Global Oil: Monthly Agency Data Snapshot
At the tipping point

Equities

Global
Oil Companies, Major

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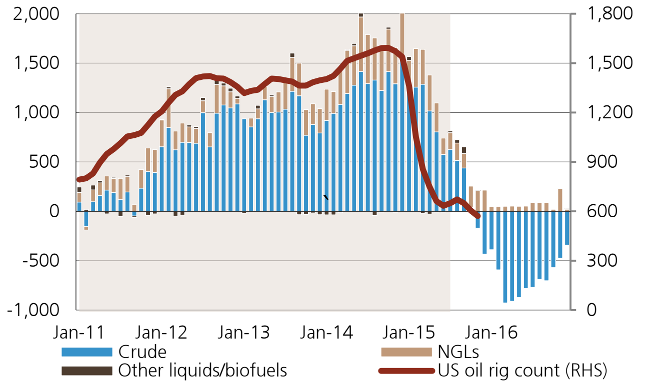
December sees minimal changes to demand outlook
December's agency updates were less dramatic than the previous few rounds. None made dramatic revisions to 2015 or 2016 demand growth: there continues to remain a significant difference (410kb/d) between the IEA's +1.8Mb/d 2015 figure (trimmed slightly on a slightly weaker outturn in 4Qtd than initially forecast) and the +1.4Mb/d forecast by the EIA, although this is offset somewhat by the EIA's 160kb/d higher figure for 2016 growth. On the supply side OPEC made some revisions to non-OPEC growth (raising 2015 by 270kb/d but cutting 2016 by 240kb/d), although this puts them more in line with the IEA and EIA after not updating forecasts in November.

OECD stocks draw for first time in 7 months
The IEA estimates OECD stocks drew by 8Mb in October to 2,971Mb, while September's preliminary figure was also revised down by 9Mb. Inventories remain elevated: 260Mb above the 5-year average and covering 64.3 days of demand. Refined product cover stands at 31.7 days, down 0.6 days m/m and 1.3 days above the 5-year average. Despite these high levels however a scenario of storage capacity filling to tank tops still appears unlikely: analysis of OECD crude inventories vs historic highs suggests ~170Mbbls of available capacity plus an additional ~150Mbbls crude tank farm capacity in the US (end-September utilisation data adjusted for October/November commercial crude builds). Our latest S/D balances imply 180-300Mbbls of builds (depending on phasing of Iranian return) before inventory drawdowns begin in 3Q16, while 2016 will also see ~230Mbbls new storage capacity enter commissioning.

OPEC production recovers slightly in November
OPEC production was up 50kb/d in November at 31.7Mb/d on a recovery in Iraqi output (October saw weather affecting loadings in the South). The latest agency balances imply a 2016 'call' of 31.3Mb/d, 30.7Mb/d and 30.8Mb/d (IEA/EIA/OPEC)

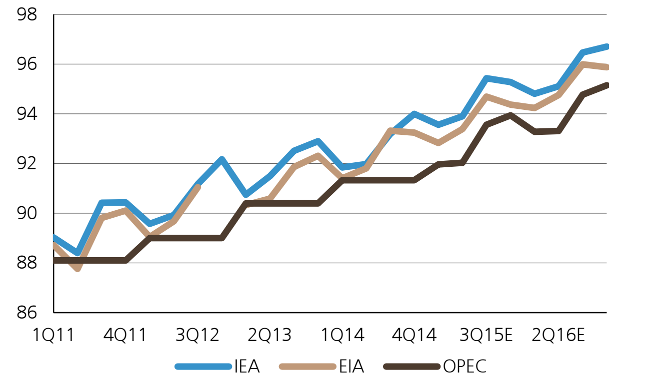
We lift our estimate of the 2016 'call' to 31.4Mb/d – drawdowns begin in 3Q16
We have also updated our S/D balances incorporating 3Q baseline data, UBS' latest GDP forecasts and the latest round of capex cuts and project deferrals into our non-OPEC supply forecast. We now anticipate that the 'call' will move to 32Mb/d by 3Q16, enough to accommodate current OPEC supply plus a degree of Iranian return.

Figure 1: US liquids y/y production growth (kb/d)



Source: EIA (historic), UBS (forecasts), Baker Hughes

Figure 2: Global oil demand (Mb/d)



