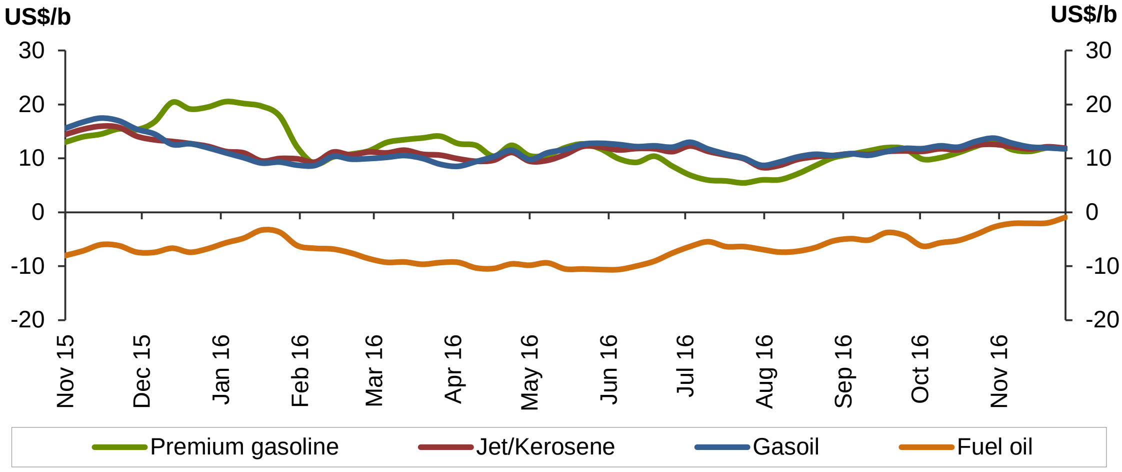
The Asian market continued to be healthy during November on the back of firm regional demand. Tight sentiment at the bottom of the barrel along with stronger demand reported at the top of the barrel lent support to the market and allowed refinery margins to continue to rise.

The Asian **gasoline** market was supported by strong regional demand, not only from the main importer, Indonesia, but also from India and Pakistan, while tightening market sentiment was further fueled by the outage of the FCC unit in a Vietnamese refinery, along with delays expected in the re-starting of some Indian refineries.

The gasoline crack spread against Oman crude in Singapore averaged around $12/b in November, gaining around $1 compared with the previous month's level. Additional gains were capped by several refineries returning from maintenance.

The Singapore **naphtha** crack strengthened in November as support came from demand in the petrochemical sector with the return of steam cracker capacity in Singapore. Additional support came from increasingly competitive differential prices, versus LPG as a petrochemical feedstock.

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 continued the recovery seen in the last month. Regional demand continued to show a typical seasonal rise, with Indian demand being boosted by the harvest season and the transportation sector's requirements. However, this positive factor was offset by expectations of a long market with the end of the heavy refinery maintenance season amid increasing supplies reported from China and South Korea, while export volumes from Japan were seen increasing.

The gasoil crack spread in Singapore against Oman averaged around $12.5/b in November, gaining just 10¢ compared with the previous month's level.

The Asian **fuel oil** market strengthened sharply on the back of stronger regional demand from Sri Lanka, Bangladesh and South Korea. Additional support came from a tightening market driven by delays in arrivals and some blend stock shortages, amid rising bunker demand in Singapore.

The fuel oil crack spread in Singapore against Oman averaged about minus $2/b in November, gaining more than $3 from the previous month.

Table 6.1: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				Refinery utilization, %			
	Sep 16	Oct 16	Nov 16	Change Nov/Oct	Sep 16	Oct 16	Nov 16	Change Nov/Oct
US	16.52	15.48	16.16	0.68	90.31	84.61	88.30	3.69
France	1.19	1.23	1.31	0.09	84.78	87.13	93.46	6.33
Germany	1.94	1.90	1.89	-0.01	88.53	86.65	86.20	-0.46
Italy	1.39	1.23	1.39	0.16	67.79	59.87	67.79	7.92
UK	1.11	1.08	1.10	0.01	78.96	77.25	78.10	0.86
Euro-16	10.54	10.51	10.70	0.19	88.97	88.74	90.30	1.56
Japan	3.19	2.90	3.26	0.36	83.63	75.92	85.28	9.35

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

Table 6.2: Refined product prices, US$/b

		Oct 16	Nov 16	Change Nov/Oct	Year-to-date 2015	Year-to-date 2016
US Gulf (Cargoes FOB):						
Naphtha*		50.32	47.00	-3.32	60.59	44.26
Premium gasoline	*(unleaded 93)*	70.31	62.37	-7.94	79.59	62.31
Regular gasoline	*(unleaded 87)*	62.73	55.33	-7.40	69.13	56.33
Jet/Kerosene		61.20	56.64	-4.56	66.43	51.85
Gasoil	*(0.2% S)*	59.29	53.85	-5.44	65.69	49.11
Fuel oil	*(3.0% S)*	40.07	38.30	-1.77	42.39	30.91
Rotterdam (Barges FoB):						
Naphtha		48.60	45.82	-2.78	51.63	41.64
Premium gasoline	*(unleaded 98)*	70.13	64.62	-5.51	77.05	62.88
Jet/Kerosene		61.50	57.36	-4.14	68.19	52.50
Gasoil/Diesel	*(10 ppm)*	61.82	57.29	-4.53	67.88	52.22
Fuel oil	*(1.0% S)*	43.83	40.98	-2.85	41.77	33.00
Fuel oil	*(3.5% S)*	38.10	35.71	-2.39	42.40	28.49
Mediterranean (Cargoes FOB):						
Naphtha		48.18	45.09	-3.09	48.81	40.79
Premium gasoline**		62.36	57.83	-4.52	70.96	55.49
Jet/Kerosene		60.06	55.87	-4.19	64.62	50.93
Diesel		62.83	57.93	-4.90	69.42	53.35
Fuel oil	*(1.0% S)*	44.46	40.71	-3.75	43.53	33.32
Fuel oil	*(3.5% S)*	40.72	37.30	-3.42	42.22	31.04
Singapore (Cargoes FOB):						
Naphtha		47.70	46.82	-0.88	53.28	41.91
Premium gasoline	*(unleaded 95)*	62.99	58.99	-4.00	70.42	55.10
Regular gasoline	*(unleaded 92)*	60.06	56.51	-3.55	67.30	52.25
Jet/Kerosene		61.02	56.63	-4.39	66.35	51.81
Gasoil/Diesel	*(50 ppm)*	61.60	57.03	-4.57	67.83	51.87
Fuel oil	*(180 cst 2.0% S)*	45.33	43.90	-1.43	47.56	35.79
Fuel oil	*(380 cst 3.5% S)*	43.06	41.68	-1.38	45.82	33.59

*Note: * Barges.*
*** Cost, insurance and freight (CIF).*
Sources: Argus Media and OPEC Secretariat.

Tanker Market

In November, tanker spot freight rates for dirty vessels showed a noteworthy rise, as average spot freight rates continued to increase for the third month in a row, showing a gain of 24% on average from the previous month. Freight rates for all classes in the dirty segment of the market increased on almost all reported routes, though the amount of gains varied. Rates for VLCC fixtures in November continued to rise as seen in the previous month, supported by steady tonnage demand in major trading areas where different routes reflected higher freight rates. The Suezmax class also benefited from a firming market, though its increase in rates remained marginal. Aframax freight rates showed the highest increase in dirty class vessels, mainly as demand and rates in the Mediterranean surged, in combination with increased delays at Turkish straits, which reduced the supply of vessels and raised freight rates significantly in a monthly and on an annual basis.

Spot fixtures

In November, **OPEC spot fixtures** were down by 1% from the previous month to average 11.10 mb/d, according to preliminary data. The drop came at the same time as lesser spot fixtures from the Middle East-to-West and outside Middle East fixtures declined – by 5.9% and 19.6%, respectively – from a month before. Meanwhile, fixtures from the Middle East-to-East rose by 0.7 mb/d in November to average 6 mb/d.

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

	Sep 16	Oct 16	Nov 16	*Change* Nov 16/Oct 16
Spot Chartering				
All areas	13.67	15.42	15.97	0.55
OPEC	9.74	11.21	11.10	-0.11
Middle East/East	5.11	5.30	6.00	0.70
Middle East/West	2.50	2.53	2.38	-0.15
Outside Middle East	2.13	3.39	2.73	-0.66
Sailings				
OPEC	23.63	23.75	24.01	0.25
Middle East	17.10	17.12	17.35	0.23
Arrivals				
North America	9.39	9.53	9.72	0.19
Europe	12.21	12.13	12.34	0.21
Far East	8.56	8.30	8.92	0.62
West Asia	4.58	4.87	4.41	-0.46

Source: Oil Movements.

Sailings and arrivals

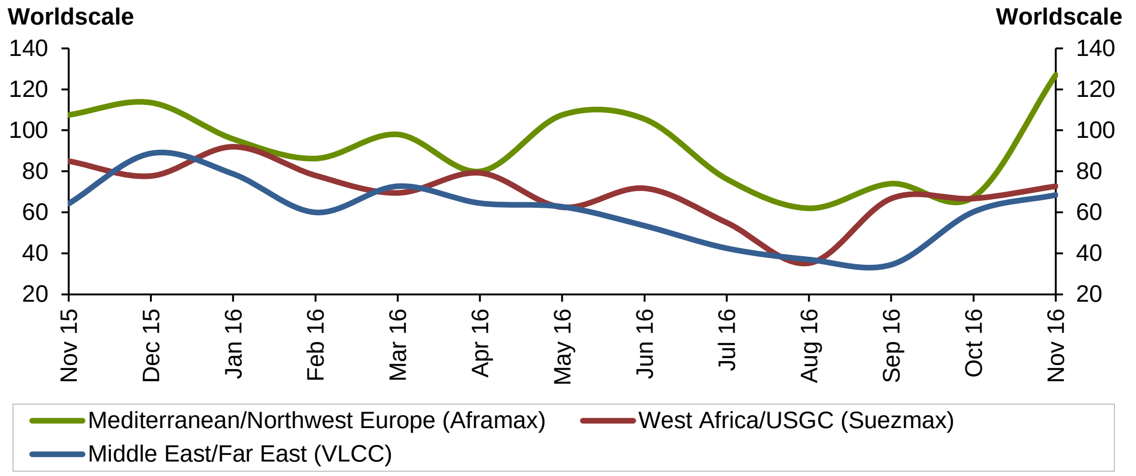
OPEC sailings increased by 0.25 mb/d, or 1.1%, in November to stand at 24.01 mb/d, This was supported by an increase in Middle East sailings, which rose by 0.23 mb/d, or 1.3%, over the previous month to average 17.35 mb/d. Crude oil arrivals were higher in most regions in November. Arrivals at North American, Far Eastern and European ports rose by 1.9%, 7.5% and 1.7%%, respectively, compared with the previous month. Arrivals in West Asian ports were the only exception, as they dropped by 9.5%.

Spot freight rates

VLCC

In the dirty market, VLCC spot freight rates continued to climb as seen in the previous month. In November, VLCC average spot freight rates increased by 11% from one month before. The tonnage market was mostly balanced in November, despite activity fluctuating, which led to a slower pace of activities, mainly as November requirements were covered. On average, VLCC spot freight rates stood at WS59 points, up by 3% from those registered in the same month a year earlier. VLCC Middle East-to-East spot freight rates went up by 14% in November to stand at WS69 points, followed by freight rates registered for tankers trading on the Middle East-to-West route, which rose by 10% to average WS39 points. As for the tanker market in West Africa, the VLCC spot freight rate on the West Africa-to-US Gulf Coast route showed fewer gains than other routes, though it remains up by 9% m-o-m to average WS73 points.

Graph 7.1: Monthly averages of crude oil spot freight rates



Sources: Argus and Platts.

Suezmax

Average Suezmax spot freight rates also showed gains in the dirty market, though at a lower level than in the VLCC sector, rising by only 2% on average in November, compared with the previous month, to average WS68 points. The month started with a quiet market in several areas with limited fixtures, while vessel supply remained sufficient and rates stayed weak. Later on, an increased flow of fixtures in the Caribbean, USGC and Europe supported Suezmax demand in many areas, reducing tonnage availability and thus boosting the tonnage sentiment. Suezmax freight rates in November were also supported by rising rates of Aframax and delays in the Turkish Straits, which partially drove the rates in the Black Sea higher.

Consequently, spot freight rates for tankers operating on the West Africa-to-US route increased by 9% in November to stand at WS73 points, while rates on the Northwest Europe(NWE)-to-US route showed a decline by 4% to stand at WS64 points.

Table 7.2: Spot tanker crude freight rates, Worldscale

	Size *1,000 DWT*	Sep 16	Oct 16	Nov 16	Change Nov 16/Oct 16
Crude					
Middle East/East	230-280	35	60	69	8
Middle East/West	270-285	24	36	39	4
West Africa/East	260	42	62	68	6
West Africa/US Gulf Coast	130-135	67	67	73	6
Northwest Europe/US Gulf Coast	130-135	59	67	64	-3
Indonesia/East	80-85	64	82	88	6
Caribbean/US East Coast	80-85	92	97	126	29
Mediterranean/Mediterranean	80-85	87	71	134	63
Mediterranean/Northwest Europe	80-85	74	68	127	60

Sources: Argus Media and OPEC Secretariat.