Source: IEA, EIA, OPEC

Global Oil Markets

Market outlook

In the absence of any intervention by OPEC, we expect that the laws of economics will slowly correct the oil market along its pathway of readjustment: Demand growth for 2015 looks healthy as price and wealth impacts work their way through (UBSe +1.7Mb/d y/y in 2015, the strongest year for demand since 2010). Meanwhile the market continues to look tighter from 2016 and beyond as non-OPEC supply reflects the impact of a swathe of capex cuts – at first in the US (now showing signs of rolling over) and then longer-cycle production elsewhere. 2015 to date has seen just 3 major oil projects totalling 0.8Mb/d plateau liquids production reach FID vs the ~5Mb/d average. In the absence of a clear price anchor we believe that while the market oversupply persists crude will likely trade in a wide range between cash costs of current supply (~$40/bbl before meaningful volumes are at risk of being shut-in) and the long-run marginal cost, with volatility exacerbated by the number of closely watched (but in our view often marginally relevant) datapoints. Reflecting the significant over-supply, OECD inventories are at record highs and we see global stocks continuing to build until 3Q16 in the absence of any material supply-side interruption. This will likely hold back price appreciation through 2016 caught between improving underlying trajectory and a bearish physical position. In the longer term the market needs to incentivise sufficient new supply which will require a pick-up in activity in non-US/non-OPEC where we believe the marginal barrel lies. Cost reduction and deflation continues to work its way through the upstream, and while some of this is cyclical pressure on the supply chain, there is growing evidence that operators are implementing overdue structural change which will be more persistent. These changes will not be easy however – sustaining historic rates of return at our long-term forecast of $80/bbl will require reductions of ~40% in unit development capex vs 2014 levels.

Upside scenario

Our base case scenario assumes no intervention from OPEC – we are sceptical about the group's willingness and capacity to reduce output in the absence of unanimity. We expect Saudi to wait to see its initiative play out and we don't believe the group will function as a cohesive cartel. If the group were to step in however it would likely target >$70/bbl where the fiscal breakevens lie for the key Gulf producers. Geopolitics and interruption to a medium-sized OPEC producer could add $5-10/bbl per 0.5Mb/d disruption.

Downside scenario

We project an over-supplied market until 3Q16 implying a significant build in physical inventories over the period. While this has a moderate pricing impact in its own right a filling of physical storage could create distressed pricing– benchmarks would likely fall be well below $50/bbl although regional differentials would see the biggest impact. Global GDP growth slipping by 100bps (cf 2014) could impact demand by ~500kb/d and defer market rebalancing by ~1 year (note there hasn't been a global recession since 2009). Chinese GDP growth at 4-5% not 6.2% as UBS forecasts would impact ~100kb/d incremental demand growth and likely depress prices by $5-10/bbl while the slowdown persisted. Iran returning to the market more quickly than we forecast (we project a gradual return to current capacity of ~3.6Mb/d over 2016 then a slow build-out to ~4Mb/d through to 2020) would prolong oversupply into 2017.

Upcoming catalysts

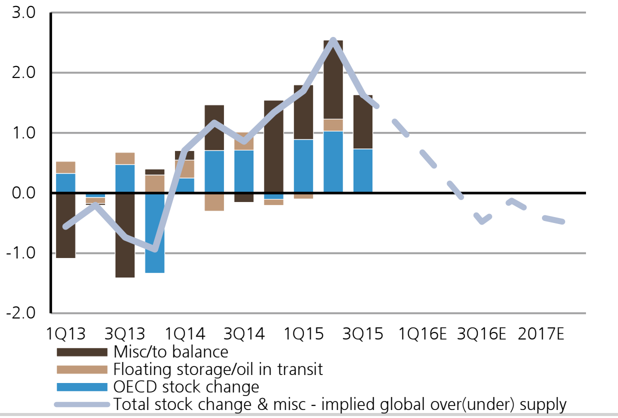
12/18/19 Jan	EIA/OPEC/IEA monthly short-term outlooks
4Q15?	US L48 y/y production growth rolls over
Unknown timing	Phased lifting of Iranian nuclear sanctions
2015-16	Continued slowdown in project FID activity

UBS oil price forecasts ($/bbl, front-month)

Brent ($/bbl)	2015E	2016E	2017E	2018E	2019E
UBSe	55.06	57.50	70.00	75.00	80.00
Strip	54.38	43.70	50.77	55.25	58.14
Consensus	54.63	56.00	62.50	70.00	70.00
WTI ($/bbl)					
UBSe	49.13	52.50	65.00	70.00	75.00
Strip	49.52	41.97	47.71	51.41	54.28
Consensus	49.75	53.00	60.00	66.00	66.00

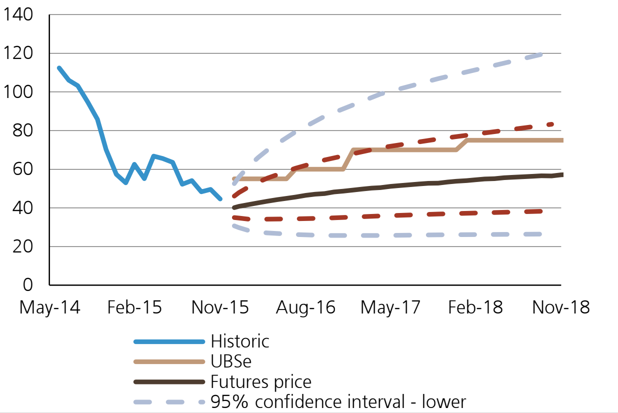
Source: UBS, Bloomberg. Strip and consensus as of 11 December 2015

UBSe S/D balance and implied stock change (Mb/d)



Source: UBS, IEA. Note: forecast stock change assumes OPEC holds output flat at 31.7Mb/d

Brent ($/bbl), UBSe, futures strip and options market-implied confidence intervals



Source: UBS, Bloomberg. Strip as of 11 December 2015

What's in a price – what is the futures curve telling us?