Aframax

Average Aframax spot freight rates showed the highest gains in dirty tanker sector, as increases were seen in all reported routes. Average Aframax spot freight rates showed remarkable gains in November, averaging WS119 points. In the Baltics and North Sea, Aframax rates experienced a sudden increase at the beginning of the month as the tonnage list tightened notably. The rising sentiment for this class spread to the neighboring areas of the Mediterranean and Black Sea tonnage market. A high level of fixtures and inquiries kept freight rates up despite a high level of volatility in different markets. The surge in rates seen in different markets was also supported by tonnage demand for Mediterranean loadings, which, coupled with increasing delays at the Turkish Straits and a prolonged total transit time, supported the massive increase in spot freight rates. On the other hand, the announcement of the Primorsk loading programme in December was another factor which maintained higher rates for Aframax in November.

Consequently, spot freight rates on the Mediterranean-to-Mediterranean and Mediterranean-to-NWE Europe routes were the main contributors to the average rate increase. Both routes reflected higher rates by 89% and 88%, respectively, from the previous month to stand at WS134 points and WS127 points. This reflects an increase of 19% and 18% from the same month in 2015. Spot freight rates for Aframax operating on the Caribbean-to-US route registered relatively lower increases, rising by 30% from last month to recover to WS126 points. Meanwhile, spot freight rates for tankers trading on the Indonesia-to-East routes showed a relatively lower gain, rising by 7% to stand at WS88 points.

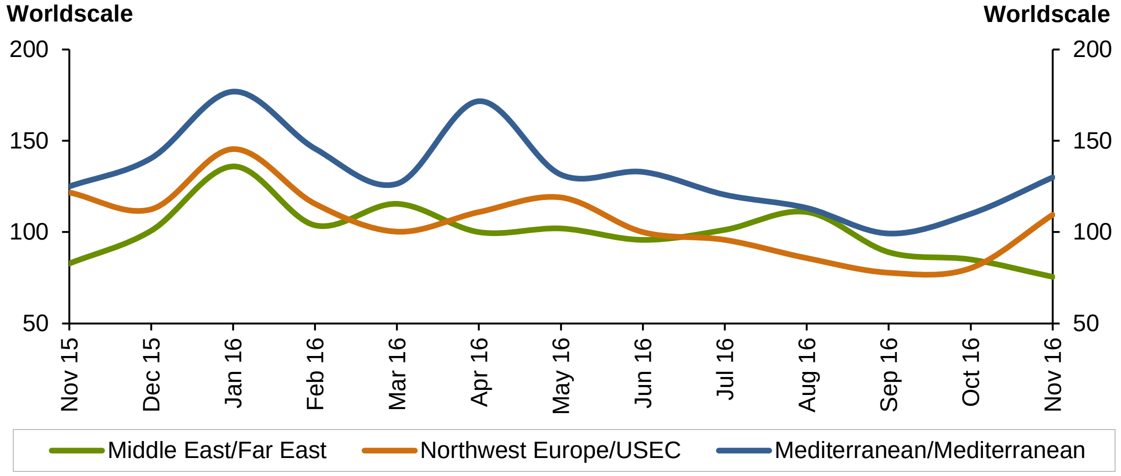
Clean spot freight rates

Within the clean tanker market, spot freight rates took different directions in November. Nevertheless, on average, clean freight rates went up by 11% compared with the previous month. The higher average freight rates were driven by higher rates achieved in western markets, while in eastern markets, market activity remained limited.

Spot freight rates for tankers operating on the Middle East-to-East route dropped by WS9 points from the previous month. Similarly, freight rates on the Singapore-to-East route declined by WS8 points from one month earlier to average WS104 points in November.

On the West-of-Suez route, rates experienced different gains as the tonnage demand in different markets varied. However, an occasional tightening of ships drove freight rates higher. Clean spot freight rates on the Mediterranean-to-Mediterranean and Mediterranean-to-NWE routes went up by 18% and 20%, respectively, in November. Rates for tankers trading on NWE-to-US East Coast averaged WS110 points, rising by 36% from a month before.

Graph 7.2: Monthly average of clean spot freight rates



Sources: Argus Media and OPEC Secretariat.

Table 7.3: Spot tanker product freight rates, Worldscale

	Size				Change
	1,000 DWT	Sep 16	Oct 16	Nov 16	Nov 16/Oct 16
Products					
Middle East/East	30-35	89	85	76	-10
Singapore/East	30-35	117	112	104	-8
Northwest Europe/US East Coast	33-37	78	80	110	29
Mediterranean/Mediterranean	30-35	99	110	130	20
Mediterranean/Northwest Europe	30-35	108	117	140	23

Sources: Argus Media and OPEC Secretariat.

Oil Trade

Preliminary data for November shows that US crude oil imports increased by 114 tb/d from the previous month to an average of 7.8 mb/d, and up by 413 tb/d from one year ago. US monthly product imports also were up in November by 316 tb/d, or 16%, to average 2.4 mb/d. Year-on-year, product imports were up by 570 tb/d.

Japan's crude oil imports dropped in October by 182 tb/d, or 6%, to average 3.1 mb/d. In a y-o-y comparison, crude imports also declined by 67 tb/d, or 2%. However, product imports were stable, averaging 440 tb/d, reflecting a drop of 23% y-o-y.

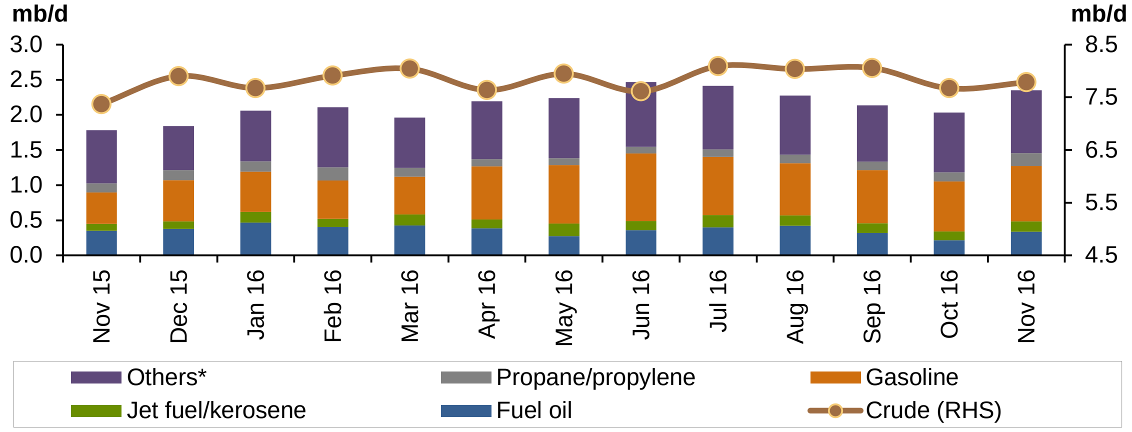
Following record-high levels for Chinese crude imports in September, October figures saw them significantly decline; they dropped by 1.3 mb/d, or 16%, to average 6.8 mb/d. In an annual comparison, they remained higher than in the same period the previous year by 575 tb/d, or 9%. China's petroleum product imports also declined in October, dropping by 14% m-o-m and down by 8% from the same month of the previous year.

India's crude imports declined by 48 tb/d, or 1%, from the previous month to average 4.3 mb/d. Crude imports showed an annual increase of 610 tb/d, or 17%. India's import of products in October rose marginally by 5 tb/d, or 1%, m-o-m to average 815 tb/d, while increasing y-o-y by 137 tb/d.

US

Preliminary data for November shows that US **crude oil imports** increased over the month to average 7.8 mb/d, up by 114 tb/d from the previous month and 413 tb/d from a year earlier. On a year-to-date basis, US crude imports in November were higher by 550 tb/d.

Graph 8.1: US imports of crude and petroleum products

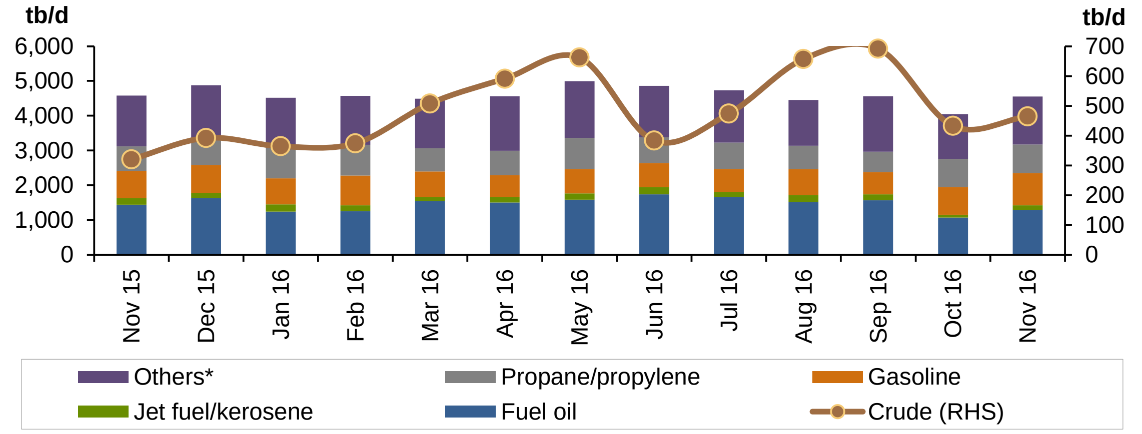


*Note: *Others: Contains natural gas liquids, liquefied refinery gases (LRG's), other liquids and all finished petroleum products except gasoline, jet fuel/kerosene, fuel oil and propane/propylene.*
Sources: US Energy Information Administration and OPEC Secretatiat.

US monthly **product imports** also were up in November by 316 tb/d, or 16%, to average 2.4 mb/d. In an annual comparison, product imports were up by 570 tb/d.

Total US **exported products** in November reached 4.6 mb/d, up by 505 tb/d from a month earlier. Annually, product exports were down by 29 tb/d or 1%. As a result, **US total net imports were lower than in the previous month to average 5.1 mb/d**, showing a drop of 106 tb/d from the year before.

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 Secretatiat.

The top **first and second suppliers** to the US in September remained the same as before. Canada was the premier crude supplier to the US, accounting for 41% of total US crude imports, reflecting a minor change from the previous month, down by 7 tb/d. Saudi Arabia maintained its status as second-largest supplier to the US in September. Saudi exports rose from the previous month by 67 tb/d. Venezuela came in as third top supplier, accounting for 10% of total US crude imports, with higher volumes from a month earlier of 63 tb/d, or 6%.

Crude imports from OPEC Member Countries went up in September from one month earlier by 196 tb/d, or 6%, accounting for 41% of total US crude imports. US **product imports from OPEC Member Countries** declined in September from the previous month by 46 tb/d, or 15%. Canada and Russia maintained their positions as **first and second product suppliers** to the US, accounting for 24% and 16%, respectively, though imports from both countries were lower in September. Algeria was the third-largest supplier to US, though down by 26 tb/d, or 7%, from the previous month.

Looking into US **crude imports by region**, September imports from North America averaged 3.3 mb/d, making it the top importing region to the US, followed by Latin America and the Middle East, which came in as second- and third-biggest regional suppliers to stand at 2.1 mb/d and 2 mb/d, respectively. Imports from North America stayed about the same, with no major changes from the previous month, while those from the Middle East increased by 200 tb/d.

Regarding **crude imports by PADD;** PADD 1 crude imports declined from all regions from one month before, with OECD Europe being the only exception, from where imports rose by 73 tb/d. PADD 2 imports continued to be largely covered by North America, averaging 2.2 mb/d, flat from a month before. Imports from the Middle East only averaged 24 tb/d for PADD 2 in September. In PADD 3, Latin America and the Middle East remained the main exporters, with average volumes of 1.6 mb/d and 1.3 mb/d, respectively. As seen previously, all imports to PADD 4 arrived solely from North America, averaging 299 tb/d in September, up by 34 tb/d from the month before.

Imports to PADD 5 came from different regions, though remaining primarily covered by the Middle East and Latin America. Both regions showed higher volumes from the previous month by 107 tb/d and 54 tb/d, respectively.