We regularly discuss our oil price forecasts in the context of the futures strip – with the strip sometimes cited as an alternative forecasting tool. Here we discuss two misconceptions: that the strip is a clear indicator of market expectations, and that it is a good forecaster of future prices.

Futures price = spot price adjusted for interest and convenience yield ≠ expected spot price

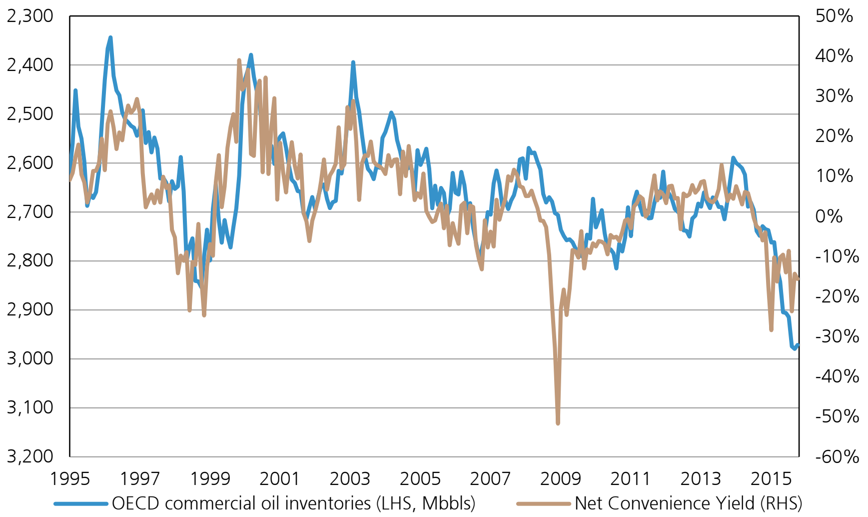
The theoretical equilibrium relationship between spot prices and futures prices is straightforward. For any purely financial asset without associated cashflows, the law of one price dictates that the futures price must equal the current spot price, adjusted for the interest that could be earned on a risk-free investment. I.e. in the case of a hypothetical dividendless share trading at $1, if risk-free rates are 1% then a 1-year futures contract to purchase the same share ought to cost $1.01 – otherwise there is a risk-free arbitrage opportunity to borrow $1, buy one share and sell a single futures contract (in practice transaction costs prevent this from binding fully but the principle remains a useful guide).

12m Brent ($/bbl) = Spot Brent ($/bbl) * 12m risk-free rate – net convenience yield

For physical commodities by contrast there exist both storage costs and a 'convenience yield' that complicate this no-arbitrage relationship. The latter comprises the benefit that consumers of oil (be it refiners in the case of crude or end-users in the case of products) gain from the ability to respond to an unexpected shock, be it to demand (a gasoline tax cut for instance) or to supply (force majeure on a long term supply contract due to a pipeline outage), by drawing down inventories rather than paying a premium for short-notice purchases. There is also a degree of option value due to the possibility, however unlikely, of a complete draw-down in inventories. Neither of these are readily observable: there is no public and transparent market for storage while the convenience yield is an intangible benefit. We can however compute the net convenience yield, simply the convenience yield less cost of storage, implied by the futures strip.

Net convenience yield a decreasing function of oil inventory levels.

Figure 3: Net convenience yield (RHS) and OECD oil inventories (LHS, Mbbls, scale inverted)



Source: IEA, Thomson Reuters, UBS. Note: net convenience yield calculated as risk-free rate (annualised) less log of the ratio of the 12m futures price to the spot price.

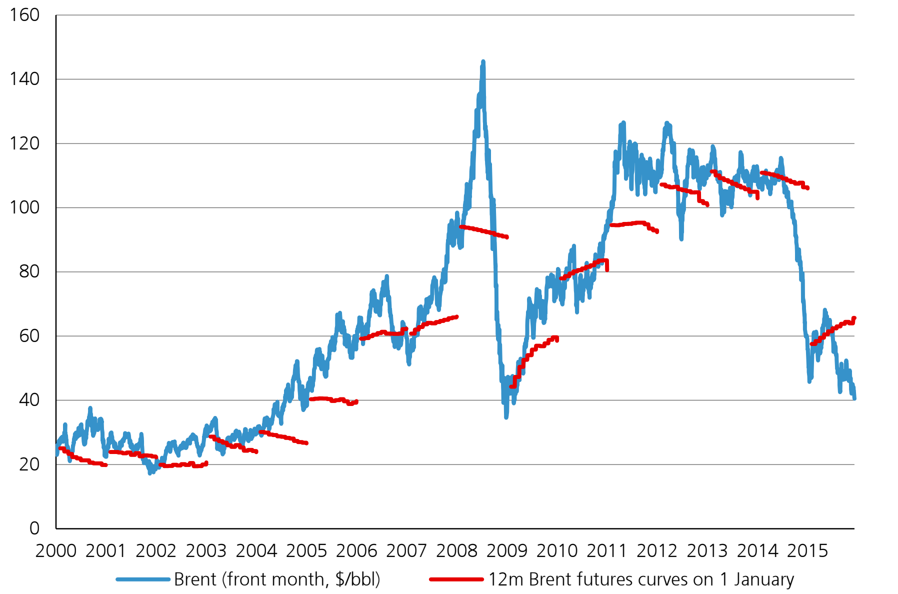
Historically this has had a very close inverse correlation with inventory levels. Intuitively this ought to be the case: the marginal convenience benefit diminishes with higher inventory levels while the marginal cost of storage increases – cheap salt caverns are filled, more costly above-ground storage approaches tank tops, and eventually tankers are chartered for floating storage.