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

	Sep 16	Oct 16	Nov 16	Change Nov 16/Oct 16
Crude oil	7,365	7,238	7,320	82
Total products	-2,421	-2,016	-2,205	-189
Total crude and products	**4,944**	**5,222**	**5,115**	**-107**

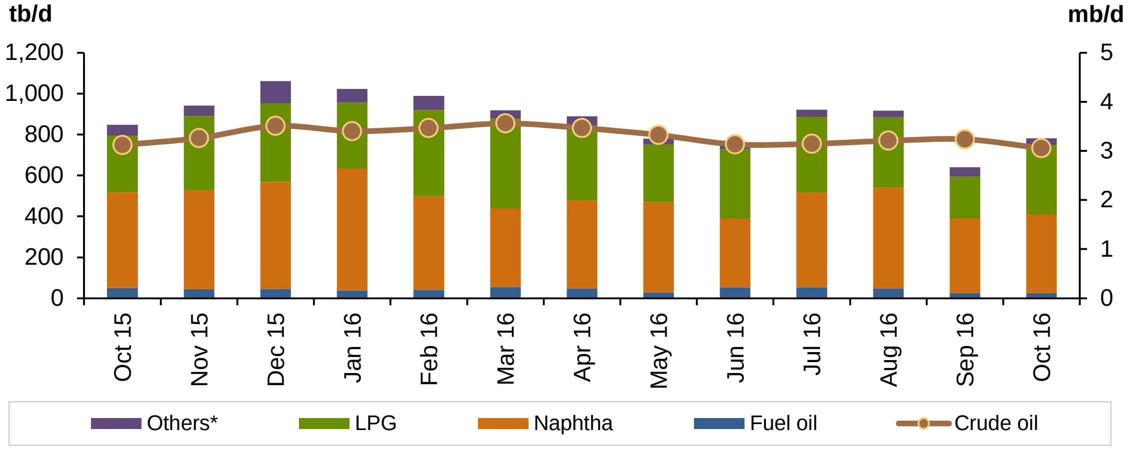
Sources: US Energy Information Administration and OPEC Secretatiat.

Japan

Japan's **crude oil imports** dropped in October by 182 tb/d, or 6%, to average 3.1 mb/d. Y-o-y, crude imports also declined in October by 67 tb/d, or 2%.

As to **supplier share**, Saudi Arabia and the UAE remained the main suppliers to Japan, holding shares of 41% and 23%, respectively. Qatar held the third position in October with a share of 7%, while volumes from Saudi Arabia rose by 233 tb/d. Imports from the UAE and Qatar were down from a month earlier by 146 tb/d and 101 tb/d, respectively.

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

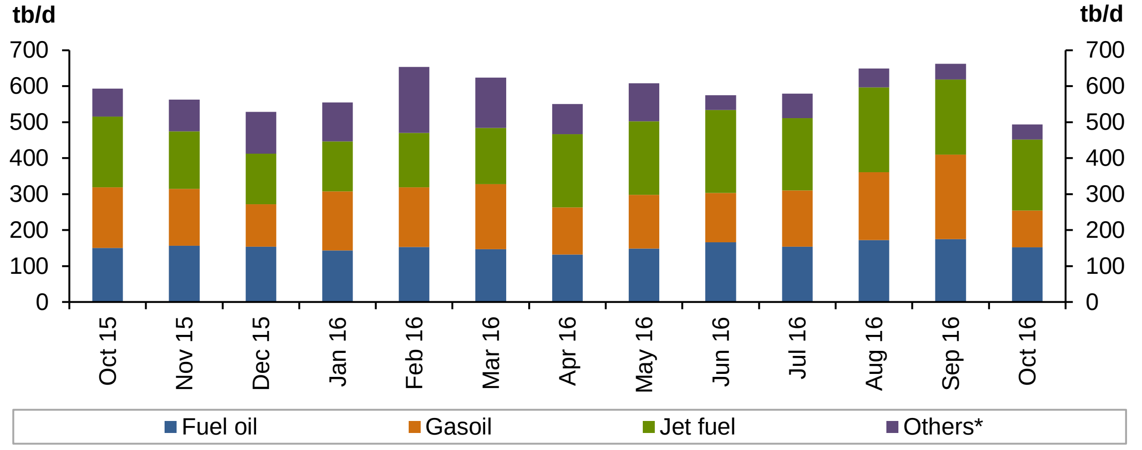


*Note: *Others: Contains gasoline, jet fuel, kerosene, gasoil, asphalt and paraffin wax.*
Sources: Ministry of Economy, Trade and Industry of Japan and OPEC Secretariat.

On the other hand, **product imports** were stable in October, averaging 440 tb/d and reflecting a drop of 23% y-o-y. Following 13 consecutive months of annual decline, **domestic product sales** reached a 34-year low in the month of October.

Japan's **product exports** in October dropped by 169 tb/d, or 25%, to average 494 tb/d. In a y-o-y comparison, they went down by 100 tb/d from a year before.

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.

Accordingly, **Japan's net imports were broadly unchanged in October, dipping by a slight 7 tb/d, to average 3 mb/d**.

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

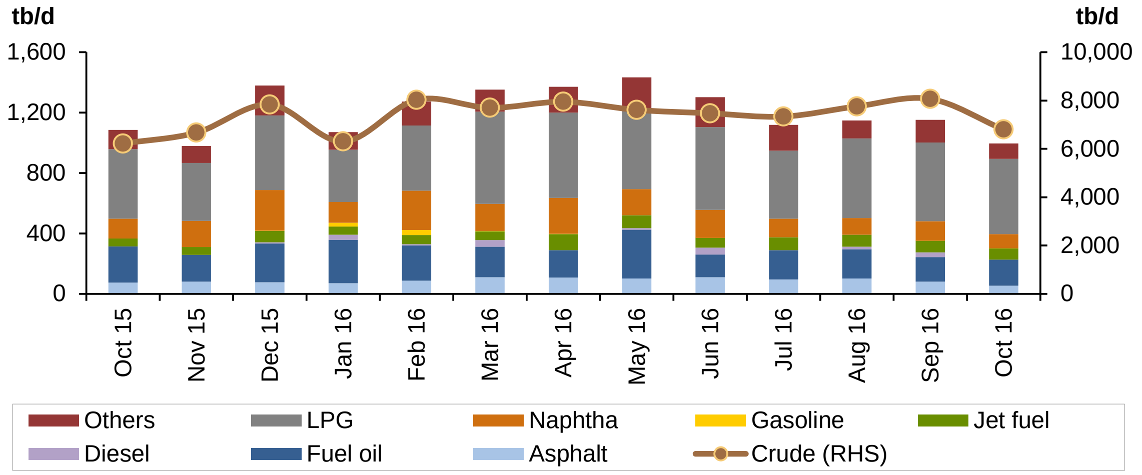
	Aug 16	Sep 16	Oct 16	*Change* Oct 16/Sep 16
Crude oil	3,206	3,236	3,055	-182
Total products	-73	-229	-54	175
Total crude and products	**3,133**	**3,008**	**3,001**	**-7**

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

China

Following gains seen in previous months, **China's crude imports** declined significantly in October, after reaching record-high levels in September. The country's crude imports dropped by 1.3 mb/d, or 16%, to average 6.8 mb/d. In an annual comparison, they remained higher than in the same period the previous year by 575 tb/d, or 9%. Year-to-date, crude imports showed a gain of 876 tb/d, or 13%.

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

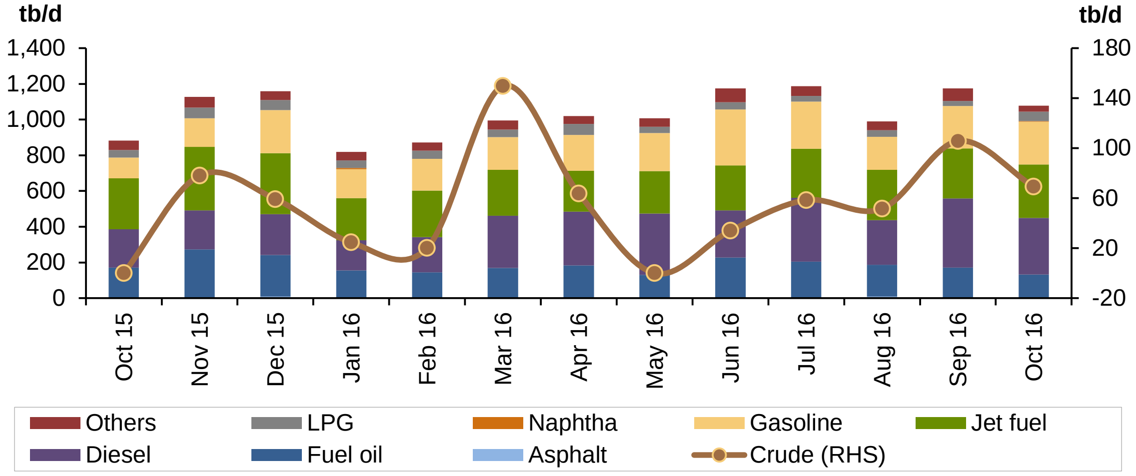


Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

China's **petroleum product imports** also declined in October, down by 14% m-o-m, less by 8% from the same month of the previous year.

Russia, Saudi Arabia and Iraq were **top suppliers** to China in October, accounting for 17%, 14% and 13%, respectively. Russia came in as top supplier to China, as it raised exported volumes by 154 tb/d from one month earlier, while Saudi Arabian and Iraqi exports to China declined by 14 tb/d and 114 tb/d, respectively. IR Iran came in as fourth-largest supplier to China in October, with higher imports by 282 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.

Following a gain in exports seen the previous month, China's **product exports** dropped by 97 tb/d, or 8%, to average 1.1 mb/d.

China's **crude exports** also decreased in October by 36 tb/d. As a result, **China's net oil imports decreased by 1.3 mb/d from the previous month to average 6.6 mb/d.** However, they remain above the previous year's level by 220 tb/d.

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

	Aug 16	Sep 16	Oct 16	*Change* Oct 16/Sep 16
Crude oil	7,706	7,961	6,728	-1,233
Total products	158	-23	-83	-60
Total crude and products	**7,864**	**7,938**	**6,645**	**-1,293**

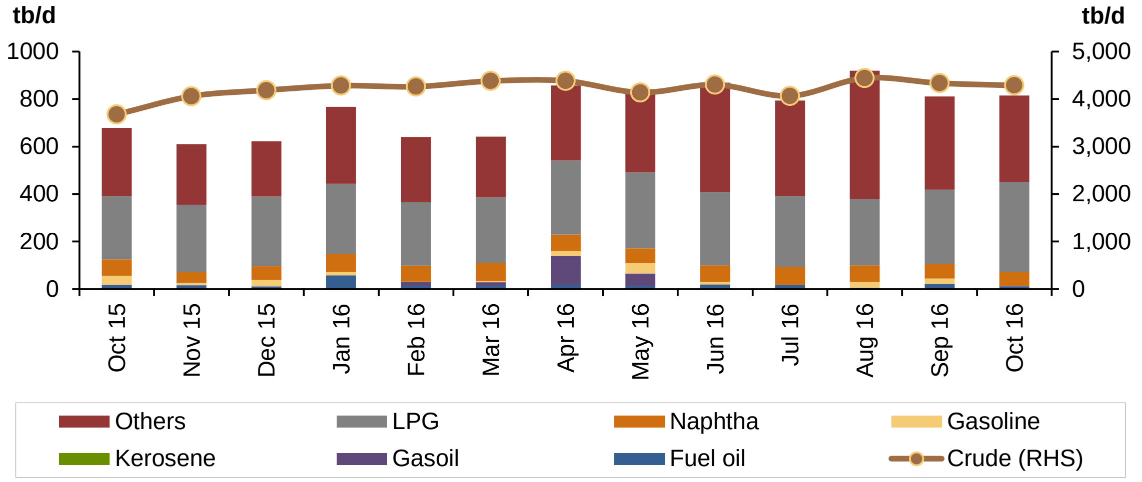
Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC Secretariat.

India

India's **crude imports** in October declined by 48 tb/d, or 1%, from the previous month, to average 4.3 mb/d. Crude imports showed an annual increase of 610 tb/d, or 17%.

On the other hand, India's **product imports** in October rose slightly by 5 tb/d, or 1%, m-o-m to average 815 tb/d, while y-o-y they increased by 137 tb/d. Higher annual product imports in October came mainly on the back of higher imported volumes of LPG, which saw an increase of 111 tb/d.