The key point is that the under the storage-driven theory we have outlined above the futures curve does not contain any information about the market's expectations of future spot prices. Rather it is a function of the current spot price, storage costs and the convenience yield – the latter two components effectively a function of inventory levels. This is not to say that there is no useful informational content in the curve: the steepness of contango acts as an indicator of storage availability, with ~$1/bbl per month generally thought to be needed to make floating storage viable. We note that the market is currently pricing ~$8/bbl for M1-M12 Brent, well below the $17/bbl reached in December 2008.

Futures price: a useful predictor?

The futures curve has historically not been a good predictor of spot prices. Over the past 15 years, the difference between the 12m Brent contract on 1 January and the actual spot price on delivery date has averaged 29%. Furthermore, the extensive academic literature on the subject has, in general, concluded that the futures curve is not much better a predictor of spot prices than a random walk. We do however acknowledge that extreme contango or backwardation can highlight some sort of temporary stress on the front end – e.g. the relatively steep backwardation in early 2011 reflected disruptions to supply that were expected to be temporary (the Arab Spring impact).

Figure 4: The futures price as a forecast: Brent futures curves vs price outturn



Source: Thomson Reuters, UBS

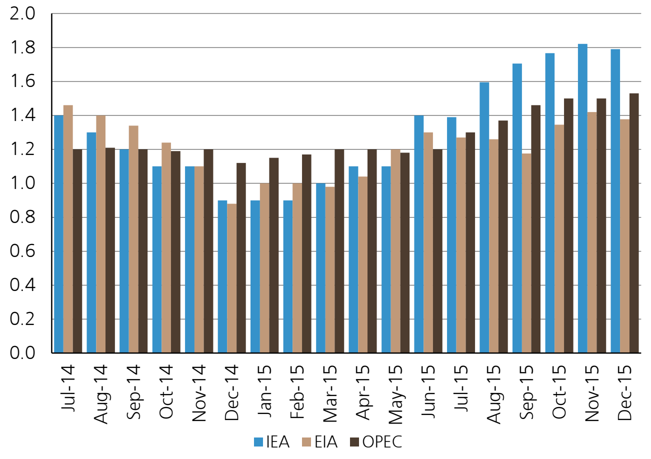
Figure 5: Supply/demand balances compared (Mb/d)