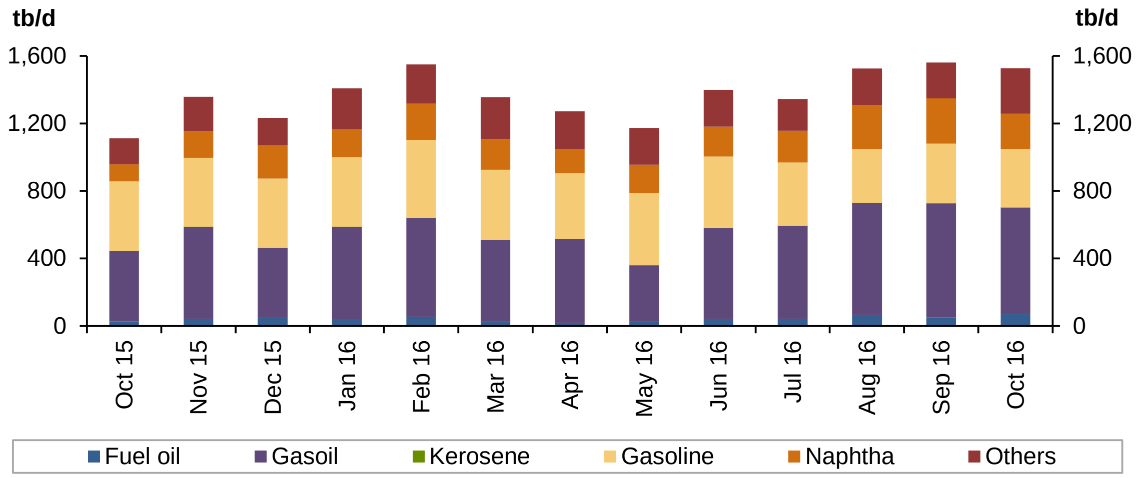
Graph 8.7: India's imports of crude and petroleum products



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

India's **product exports** dropped in October by 34 tb/d, or 2%, to average 1.5 mb/d, their lowest level since April 2015. On a y-o-y basis, product exports showed an increase of 414 tb/d. Annual product export increases came on the back of higher diesel and naphtha exports, which went up by 216 tb/d and 109 tb/d, respectively, from the previous month.

Graph 8.8: India's exports of petroleum products



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

Consequently, **India's net imports stayed broadly unchanged from the previous month to average 3.6 mb/d**, reflecting a gain of 333 tb/d, or 10%, y-o-y.

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

	Aug 16	Sep 16	Oct 16	*Change* Oct 16/Sep 16
Crude oil	4,442	4,334	4,286	-48
Total products	-606	-750	-712	39
Total crude and products	**3,836**	**3,584**	**3,575**	**-9**

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 October, **total crude oil exports from the former Soviet Union (FSU) increased by 249 tb/d, or 4%, to average 7 mb/d**. Crude exports through Russian pipelines went up as well by a slight 31 tb/d, or 1%, to average 4.4 mb/d.

Total shipments from the **Black Sea** dropped by 142 tb/d, or 21%, to average 532 tb/d as a result of lower exports through the Novorossiysk port terminal. Meanwhile, total **Baltic Sea exports** rose by 248 tb/d in October. The higher volumes came as both the Primorsk and the Ust Luga port terminals exported greater volumes from a month earlier. Total shipments through the Druzhba pipeline stayed almost flat from the previous month, averaging 1.1 mb/d in October. Kozmino shipments declined by 71 tb/d, or 10%, to average 324 tb/d.

Exports through the **Lukoil system** all dropped in October from the previous month, particularly from the Varandey platform and Kalinigrad terminal.

On **Other routes**, **Black Sea total** exports increased by 151 tb/d, mainly as exports through Novorossiyk port terminal (CPC) increased by 145 tb/d, while Supsa and Kulevi port terminal exports stayed flat from a month before. In the **Mediterranean Sea**, BTC supplies increased by 87 tb/d from the previous month, to average 680 tb/d.

FSU total product exports almost all declined, with the exception of gasoline, which rose by 115 tb/d. As a result, total FSU product exports averaged 2.6 mb/d in October.

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

			2015	3Q15	4Q15	Sep 16	Oct 16
Transneft system							
	Europe	**Black sea total**	**597**	**622**	**580**	**674**	**532**
		Novorossiysk port terminal - total	597	622	580	674	532
		of which: Russian oil	439	461	425	520	350
		Others	159	161	156	154	182
		Baltic sea total	**1,430**	**1,632**	**1,561**	**1,565**	**1,813**
		Primorsk port terminal - total	897	1,062	1,005	965	1,140
		of which: Russian oil	897	1,062	1,005	965	1,140
		Others	0	0	0	0	0
		Ust-Luga port terminal - total	533	570	556	600	673
		of which: Russian oil	350	388	360	384	464
		Others	183	182	196	216	209
		Druzhba pipeline total	**1,071**	**1,047**	**1,097**	**1,113**	**1,120**
		of which: Russian oil	1,039	1,015	1,066	1,081	1,088
		Others	32	32	31	31	32
	Asia	**Pacific ocean total**	**620**	**645**	**658**	**720**	**649**
		Kozmino port terminal - total	620	645	658	720	649
		China (via ESPO pipeline) total	**326**	**348**	**311**	**335**	**324**
		China Amur	326	348	311	335	324
	Total Russian crude exports		**4,044**	**4,295**	**4,207**	**4,406**	**4,437**
Lukoil system			**2015**	**3Q15**	**4Q15**	**Sep 16**	**Oct 16**
	Europe &	**Barents sea total**	**136**	**157**	**163**	**174**	**142**
	N. America	Varandey offshore platform	136	157	163	174	142
	Europe	**Baltic sea total**	**16**	**14**	**14**	**19**	**15**
		Kalinigrad port terminal	16	14	14	19	15
Other routes			**2015**	**3Q15**	**4Q15**	**Sep 16**	**Oct 16**
	Asia	**Russian Far East total**	**320**	**424**	**274**	**360**	**391**
		Aniva bay port terminal	110	128	95	99	141
		De Kastri port terminal	211	296	179	261	250
		Central Asia total	**228**	**183**	**200**	**231**	**211**
		Kenkiyak-Alashankou	228	183	200	231	211
	Europe	**Black sea total**	**979**	**979**	**948**	**982**	**1,133**
		Novorossiysk port terminal (CPC)	875	862	822	869	1,014
		Supsa port terminal	84	81	77	65	65
		Batumi port terminal	20	36	49	48	55
		Kulevi port terminal	0	0	0	0	0
		Mediterranean sea total	**582**	**701**	**663**	**593**	**680**
		BTC	582	701	663	593	680
Russian rail			**2015**	**3Q15**	**4Q15**	**Sep 16**	**Oct 16**
		Russian rail	**15**	**46**	**35**	**33**	**37**
		of which: Russian oil	8	*42*	*33*	*31*	*35*
		Others	6	4	2	1	2
	Total FSU crude exports		**6,320**	**6,798**	**6,505**	**6,797**	**7,046**
Products			**2015**	**3Q15**	**4Q15**	**Sep 16**	**Oct 16**
		Gasoline	157	204	139	114	228
		Naphtha	506	474	536	584	487
		Jet	30	39	54	54	40
		Gasoil	1,004	999	859	829	752
		Fuel oil	1,361	1,065	1,013	1,054	818
		VGO	260	282	323	310	306
	Total FSU product exports		**3,318**	**3,064**	**2,925**	**2,945**	**2,631**
Total FSU oil exports			**9,638**	**9,862**	**9,430**	**9,742**	**9,677**

Sources: Argus Nefte Transport and Argus Global Markets.

Stock Movements

OECD commercial oil stocks fell in October to stand at 3,027 mb, around 302 mb above the latest five-year average. Crude and products both indicated a surplus, around 184 mb and 118 mb above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks stood at 65.3 days, 6.3 days higher than the latest five-year average.

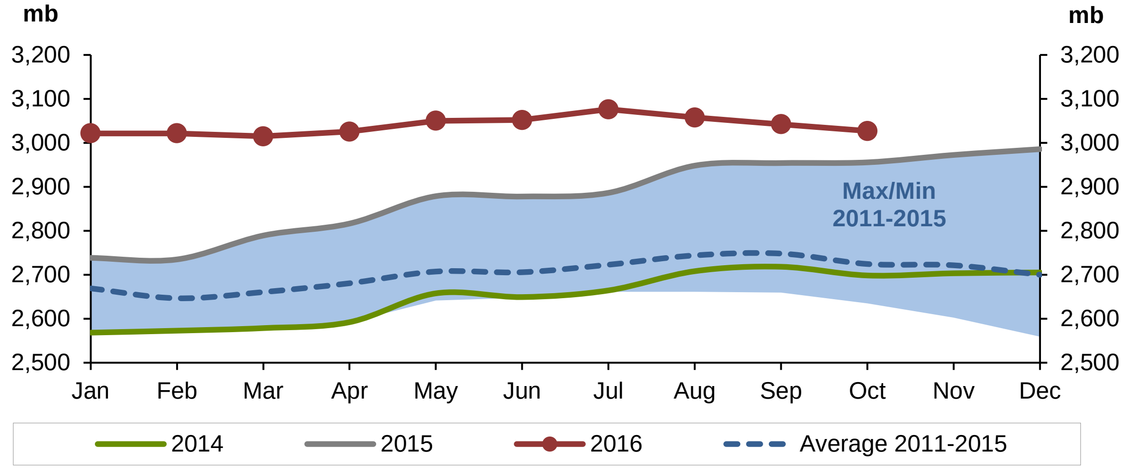
Preliminary data for November shows that total commercial oil stocks in the US rose by 8.8 mb, to settle at 1,343 mb, around 46 mb above the same period a year ago and 196 mb higher than the latest five-year average. Within components, crude stocks rose slightly by 0.7 mb, while products rose by 8.1 mb.

The latest information for China showed total commercial oil inventories fell by 3.4 mb in October to stand at 369.1 mb. Within components, crude fell by 4.4 mb, while product inventories rose by 1.0 mb.

OECD

Preliminary data for October shows that **total OECD commercial oil stocks** fell by 15.3 mb for the third consecutive month to stand at 3,027 mb, which is around 71 mb higher than at the same time one year ago and 302 mb above the latest five-year average. From January to October this year, OECD commercial stock builds have shown signs of slowing as they increased by only 41 mb compared with a build of 257 mb the previous year during the same period. The slowing build this year could be attributed to lower global supply growth compared with the considerable growth seen the previous year. Within components, crude rose by 19.5 mb, while product stocks fell by 34.8 mb.

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 rose in October, ending the month at 1,513 mb, standing 32 mb above the same time one year earlier and around 184 mb higher than the latest five-year average. OECD America and OECD Asia Pacific experienced builds, while OECD Europe stocks remained almost unchanged.

In contrast, **OECD product inventories** fell sharply by 34.8 mb following a drop of 11.1 mb in September. At 1,514 mb, OECD product inventories are 14.7 mb above a year ago at the same time and 118 mb above the seasonal norm. Within regions, OECD North America and OECD Asia Pacific saw a drop, while OECD Europe experienced a build.

In terms of **days of forward cover**, OECD commercial stocks were unchanged in October to stand at 65.3 days, which is 1.3 days above the previous year in the same period and 6.3 days higher than the latest five-year average. Within the regions, OECD Americas had 7.4 more days of forward cover than the historical average to stand at 64.7 days in October. OECD Asia Pacific stood 5.0 days above the seasonal average to finish the month of October at 53.8 days. At the same time, OECD Europe indicated a surplus of 5.0 days above the seasonal norm, averaging 73.6 days in October.

Table 9.1: OECD's commercial stocks, mb

	Aug 16	Sep 16	Oct 16	*Change* Oct 16/Sep 16	Oct 15
Crude oil	1,498	1,494	1,513	19.5	1,487
Products	1,560	1,548	1,514	-34.8	1,469
Total	**3,057**	**3,042**	**3,027**	**-15.3**	**2,956**
Days of forward cover	**65.9**	**65.4**	**65.3**	**0.0**	**64.0**

Note: Totals may not add up due to independent rounding.
Sources: Argus Media, Euroilstock, IEA, METI, OPEC Secretariat and US Energy Information Administration.

Commercial stocks in **OECD Americas** fell by 18.8 mb in October, following a drop of 14.8 mb in September, to settle at 1,592 mb, a surplus of 46 mb above a year ago and 207 mb higher than the seasonal norm. Within components, crude stocks rose by 15.9 mb, while products fell by 34.7 mb.

At the end of October, **commercial crude oil stocks** in **OECD Americas** rose, ending the month at 831 mb, which was 32 mb above the same time one year ago, and 142 mb above the latest five-year average. Higher crude imports were behind the build in crude oil stocks. The decline in US crude throughput in October also contributed to the build in OECD America crude inventories.

In contrast, **product stocks in OECD Americas** fell by 34.7 mb, ending October at 760 mb, but still indicating a surplus of 15 mb above the same time one year ago and 64 mb higher than the seasonal norm. Higher consumption, mainly distillate products, combined with lower refinery output, was behind the drop in OECD America product stocks.

OECD Europe's commercial stocks rose by 2.7 mb in October, ending the month at 984 mb, which is 13 mb higher than at the same time a year ago and 71 mb above the latest five-year average. Product stocks rose by 2.8 mb, while crude stocks remained almost unchanged.

OECD Europe's commercial crude stocks remained almost unchanged in October, ending the month at 417 mb, which is in line with the same period a year earlier and 23.4 mb higher than the latest five-year average. The decline in crude production from the North Sea offset a decrease in crude throughput.