		2014	1Q15	2Q15	3Q15E	4Q15E	2015E	1Q16E	2Q16E	3Q16E	4Q16E	2016E	2015E y/y	2016E y/y
	Demand													
IEA	OECD	45.7	46.5	45.3	46.7	46.2	46.2	46.4	45.4	46.4	46.7	46.2	0.5	0.0
	Non-OECD	47.1	47.1	48.6	48.8	49.0	48.4	48.4	49.7	50.1	50.1	49.6	1.3	1.2
	Total Demand	92.8	93.6	93.9	95.4	95.3	94.6	94.8	95.1	96.5	96.7	95.8	1.8	1.2
EIA	OECD	45.8	46.6	45.5	46.5	46.7	46.3	46.9	45.8	46.7	47.2	46.7	0.6	0.3
	Non-OECD	46.7	46.3	47.8	48.2	47.6	47.5	47.3	48.9	49.3	48.7	48.6	0.8	1.1
	Total Demand	92.4	92.8	93.4	94.7	94.4	93.8	94.2	94.8	96.0	95.9	95.2	1.4	1.4
OPEC	OECD	45.7	46.5	45.4	46.3	46.6	46.2	46.7	45.6	46.4	46.7	46.4	0.5	0.1
	Non-OECD	45.6	45.5	46.6	47.3	47.3	46.7	46.6	47.7	48.4	48.4	47.8	1.1	1.1
	Total Demand	91.4	92.0	92.0	93.6	93.9	92.9	93.3	93.3	94.8	95.2	94.1	1.5	1.3
UBS	OECD	45.7	46.5	45.3	46.7	46.5	46.2	46.4	45.9	47.0	46.7	46.5	0.6	0.3
	Non-OECD	46.9	46.7	48.3	48.4	48.7	48.0	47.9	49.2	49.6	49.6	49.1	1.2	1.0
	Total Demand	92.6	93.2	93.6	95.1	95.2	94.3	94.4	95.1	96.6	96.3	95.6	1.7	1.3
	Supply													
IEA	Non-OPEC	57.0	58.1	58.2	58.6	58.4	58.3	57.6	57.5	57.7	57.9	57.7	1.3	-0.6
	OPEC non-crude	6.4	6.4	6.5	6.6	6.6	6.5	6.7	6.8	6.8	6.9	6.8	0.2	0.2
	Call on OPEC crude	29.4	29.0	29.2	30.3	30.3	29.7	30.5	30.8	31.9	31.9	31.3	0.3	1.6
	OPEC crude	30.3	30.5	31.5	31.7									
	Total Supply	93.7	95.0	96.2	96.9									
EIA	Non-OPEC	56.9	57.8	58.0	58.6	58.0	58.1	57.3	57.7	57.9	58.1	57.7	1.2	-0.4
	OPEC non-crude	6.3	6.4	6.4	6.5	6.5	6.4	6.7	6.7	6.8	6.9	6.8	0.2	0.3
	Call on OPEC crude	29.3	28.7	29.0	29.6	29.8	29.3	30.3	30.3	31.3	31.0	30.7	0.0	1.4
	OPEC Crude	30.1	30.3	31.0	31.4	31.3	31.0	30.7	31.0	31.8	31.6	31.3	0.9	0.3
	Total Supply	93.3	94.4	95.4	96.5	95.8	95.5	94.7	95.4	96.5	96.6	95.8	2.3	0.3
OPEC	Non-OPEC	56.5	57.9	57.6	57.4	57.2	57.5	57.1	56.9	57.0	57.6	57.1	1.0	-0.4
	OPEC non-crude	5.8	5.9	5.9	6.0	6.1	6.0	6.1	6.1	6.2	6.2	6.2	0.2	0.2
	Call on OPEC crude	29.0	28.2	28.5	30.1	30.6	29.4	30.1	30.3	31.6	31.3	30.8	0.4	1.5
	OPEC Crude	30.1	30.3	31.2	31.6									
	Total Supply	92.4	94.1	94.7	95.0									
UBS	Non-OPEC	56.9	58.0	58.1	58.5	58.3	58.3	57.0	57.0	57.8	57.8	57.4	1.3	-0.8
	OPEC non-crude	6.3	6.4	6.5	6.5	6.6	6.5	6.6	6.7	6.8	6.9	6.7	0.2	0.2
	Call on OPEC crude	29.3	28.8	29.0	30.1	30.3	29.5	30.8	31.4	32.0	31.6	31.4	0.2	1.9
	OPEC Crude	30.3	30.5	31.5	31.7									
	Total Supply	92.6	93.2	93.6	95.1									

Source: IEA, EIA, OPEC, UBS.

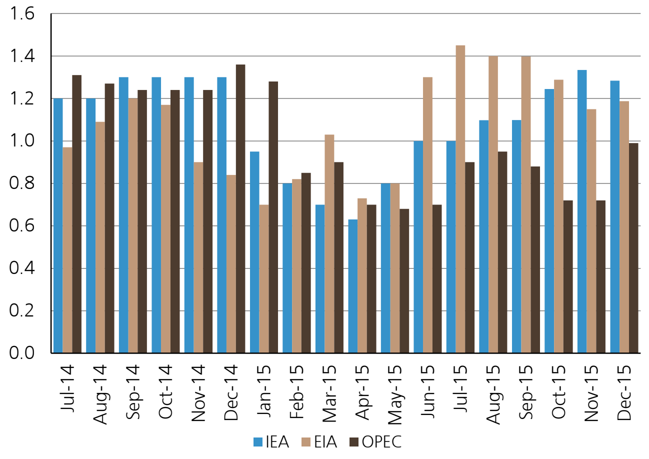
Evolving 2015 Forecasts

Figure 6: Demand growth y/y (Mb/d)



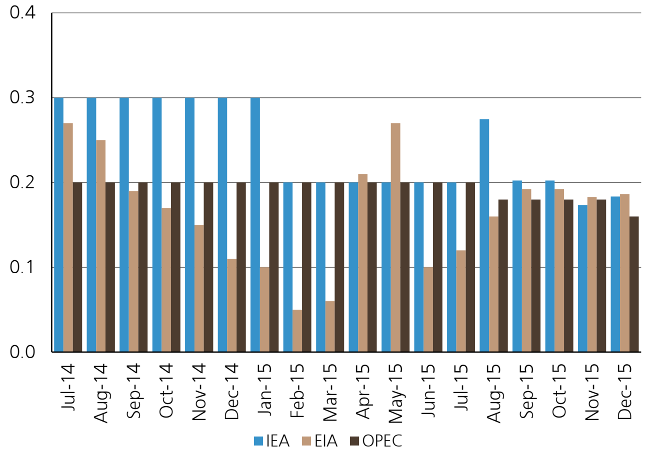
Source: IEA, EIA, OPEC, UBS

Figure 7: Non-OPEC supply growth y/y (Mb/d)



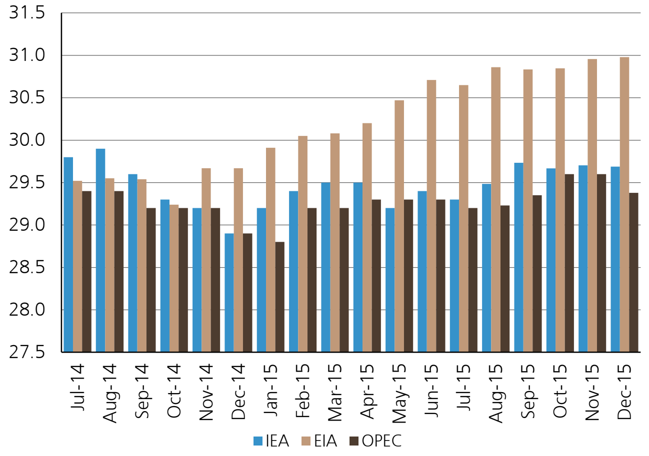
Source: IEA, EIA, OPEC, UBS

Figure 8: OPEC NGL supply growth y/y (Mb/d)



Source: IEA, EIA, OPEC, UBS

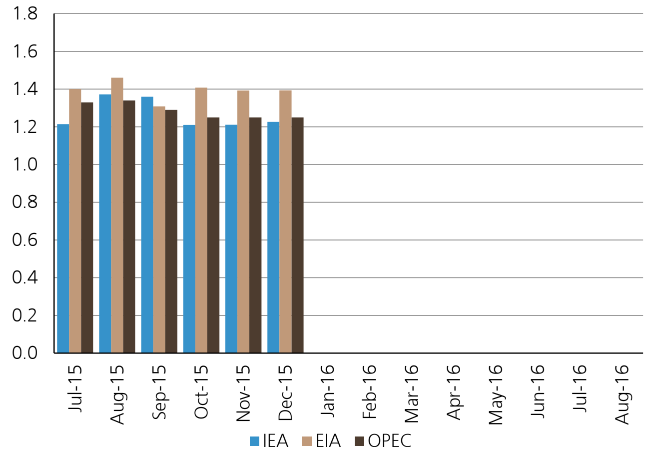
Figure 9: Call on OPEC (Mb/d)



Source: IEA, EIA, OPEC, UBS. Note: EIA is OPEC crude production rather than call on OPEC crude.

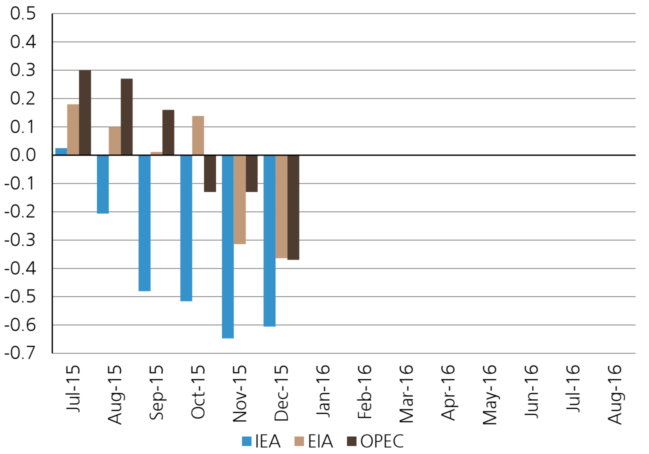
Evolving 2016 Forecasts

Figure 10: Demand growth y/y (Mb/d)



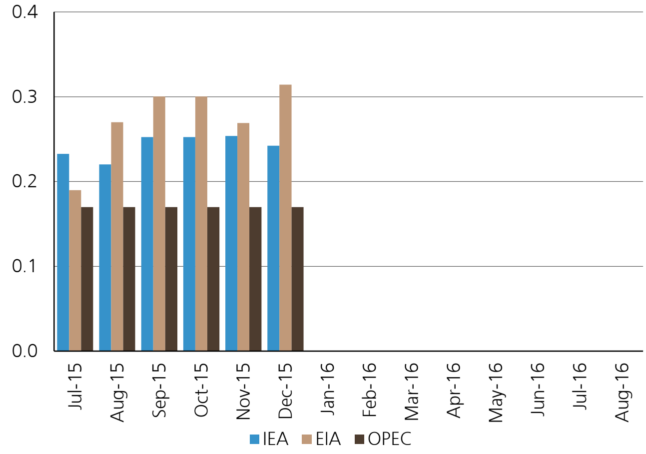
Source: IEA, EIA, OPEC, UBS

Figure 11: Non-OPEC supply growth y/y (Mb/d)



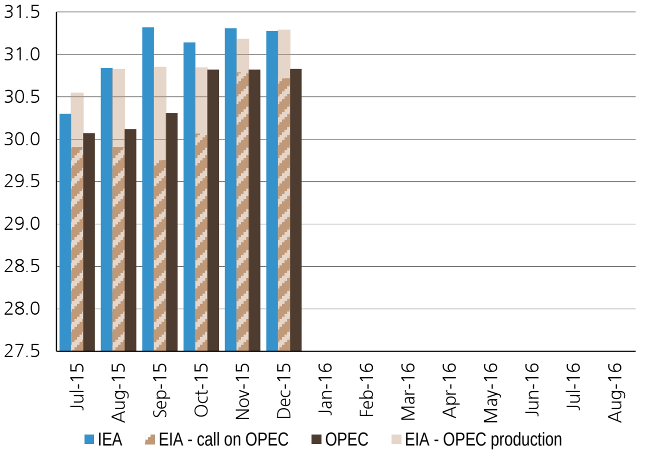
Source: IEA, EIA, OPEC, UBS

Figure 12: OPEC NGL supply growth y/y (Mb/d)