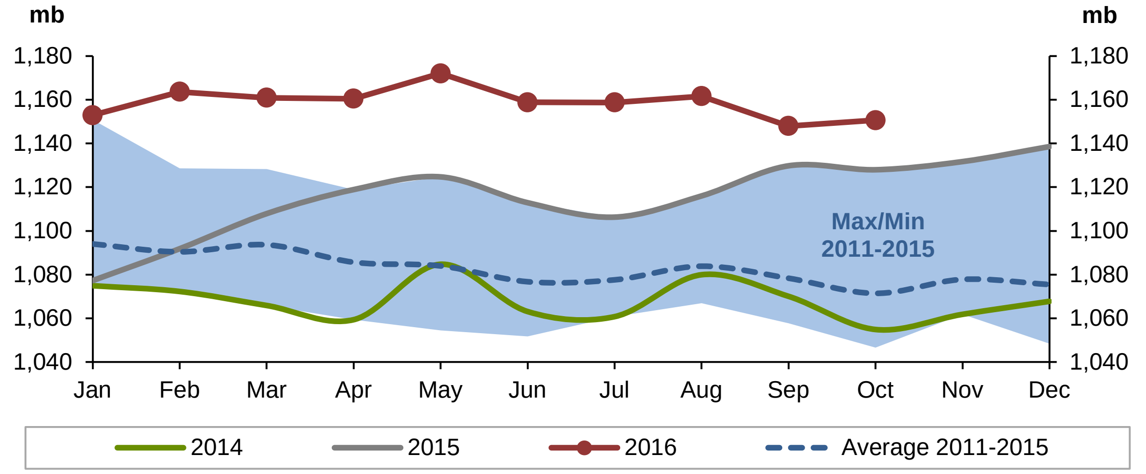
OECD Europe's commercial product stocks rose by 2.8 mb to end October at 567 mb, which is 13 mb higher than a year ago at the same time and 48 mb higher than the seasonal norm. This build could be attributed to lower demand in the region combined with lower refinery output.

OECD Asia Pacific commercial oil stocks rose slightly by 0.8 mb in October to settle at 451 mb, which is 12 mb higher than a year ago and 24.8 mb above the five-year average. Within components, crude rose by 3.6 mb, while product stocks fell by 2.8 mb. In October, crude inventories ended the month at 265 mb, which is 5.4 mb below a year ago, yet 18.3 mb above the seasonal norm. OECD Asia Pacific's total product inventories ended October at 186 mb, standing 13 mb higher than the same time a year ago and 6.2 mb above the seasonal norm.

EU plus Norway

Preliminary data for October shows total **European stocks** rose by 2.7 mb to stand at 1,150.6 mb, which is 22.7 mb, or 2.0%, above the same time a year ago and 79.2 mb, or 7.4%, higher than the latest five-year average. Crude stocks fell slightly by 0.1 mb, while product stocks rose by 2.8 mb.

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



Source: Euroilstock.

European crude inventories fell slightly in October for the fifth consecutive month to stand at 483.3 mb, which is 2.9 mb, or 0.6%, lower than the same period a year ago, but they are still 17.2 mb, or 3.7%, higher than the seasonal norm. The slight decline could derive from lower crude production from the North Sea, as crude throughput dropped by around 200,000 b/d in September versus August.

In contrast**, European product stocks** rose by 2.8 mb, ending October at 667.3 mb, which is 25.5 mb, or 4.0%, above the same time a year ago, and 62.0 mb, or 10.2%, above the seasonal norm. Within products, the picture was mixed; gasoline and distillate stocks went up, while residual fuel stocks witnessed draws. Naphtha remained unchanged.

Gasoline stocks rose by 1.7 mb in October to stand at 119.1 mb, which is 9.3 mb, or 8.5%, above a year earlier, and 11.6 mb, or 10.8%, higher than the seasonal norm. The build could have been driven by lower exports combined with higher output. Lower demand may also have contributed to the build in gasoline stocks.

Distillate stocks also rose by 2.5 mb in October, reversing September's stock-draw. At 449.3 mb, distillate inventories are 15.8 mb, or 3.6%, higher than at the same time one year ago and 60.2 mb, or 15.5%, above the latest five-year average. The build could be attributed to higher output combined with lower demand. Distillate stocks remained at historically high levels; this will provide little support to global distillate markets.

In contrast, **residual fuel oil stocks** fell by 1.4 mb in October to stand at 74.7 mb, which is 1.6 mb, or 2.1%, less than the same month a year ago and 7.1 mb, or 8.7%, lower than the latest five-year average. The decline was a result of higher demand in the region, mainly from bunker consumption.

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

	Aug 16	Sep 16	Oct 16	*Change* Oct 16/Sep 16	Oct 15
Crude oil	**487.3**	**483.4**	**483.3**	**-0.1**	**486.2**
Gasoline	119.7	117.4	119.1	1.7	109.8
Naphtha	23.8	24.2	24.2	0.0	22.2
Middle distillates	454.3	446.9	449.3	2.5	433.6
Fuel oils	76.6	76.1	74.7	-1.4	76.3
Total products	**674.3**	**664.6**	**667.3**	**2.8**	**641.8**
Total	**1,161.6**	**1,148.0**	**1,150.6**	**2.7**	**1,128.0**

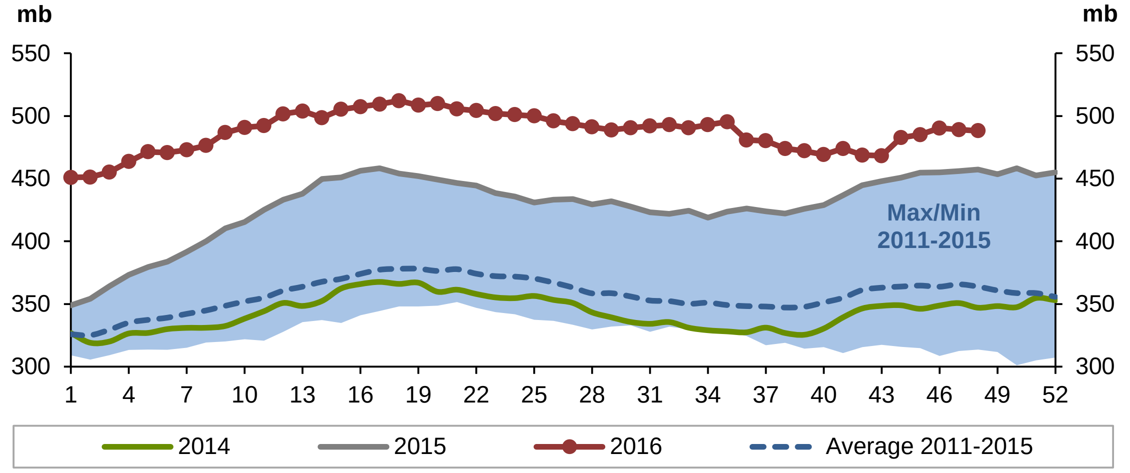
Sources: Argus and Euroilstock.

US

Preliminary data for November shows that **total commercial oil stocks** in the US rose by 8.8 mb, following a drop of 18.8 mb in October, to settle at 1,342.6 mb. This is around 45.6 mb, or 3.5%, above the same period a year ago and 196 mb, or 17%, higher than the latest five-year average. Within components, crude stocks rose slightly by 0.7 mb, while products rose by 8.1 mb.

US commercial crude stocks rose slightly in November, after increasing by nearly 16 mb in October. At 485.6 mb, US crude oil stocks were 29.8 mb or 6.5 %, above the same time one year ago and 121 mb, or 33.2%, above the latest five-year average. The build in US commercial crude stocks could be attributed to higher imports. Less crude oil moving into refineries could also have contributed to the build. Stocks in Cushing, Oklahoma rose by more than 7 mb, ending October at 65.3 mb.

Graph 9.3: US weekly commercial crude oil stocks



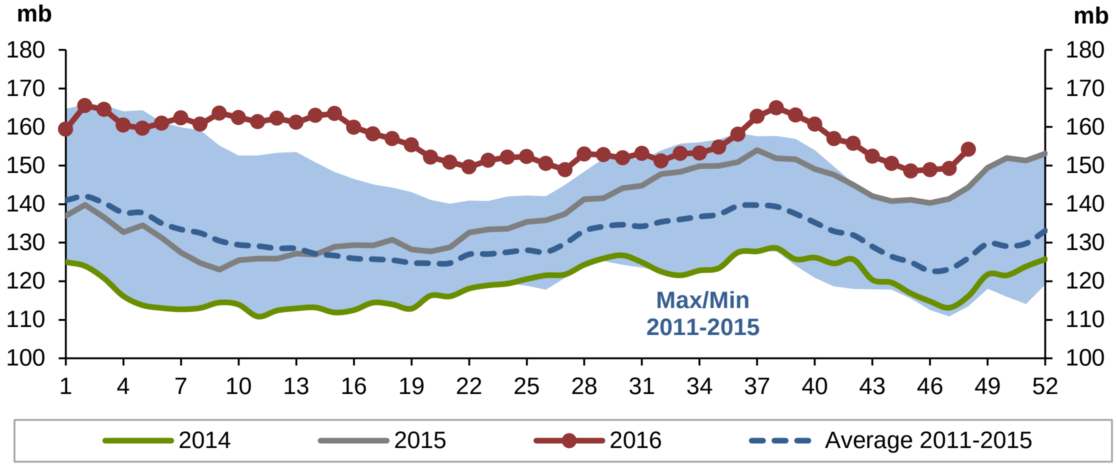
Sources: US Energy Information Administration and OPEC Secretariat.

Total product stocks rose by 8.1 mb in November, ending the month at 856.9 mb, which was around 16 mb, or 1.9%, above the level seen the same time a year ago, and 75.0 mb, or 9.5%, above the seasonal norm. All major products experienced a build.

Gasoline stocks rose by 8.6 mb in November to settle at 229.5 mb, which is 6.6 mb, or 3.0%, above the same period a year ago and 10.7 mb, or 4.9%, above the latest five-year average. The build came mainly from lower consumption, which averaged 9.0 mb/d, 30,000 b/d lower than in the previous month. Higher gasoline output limited a further build in gasoline stocks.

Distillate stocks also rose by 8.1 mb, revising a 11.8 mb drop in October. At 156.7 mb, they indicated a slight deficit with the same period a year ago, but are 23.4 mb, or 17.6%, above the latest five-year average. The build in middle distillate stocks came mainly on higher output, which increased by nearly 450,000 b/d, to average around 5.1 mb/d. Lower demand also contributed to a build in middle distillate stocks.

Graph 9.4: US weekly distillate stocks



Sources: US Energy Information Administration and OPEC Secretariat.

Jet fuel stocks rose by 1.9 mb, ending November at 43.8 mb, which is 5.7 mb, or 15%, above the same period a year ago, and 5.0 mb, or 12.9%, higher than the latest five-year average. Residual fuel oil inventories rose by 1.3 mb to 40.4 mb in November, which is 3.2 mb, or 7.2%, lower than the same period a year ago, but 2.0 mb, or 5.3%, above the seasonal norm.

Table 9.3: US inland commercial petroleum stocks, mb

	Sep 16	Oct 16	Nov 16	*Change* Nov 16/Oct 16	Nov 15
Crude oil	**469.1**	**485.0**	**488.1**	**3.1**	**456.0**
Gasoline	227.0	221.0	226.1	5.2	222.9
Distillate fuel	160.4	148.6	154.2	5.6	157.2
Residual fuel oil	38.8	39.2	40.3	1.1	43.6
Jet fuel	44.7	41.9	42.3	0.3	38.1
Total	**1,352.5**	**1,333.8**	**1,341.2**	**7.5**	**1,297.0**
SPR	695.1	695.1	695.1	0.0	695.1

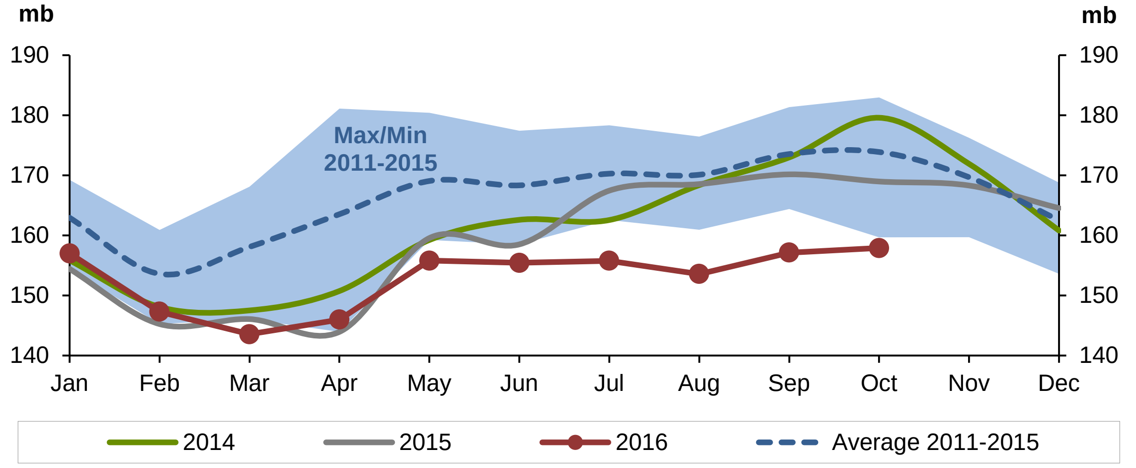
Source: US Energy Information Administration.