Source: IEA, EIA, OPEC, UBS

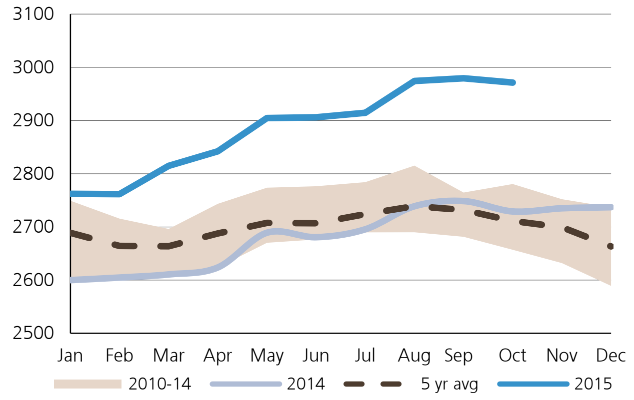
Figure 13: Call on OPEC (Mb/d)



Source: IEA, EIA, OPEC, UBS

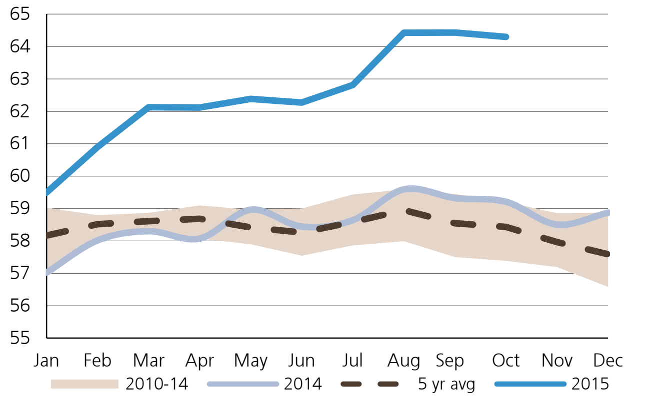
OECD Inventories Held By Industry

Figure 14: OECD Total Industry Stocks (Mb)



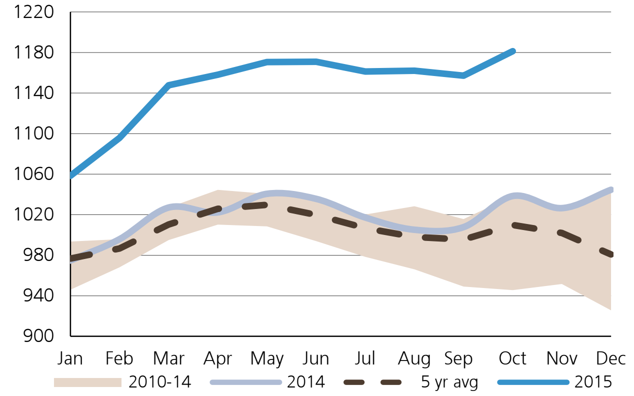
Source: IEA, UBS

Figure 15: OECD Total Industry Stocks (Days Fwd Cover)



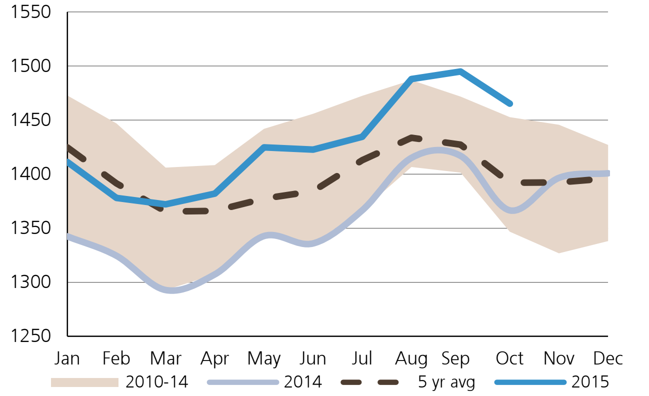
Source: IEA, UBS

Figure 16: OECD Total Industry Crude Stocks (Mb)



Source: IEA, UBS

Figure 17: OECD Total Industry Product Stocks (Mb)



Source: IEA, UBS

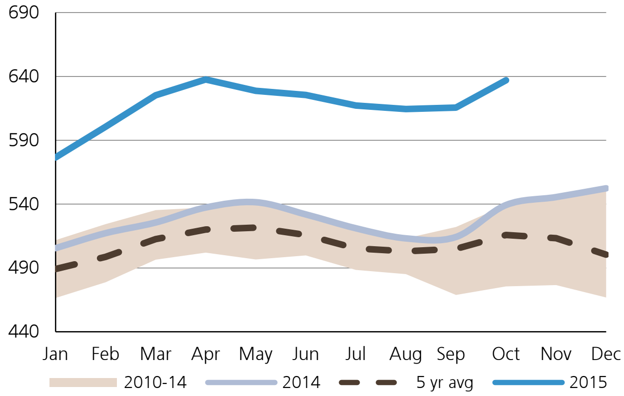
Figure 18: OECD Industry Stocks (Mbbls) – End-October data