Japan

In Japan, total **commercial oil stocks** rose by 0.8 mb in October for the second consecutive month to stand at 157.9 mb, which is 11.1 mb, or 6.5%, less than the same time a year ago and 16.0 mb, or 9.2%, below the five-year average. Within components, crude rose by 3.6 mb, while product stocks went down by 2.8 mb.

Japanese commercial **crude oil stocks** rose in October, ending the month at 92.4 mb, which is 7.0 mb, or 7.1%, below the same period a year ago, and 7.3 mb, or 7.3%, below the seasonal norm. The build was driven by lower crude throughput, which decreased by around 290,000 b/d or 6.3%, to average 2.9 mb/d. Lower crude imports limited a further build in crude inventories. Indeed, crude inventories fell in October by 182,000 b/d to stand at 3.05 mb/d.

Graph 9.5: Japan's commercial oil stocks



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

In contrast, Japan's **total product inventories** fell by 2.8 mb in October, reversing the build of the last three months. At 65.5 mb, total product inventories stood at 4.0 mb, or 5.8%, lower than the previous year in the same month and 8.7 mb, or 11.7%, less than the seasonal norm. This drop came on the back of higher domestic product sales, which increased by 65,000 b/d for the previous month to average 2.9 mb/d. However, year-on-year, Japan's total oil sales hit a 34-year low for the month of October due to slowing demand for fuel oil, kerosene and gasoil. All products dropped, with the bulk of the stock-draw coming from distillates.

Distillate stocks fell by 1.4 mb in October to stand at 32.8 mb. At this level, they stood at 0.6 mb, or 1.8%, lower than the same period a year ago and 2.7 mb, or 7.7%, below the seasonal average. Within distillate components, jet fuel, kerosene and gasoil fell by 5.7%, 3.2% and 4.3%, respectively. The fall in jet fuel came mainly from lower output, while the drop in kerosene and gasoil came on the back of higher domestic demand.

Gasoline inventories fell by 0.5 mb, ending October at 9.7 mb, 0.6 mb, or 5.6%, lower than a year ago at the same time and 2.2 mb, or 18.4%, lower than the seasonal norm. The fall in gasoline stocks could be driven by higher domestic sales, which increased by 2.0%. **Naphtha** inventories fell by 0.7 mb in October to stand at 9.8 mb. At this level, naphtha stocks are 0.7 mb, or 6.5%, lower than the previous year at the same time, and 1.2 mb or 10.7%, below the five-year average.

Total **residual fuel oil** stocks also fell by 0.2 mb in October to stand at 13.3 mb, which is 2.2 mb, or 14.0%, lower than a year ago and 2.6 mb, or 16.5%, below the latest five-year average. Within fuel oil components, fuel oil A rose by 6.7%, driven by higher output, while fuel oil B.C stocks fell by 9.3% on the back of lower domestic sales.

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

	Aug 16	Sep 16	Oct 16	*Change* Oct 16/Sep 16	Oct 15
Crude oil	**86.1**	**88.8**	**92.4**	**3.6**	**99.5**
Gasoline	10.2	10.2	9.7	-0.5	10.2
Naphtha	10.4	10.5	9.8	-0.7	10.5
Middle distillates	33.1	34.1	32.8	-1.4	33.4
Residual fuel oil	13.7	13.5	13.3	-0.2	15.4
Total products	**67.5**	**68.3**	**65.5**	**-2.8**	**69.5**
Total**	**153.6**	**157.1**	**157.9**	**0.8**	**169.0**

*Note: * At the end of the month.*
*** Includes crude oil and main products only.*
Source: Ministry of Economy, Trade and Industry of Japan.

China

The latest information for China showed total **commercial oil inventories** fell by 3.4 mb in October to stand at 369.1 mb, which is 9.1 mb lower than the previous year at the same time. Within components, crude fell by 4.4 mb, while product inventories rose by 1.0 mb.

In October, **commercial crude stocks** fell to 230.1 mb, reversing the build of the previous two months. With this stock-draw, they were 16.9 mb below the previous year at the same time. The drop could be attributed to higher crude oil throughput, which expanded by 7.4% from the previous month. Lower crude oil imports also contributed to a drop in crude oil stocks.

In contrast, total **product stocks** in China rose by 1.0 mb in October for the third consecutive month to stand at 139 mb. At this level, total product stocks were 7.8 mb above the same time a year ago. Gasoline inventories went up, while diesel and kerosene experienced a fall.

Gasoline stocks rose in October to stand at 67.8 mb, which is 16.0 mb above the same time a year ago. The build in gasoline stocks was driven by higher output combined with lower demand, which was attributed to less travel due to cold weather.

In contrast, **diesel and kerosene** inventories fell by 1.5 mb and 1.0 mb to stand at 51.8 mb and 16.8 mb, respectively. This fall in diesel stocks came on the back of healthy consumption, driven by higher agricultural and industrial activities.

Table 9.5: China's commercial oil stocks, mb

	Aug 16	Sep 16	Oct 16	*Change* Oct 16/Sep 16	Oct 15
Crude oil	**228.9**	**234.5**	**230.1**	**-4.4**	**247.0**
Gasoline	67.5	66.9	67.8	0.9	51.8
Diesel	61.2	53.4	51.8	-1.5	64.2
Jet kerosene	18.3	17.8	16.8	-1.0	15.2
Total products	**147.0**	**138.0**	**136.4**	**-1.6**	**131.2**
Total	**375.9**	**372.6**	**366.5**	**-6.0**	**378.2**

Sources: China Oil and Gas Petrochemicals and OPEC Secretariat.

Singapore and Amsterdam-Rotterdam-Antwerp (ARA)

At the end of October, **product stocks in Singapore** rose slightly by 0.2 mb to stand at 48.9 mb. At this level, they are 1.4 mb or 2.7% below the same period a year ago. Within products, the picture was mixed, with light distillate and middle distillate stocks rising, while fuel oil inventories fell.

Light and **middle distillate** stocks rose in October by 0.7 mb and 0.4 mb, respectively. At 12.7 mb, light distillates stood at 2.2 mb, higher than the previous year at the same time, while middle distillates ended October at 13.1 mb, which was 0.2 mb or 1.4% less than a year ago in the same period. The build in both products was driven by lower exports from the hub.

In contrast, **residual fuel** oil stocks fell by 0.8 mb in October, ending the month at 23.2 mb. At this level, they were 3.3 mb or 12.6% less than at the same time a year ago. The fall could be attributed to greater marine bunkering in the region.

Product stocks in Amsterdam-Rotterdam-Antwerp (ARA) fell by 4.1 mb to end October at 38.7 mb, which is 8.7 mb, or 18.3%, lower than at the same time a year ago. All products, with the exception of gasoline, witnessed a stock-draw.

Gasoline inventories rose by 0.1 mb, ending October at 6.4 mb, which is 0.6 mb, or around 9%, lower than the same month of the previous year. Lower demand in the region was behind this build.

In contrast, **gasoil** fell by 1.1 mb in October to stand at 21.8 mb. At this level, it stood at 4.1 mb, or 15.7%, below a year ago at the same time. **Fuel oil stocks** also fell by 1.1 mb in October to stand at 3.9 mb, which is 2.9 mb, or nearly 43%, lower than at the same period a year ago. This fall was mainly driven by lower demand from marine bunkers in the region.

Balance of Supply and Demand

Demand for OPEC crude in 2016 was unchanged from the previous month to stand at 31.9 mb/d, which is 1.9 mb/d higher than 2015. In 2017, the demand for OPEC crude is projected at 32.6 mb/d, around 0.1 mb/d lower than in the last assessment and 0.7 mb/d higher than this year.

Estimate for 2016

Demand for OPEC crude for 2016 was unchanged from the previous *MOMR* to stand at 31.9 mb/d, representing an increase of 1.9 mb/d from last year level. Within the quarters, the third quarter was revised up by 0.1 mb/d, while the other quarters remained broadly unchanged. 1Q16 and 2Q16 rose by 1.2 mb/d and 2.4 mb/d, respectively, versus the same quarters last year; 3Q16 and 4Q16 are estimated to show growth of 2.1 mb/d and 1.7 mb/d, respectively.

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

	2015	1Q16	2Q16	3Q16	4Q16	2016
(a) World oil demand	**93.17**	**93.47**	**93.62**	**95.21**	**95.31**	**94.41**
Non-OPEC supply	56.98	56.98	55.53	55.79	56.50	56.20
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	**63.11**	**63.22**	**61.79**	**62.08**	**62.83**	**62.48**
Difference (a-b)	**30.06**	**30.24**	**31.82**	**33.12**	**32.47**	**31.92**
OPEC crude oil production	32.11	32.51	32.77	33.31		
Balance	2.05	2.27	0.94	0.19		

*Note: * 2016 = Estimate.*
Totals may not add up due to independent rounding.
Source: OPEC Secretariat.

Forecast for 2017

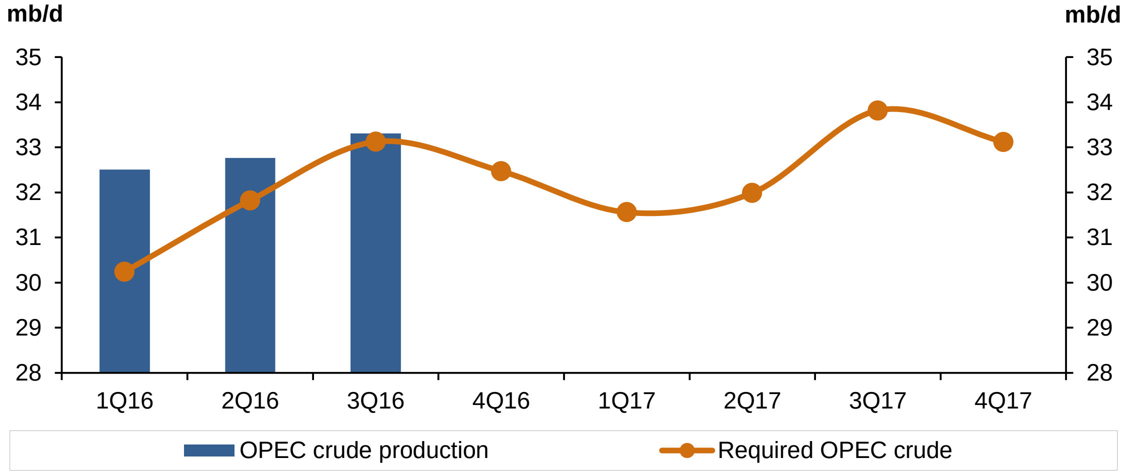
For 2017, demand for OPEC crude was revised down by 0.1 mb/d from the previous *MOMR* and is projected to increase by 0.7 mb/d, to average 32.6 mb/d. Within the quarters, 2Q17 was revised down by 0.1 mb/d, while the other quarters remained unchanged. 1Q17 and 2Q17 are expected to increase by 1.3 mb/d and 0.2 mb/d, respectively; 3Q17 and 4Q17 are projected to increase by 0.7 mb/d and 0.6 mb/d, respectively, versus the same quarters this year.

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

	2016	1Q17	2Q17	3Q17	4Q17	2017
(a) World oil demand	**94.41**	**94.61**	**94.67**	**96.45**	**96.48**	**95.56**
Non-OPEC supply	56.20	56.69	56.28	56.19	56.84	56.50
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	**62.48**	**63.04**	**62.68**	**62.63**	**63.36**	**62.93**
Difference (a-b)	**31.92**	**31.56**	**31.99**	**33.82**	**33.12**	**32.63**

*Note: * 2017 = Forecast.*
Totals may not add up due to independent rounding.
Source: OPEC Secretariat.

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	46.4	46.8	46.2	47.1	46.7	46.7	46.9	46.3	47.4	46.8	46.8
Americas	24.2	24.2	24.6	24.6	24.7	25.1	24.8	24.8	24.8	24.9	25.4	25.0	25.0
Europe	13.6	13.5	13.7	13.6	13.9	14.3	13.7	13.9	13.6	13.9	14.4	13.8	13.9
Asia Pacific	8.3	8.1	8.0	8.6	7.6	7.7	8.1	8.0	8.5	7.6	7.7	8.0	7.9
DCs	29.1	29.9	30.6	30.7	31.0	31.6	31.2	31.1	31.3	31.7	32.2	31.9	31.8
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	10.3	10.7	11.0	10.8	11.4	11.1	11.6	11.2	11.1	11.6	11.4	11.9	11.5
(a) Total world demand	**90.7**	**91.6**	**93.2**	**93.5**	**93.6**	**95.2**	**95.3**	**94.4**	**94.6**	**94.7**	**96.5**	**96.5**	**95.6**
Non-OPEC supply													
OECD	22.2	24.3	25.3	25.4	24.3	24.5	24.7	24.7	24.7	24.5	24.3	24.7	24.6
Americas	18.2	20.1	21.1	21.1	20.1	20.5	20.5	20.5	20.4	20.3	20.3	20.5	20.4
Europe	3.6	3.6	3.8	3.9	3.7	3.6	3.8	3.7	3.9	3.7	3.5	3.8	3.7
Asia Pacific	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4
DCs	10.9	11.1	11.3	11.1	11.1	11.3	11.4	11.2	11.4	11.5	11.5	11.6	11.5
FSU	13.6	13.5	13.7	14.0	13.7	13.7	14.1	13.9	14.1	14.0	14.1	14.2	14.1
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	4.0	4.0	4.1	4.0	4.0	4.0	4.0	4.0
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	53.2	55.5	57.0	57.0	55.5	55.8	56.5	56.2	56.7	56.3	56.2	56.8	56.5
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**	**61.5**	**63.1**	**63.2**	**61.8**	**62.1**	**62.8**	**62.5**	**63.0**	**62.7**	**62.6**	**63.4**	**62.9**
OPEC crude oil production (secondary sources)	31.2	31.0	32.1	32.5	32.8	33.3							
Total supply	90.2	92.5	95.2	95.7	94.5	95.4							
Balance (stock change and miscellaneous)	-0.5	0.9	2.0	2.3	0.9	0.2							
OECD closing stock levels (mb)													
Commercial	2,559	2,705	2,986	3,015	3,052	3,042							
SPR	1,584	1,580	1,587	1,593	1,591	1,595							
Total	4,144	4,285	4,572	4,608	4,642	4,637							
Oil-on-water	909	924	1,017	1,055	1,094	1,068							
Days of forward consumption in OECD													
Commercial onland stocks	55.9	58.4	63.9	65.2	64.7	65.2							
SPR	34.6	34.1	34.0	34.5	33.8	34.2							
Total	90.4	92.5	97.9	99.7	98.5	99.4							
Memo items													
FSU net exports	9.0	8.9	9.1	9.5	9.4	8.9	9.0	9.2	9.6	9.6	9.3	9.1	9.4
(a) - (b)	**31.7**	**30.1**	**30.1**	**30.2**	**31.8**	**33.1**	**32.5**	**31.9**	**31.6**	**32.0**	**33.8**	**33.1**	**32.6**

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	-	-	-	-	-	0.2	-	-	-	-	0.2	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-
Asia Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-
DCs	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-	-
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-
(a) Total world demand	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-
World demand growth	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Non-OPEC supply													
OECD	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
Asia Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-
DCs	-	-	-	-	-	-	-	-	-	-	-	-	-
FSU	-	-	-	-	-	-	-	-	-	0.1	0.1	-	0.1
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-
Total non-OPEC supply	-	-	-	-	-	-	-	-	-	0.1	0.1	-	0.1
Total non-OPEC supply growth	-	-	-	-	-	-	-	-	-	0.1	0.1	-	0.1
OPEC NGLs + non-conventionals	-	-	-	-	-	-	-	-	-	-	-	-	-
(b) Total non-OPEC supply and OPEC NGLs	-	-	-	-	-	-	-	-	-	0.1	0.1	-	0.1
OPEC crude oil production (secondary sources)	-	-	-	-	-	-							
Total supply	-	-	-	-	-	-							
Balance (stock change and miscellaneous)	-	-	-	-	-	-0.1							
OECD closing stock levels (mb)													
Commercial	-	-	1	-	-1	-9							
SPR	-	-	-	-	-	-							
Total	-	-	1	-	-1	-9							
Oil-on-water	-	-	-	-	-	-							
Days of forward consumption in OECD													
Commercial onland stocks	-	-	-	-	-	-							
SPR	-	-	-	-	-	-							
Total	-	-	-	-	-	-							
Memo items													
FSU net exports	-	-	-	-	-	-	-	-	-	0.1	0.1	-	0.1
(a) - (b)	-	-	-	-	-	0.1	-	-	-	-0.2	-	-	-0.1

*Note: * This compares Table 10.3 in this issue of the MOMR with Table 10.3 in the November 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

		2013	2014	2015	3Q14	4Q14	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16	3Q16
Closing stock levels, mb													
OECD onland commercial		**2,559**	**2,705**	**2,986**	**2,718**	**2,705**	**2,789**	**2,878**	**2,954**	**2,986**	**3,015**	**3,052**	**3,042**
	Americas	1,286	1,414	1,561	1,385	1,414	1,458	1,508	1,542	1,561	1,589	1,609	1,611
	Europe	881	886	990	898	886	939	940	967	990	1,004	1,005	982
	Asia Pacific	392	405	435	436	405	392	430	445	435	421	438	450
OECD SPR		**1,584**	**1,580**	**1,587**	**1,578**	**1,580**	**1,583**	**1,585**	**1,579**	**1,587**	**1,593**	**1,591**	**1,595**
	Americas	697	693	697	693	693	693	696	697	697	697	697	697
	Europe	470	470	473	469	470	470	471	467	473	477	473	477
	Asia Pacific	417	417	416	417	417	420	418	415	416	419	421	421
OECD total		**4,144**	**4,285**	**4,572**	**4,297**	**4,285**	**4,372**	**4,463**	**4,533**	**4,572**	**4,608**	**4,642**	**4,637**
Oil-on-water		**909**	**924**	**1,017**	**952**	**924**	**864**	**916**	**924**	**1,017**	**1,055**	**1,094**	**1,068**
Days of forward consumption in OECD													
OECD onland commercial		**56**	**58**	**56**	**59**	**58**	**61**	**61**	**64**	**64**	**65**	**65**	**65**
	Americas	54	55	53	56	58	60	60	63	64	64	64	65
	Europe	66	67	65	66	66	69	66	71	73	72	70	71
	Asia Pacific	47	49	48	53	47	52	56	54	51	55	57	56
OECD SPR		**33**	**34**	**35**	**34**	**34**	**35**	**34**	**34**	**34**	**34**	**34**	**34**
	Americas	29	29	29	28	28	28	28	28	28	28	28	28
	Europe	31	32	35	35	35	35	33	34	35	34	33	35
	Asia Pacific	49	50	51	50	48	55	54	51	49	55	55	52
OECD total		**90**	**91**	**90**	**93**	**92**	**96**	**95**	**98**	**98**	**100**	**99**	**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* 16/15	1Q17	2Q17	3Q17	4Q17	2017	*Change* 17/16
US	11.2	13.0	14.0	13.5	13.5	13.6	-0.4	13.4	13.4	13.4	13.6	13.5	-0.2
Canada	4.0	4.3	4.4	4.5	4.6	4.4	0.0	4.6	4.6	4.6	4.7	4.6	0.2
Mexico	2.9	2.8	2.6	2.5	2.4	2.5	-0.1	2.4	2.3	2.3	2.2	2.3	-0.2
OECD Americas*	**18.2**	**20.1**	**21.1**	**20.5**	**20.5**	**20.5**	**-0.5**	**20.4**	**20.3**	**20.3**	**20.5**	**20.4**	**-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	2.0	0.0
UK	0.9	0.9	1.0	0.9	1.0	1.0	0.0	1.1	1.0	0.9	1.0	1.0	0.0
Denmark	0.2	0.2	0.2	0.1	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	0.6	0.6	0.6	-0.1	0.6	0.6	0.6	0.6	0.6	0.0
OECD Europe	**3.6**	**3.6**	**3.8**	**3.6**	**3.8**	**3.7**	**0.0**	**3.9**	**3.7**	**3.5**	**3.8**	**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	0.4	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**	**0.5**	**0.5**	**0.4**	**0.0**	**0.4**	**0.5**	**0.4**	**0.4**	**0.4**	**0.0**
Total OECD	**22.2**	**24.3**	**25.3**	**24.5**	**24.7**	**24.7**	**-0.6**	**24.7**	**24.5**	**24.3**	**24.7**	**24.6**	**-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	0.9	0.8	0.9	0.0	0.9	0.9	0.9	0.9	0.9	0.0
Malaysia	0.6	0.7	0.7	0.7	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	0.3	0.2	0.0	0.3	0.3	0.3	0.3	0.3	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	3.3	3.3	3.1	0.1	3.3	3.3	3.4	3.5	3.4	0.3
Colombia	1.0	1.0	1.0	0.9	0.9	0.9	-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**	**1.3**	**1.3**	**1.3**	**1.2**	**1.3**	**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	0.4	0.4	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	0.2	0.0
Africa other	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.3	0.4	0.4	0.4	0.4	0.1
Africa	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**0.0**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**0.1**
Total DCs	**10.9**	**11.1**	**11.3**	**11.3**	**11.4**	**11.2**	**-0.1**	**11.4**	**11.5**	**11.5**	**11.6**	**11.5**	**0.3**
FSU	**13.6**	**13.5**	**13.7**	**13.7**	**14.1**	**13.9**	**0.2**	**14.1**	**14.0**	**14.1**	**14.2**	**14.1**	**0.3**
Russia	10.6	10.7	10.8	11.0	11.1	11.0	0.2	11.1	11.1	11.1	11.1	11.1	0.1
Kazakhstan	1.6	1.6	1.6	1.4	1.7	1.6	0.0	1.7	1.7	1.8	1.8	1.8	0.2
Azerbaijan	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.9	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**	**4.0**	**4.0**	**4.1**	**-0.3**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**-0.1**
Non-OPEC production	**51.0**	**53.3**	**54.8**	**53.6**	**54.3**	**54.0**	**-0.8**	**54.5**	**54.1**	**54.0**	**54.6**	**54.3**	**0.3**
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	**53.2**	**55.5**	**57.0**	**55.8**	**56.5**	**56.2**	**-0.8**	**56.7**	**56.3**	**56.2**	**56.8**	**56.5**	**0.3**
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**	**61.5**	**63.1**	**62.1**	**62.8**	**62.5**	**-0.6**	**63.0**	**62.7**	**62.6**	**63.4**	**62.9**	**0.4**

*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

	2013	2014	2015	*Change* 2015/14	3Q15	4Q15	1Q16	2Q16	3Q16	Oct 16	Nov 16	*Change* Nov/Oct
US	1,761	1,862	977	-885	866	754	551	420	479	543	580	37
Canada	354	380	192	-188	191	169	172	49	122	157	173	16
Mexico	106	86	52	-34	42	39	36	22	25	21	18	-3
Americas	2,221	2,327	1,221	-1,107	1,098	962	759	490	626	721	771	50
Norway	20	17	17	1	18	15	18	17	18	9	15	6
UK	17	16	14	-2	13	12	9	9	9	7	10	3
Europe	135	145	117	-28	109	110	104	92	94	87	97	10
Asia Pacific	27	26	17	-9	16	15	10	6	5	4	5	1
Total OECD	**2,383**	**2,499**	**1,355**	**-1,144**	**1,222**	**1,087**	**873**	**588**	**724**	**812**	**873**	**61**
Other Asia	180	194	175	-19	177	167	157	161	167	161	169	8
Latin America	166	172	145	-27	149	128	83	62	64	65	64	-1
Middle East	102	108	102	-6	100	106	98	92	85	78	74	-4
Africa	35	47	30	-16	27	22	21	19	15	17	17	0
Total DCs	**484**	**521**	**452**	**-69**	**454**	**423**	**359**	**334**	**330**	**321**	**324**	**3**
Non-OPEC rig count	**2,867**	**3,019**	**1,807**	**-1,213**	**1,676**	**1,511**	**1,232**	**922**	**1,055**	**1,133**	**1,197**	**64**
Algeria	47	48	51	3	51	49	52	54	55	53	53	0
Angola	11	15	11	-4	8	11	9	9	4	2	3	1
Ecuador	26	24	12	-12	12	4	3	3	5	6	5	-1
Gabon	6	7	4	-3	4	2	1	1	0	0	0	0
Indonesia	38	34	27	-7	24	24	19	17	18	17	14	-3
Iran**	54	54	54	0	54	54	57	57	57	57	57	0
Iraq**	83	79	52	-27	47	51	49	42	39	42	41	-1
Kuwait**	32	38	47	8	44	42	41	42	47	48	47	-1
Libya**	15	10	3	-8	1	1	1	1	1	1	1	0
Nigeria	37	34	30	-4	28	28	27	25	24	23	24	1
Qatar	9	10	8	-3	7	6	7	7	7	12	9	-3
Saudi Arabia	114	134	155	21	154	158	157	154	155	157	158	1
UAE	28	34	42	8	41	52	50	50	51	54	51	-3
Venezuela	121	116	110	-6	114	112	111	103	93	90	93	3
OPEC rig count	**620**	**637**	**606**	**-31**	**589**	**592**	**584**	**566**	**558**	**562**	**556**	**-6**
Worldwide rig count*	**3,486**	**3,656**	**2,412**	**-1,244**	**2,265**	**2,103**	**1,816**	**1,488**	**1,612**	**1,695**	**1,753**	**58**
of which:												
Oil	2,611	2,795	1,727	-1,068	1,606	1,471	1,268	1,043	1,135	1,182	1,233	51
Gas	746	743	563	-180	536	509	422	315	343	381	392	11
Others	109	95	100	5	99	102	106	110	116	114	110	-4

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

OPEC decides to adjust production to 32.5 mb/d

The 171st Meeting of the OPEC Conference decided in line with the 'Algiers Accord' to implement a new OPEC-14 production target of 32.5 mb/d in order to accelerate the ongoing drawdown of the stock overhang and bring oil market rebalancing forward. The Agreement will be effective from 1 January 2017.

The Conference took note of oil market developments since it last met in Algeria on 28 September 2016 and reviewed the oil market outlook for the remainder of 2016 and 2017. It observed that global economic growth forecasts were reasonable for both 2016 and 2017, at 2.9% and 3.1%, respectively, that non-OPEC supply is expected to contract by 0.8 mb/d in 2016, before returning to growth of 0.3 mb/d in 2017, and that world oil demand is anticipated to grow at healthy levels of around 1.2 mb/d in both 2016 and 2017.

For 2017, demand for OPEC crude is expected at 32.6 mb/d; however, the requirement in the first half of 2017 will be much lower than in the second half of the year. OPEC production at 32.5 mb/d would indicate a slight stock draw of 0.1 mb/d in 2017, leading to a reduction in excess supply and an acceleration of the stock draw.

At the same time, it should be remembered that the current overhang of 300 mb, or 0.8 mb/d, will remain as additional volume in the market, as the OPEC production adjustment alone would not be enough to clear the total overhang. This clearly emphasizes the importance of non-OPEC producers' contribution to the production adjustment in support of market rebalancing.

Table 11.1: Difference between OPEC production and demand for OPEC crude, mb/d

	1H 17	2H 17	2017
Total OPEC	**32.50**	**32.50**	**32.50**
Demand for OPEC crude	31.80	33.43	**32.62**
Difference	***0.70***	***-0.93***	***-0.12***

Source: OPEC Secretariat.

OPEC welcomes early enforcement of the Paris Agreement on climate change

The OPEC Secretary General, HE Mohammad Sanusi Barkindo, told the Climate Change Conference (COP22/CMP12) that OPEC and its Member Countries welcomed the early enforcement of the Paris Agreement, adding that the Organization and its Members have been active partners in climate change negotiations.

He highlighted that thirteen out of fourteen OPEC Member Countries have signed the Agreement, and five have already ratified it. "OPEC remains committed to this process and will continue to support its successful and comprehensive implementation to ensure a 'win-win' outcome for all," he said.

"Our Member Countries joined the global consensus in Paris in order to midwife this Agreement and move the process forward," the OPEC Secretary General said. "However, we remain concerned on the weakening of some key principles of the Convention. The Principle of Equity; principle of common but differentiated responsibilities and respective capabilities; the convention provision of response measures on developing countries; are just some of these issues that COP22 should revisit and strengthen."

This year's event – held in Marrakech, Morocco from 7-18 November 2016 – was the twenty-second session of the Conference of the Parties (COP 22), the twelfth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 12), and the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA 1).

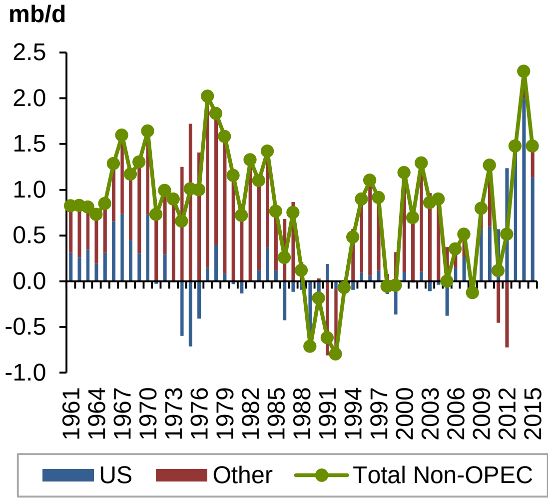
The OPEC Secretary General concluded his statement with the hope "that the same cooperative and positive spirit that led us to its successful adoption at COP21 will be maintained in its implementation stage." He added that it should be remembered that the Agreement is under the Convention and should continue to be guided by its principles and provisions. "In particular, the unique situation of developing countries should be given the top priority it deserves," he said.

OPEC *Annual Statistical Bulletin* highlights key oil market developments in 2015

The **OPEC *Annual Statistical Bulletin* (ASB)** has a long history with its first edition dating back to 1965. It offers reliable and timely historical data on several areas of the global oil and gas industry and substantially exceeds its self-declared main focus of providing data for OPEC's Member Countries (MCs). The data coverage is impressive both in quality and quantity with available time series reaching back as far as 1960[1]. The following highlights some of the key developments that took place in 2015 and provides a historical context.

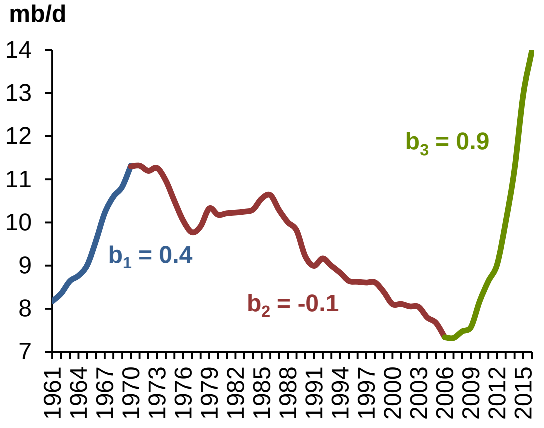
- In 2015, Non-OPEC oil supply increased by 1.5 mb/d, marking the second highest increase since the early 1970s. The biggest yearly increase was seen in the United States, which grew by 1.1 mb/d, leading to the highest yearly historical oil supply level in the country. US oil supply has been through three main historical periods;
  1. 1961 to 1970: US oil supply grew with an average yearly increase of 0.4 mb/d.
  2. 1971 to 2005: This marks a period of declines. Although increases of smaller ranges have been observed in some years, US oil supply has generally decreased by around 0.1 mb/d per year.
  3. 2006 to 2015: US oil supply grew by a remarkable 0.9 mb/d per year (***Graph 11.2***).
- World refinery capacity expanded by 0.8 million barrels per calendar day (mb/cd) to stand at 96.6 mb/cd during 2015, mainly supported by additions in the Middle East and Asia regions. In the Middle East, expansions came largely from OPEC, while in Asia, growth originated predominantly in India and China. Refinery capacity in the OECD continued to decline despite small gains seen in the United States.

Graph 11.1: Non-OPEC oil supply growth, y-o-y



Source: OPEC Secretariat.

Graph 11.2: US oil supply

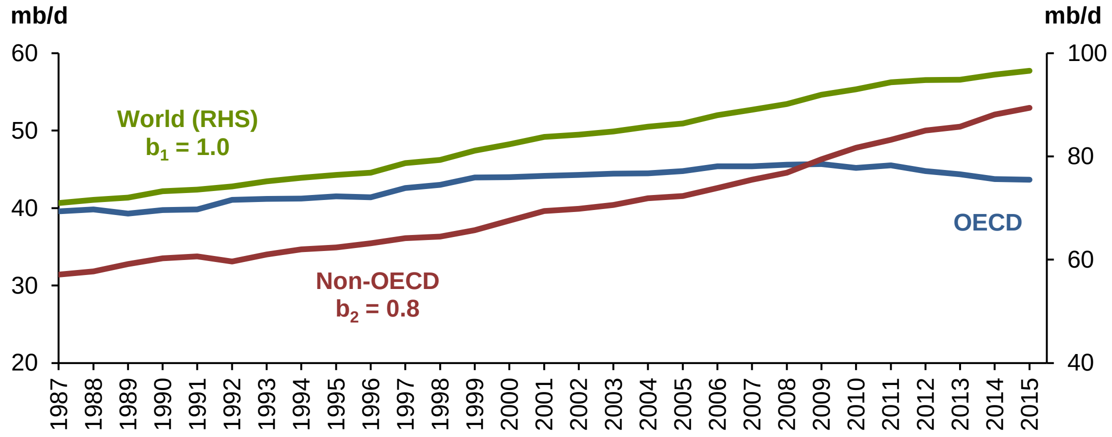


Note: b = Simple linear regression coefficients with time as independent variables are utilised to estimate annual increases.
Source: OPEC Secretariat.

World refinery capacity increased by 1.0 mb/cd on average per year since 1987; the bulk of additions originated in Non-OECD, which contributed 0.8 mb/cd per year, or around 80%, of the total. ***Graph 11.3*** displays the substantial shift in the world's refinery capacity from the OECD to the Non-OECD region and particularly to Asia. Non-OECD refinery capacity exceeded OECD for the first time in 2009.

[1] *The interactive version of the ASB can be retrieved under http://asb.opec.org/; a Smart App is also publicly available for iOS and Android devices.*

Graph 11.3: World refinery capacity by main region

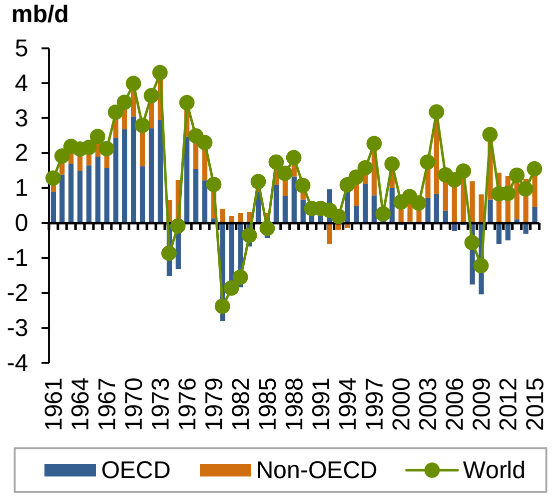


Note: b = Simple linear regression coefficients with time as independent variables are utilised to estimate annual increases.
Source: OPEC Secretariat.

- OPEC crude oil exports averaged 23.6 mb/d in 2015, up slightly from 23.2 mb/d in 2014, with the increase representing around 2% of growth y-o-y. The bulk of OPEC crude, 14.5 mb/d, or 62%, was exported to Asia. Significant volumes were, however, also exported to Europe, which increased its imports from OPEC MCs to 4.2 mb/d in 2015, up from 4.0 mb/d in 2014, or 5%. In line with rising oil supply, OPEC crude oil exports to the United States decreased during 2015 by 0.3 mb/d, or 11%, from 3.0 mb/d in 2014 to 2.7 mb/d in 2015.

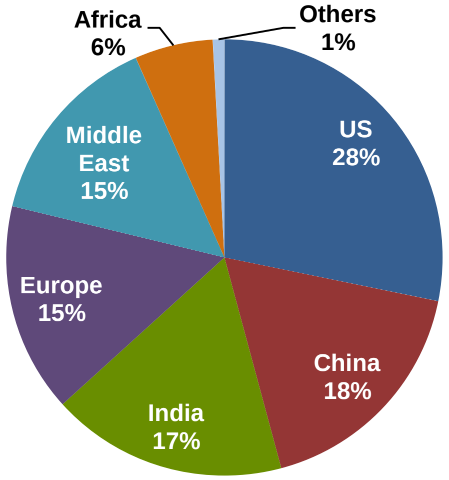
- World oil demand rose by 1.5 mb/d during 2015, y-o-y, with the largest increases taking place in Asia, particularly India and China, the United States, Europe, the Middle East and Africa. OECD oil demand grew soundly during 2015, while it declined in Latin America for the first time since 2003. Distillates and gasoline accounted for around 56% of total world oil demand and were on increasing trends, while residual fuel oil requirements declined for another year. Gasoline dominated 2015 oil demand growth in Asia and the United States, while distillates appeared robust in Europe (***Graph 11.4-11.5***).

Graph 11.4: World oil demand growth, y-o-y



Source: OPEC Secretariat.

Graph 11.5: Contribution to 2015 world oil demand growth



Source: OPEC Secretariat.

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Disclaimer

OPEC Basket average price

US$/b

down 4.65 in November	November 2016	43.22
	October 2016	47.87
	Year-to-date	**39.80**

November OPEC crude production

mb/d, according to secondary sources

up 0.15 in November	November 2016	33.87
	October 2016	33.72

Economic growth rate

per cent

	World	OECD	US	Japan	Euro-zone	China	India
2016	2.9	1.7	1.6	0.8	1.6	6.7	7.5
2017	3.1	1.7	2.1	0.9	1.3	6.2	7.1

Supply and demand

mb/d

2016		16/15	2017		17/16
World demand	94.4	1.2	World demand	95.6	1.2
Non-OPEC supply	56.2	–0.8	Non-OPEC supply	56.5	0.3
OPEC NGLs	6.3	0.2	OPEC NGLs	6.4	0.1
Difference	**31.9**	**1.9**	**Difference**	**32.6**	**0.7**

OECD commercial stocks

mb

	Aug 16	Sep 16	Oct 16	Oct 16/Sep 16	Oct 15
Crude oil	1,498	1,494	1,513	19.5	1,487
Products	1,560	1,548	1,514	–34.8	1,469
Total	**3,057**	**3,042**	**3,027**	**–15.3**	**2,956**
Days of forward cover	65.9	65.4	65.3	0.0	64.0

Next report to be issued on 18 January 2017.