	Americas	Europe	APAC	Total	Monthly Change	yearly Change	Days of Fwd Demand
Crude Oil	637.0	343.6	200.8	1181.3	24.1	142.8	31.1
Gasoline	246.7	89.6	23.5	359.8	-10.5	16.5	25.7
Middle Distillate	207.5	302.2	65.5	575.2	-13.2	68.8	33.1
Residual Fuel oil	50.2	69.5	22.0	141.8	3.3	14.6	77.9
Other Products	234.3	94.8	59.4	388.4	-9.4	-1.3	-
Total Products	738.7	556.1	170.4	1465.1	-29.8	98.6	31.7
Other Oils	190.3	69.2	65.3	324.8	-2.5	0.7	-
Total Oil	1566.0	968.8	436.4	2971.2	-8.2	242.2	64.3
Days of Fwd Demand	64.3	73.4	50.5	64.3	-	-	-

Source: IEA, UBS

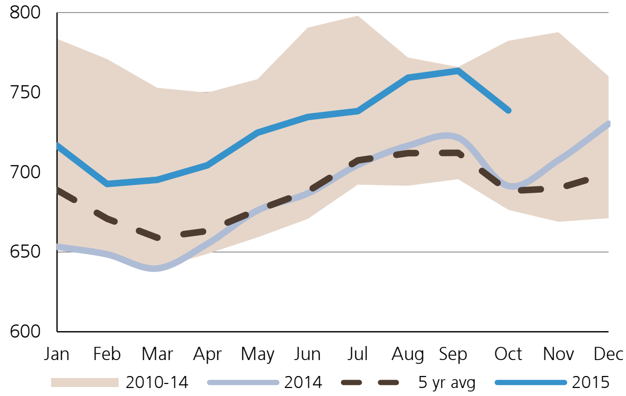
OECD Regional Inventories Held By Industry

Figure 19: OECD North America Crude Stocks (Mb)



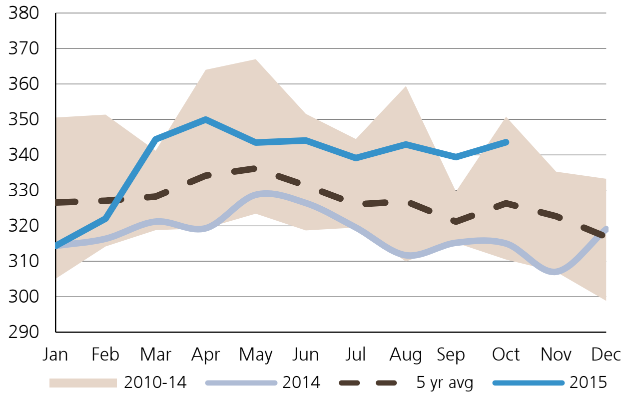
Source: IEA, UBS

Figure 20: OECD North America Refined Product Stocks (Mb)



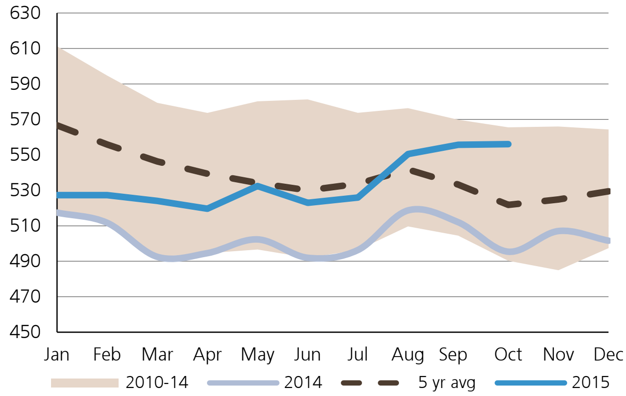
Source: IEA, UBS

Figure 21: OECD Europe Crude Stocks (Mb)



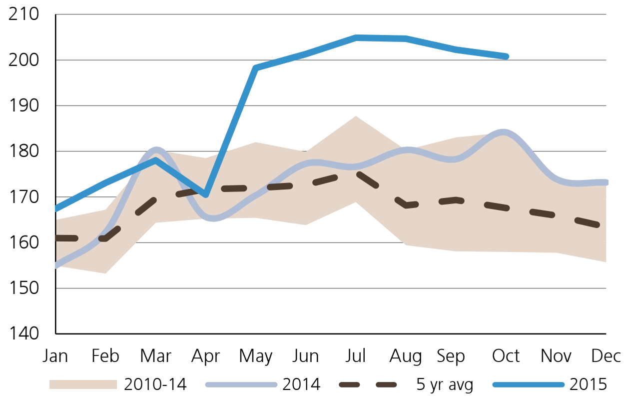
Source: IEA, UBS

Figure 22: OECD Europe Refined Product Stocks (Mb)



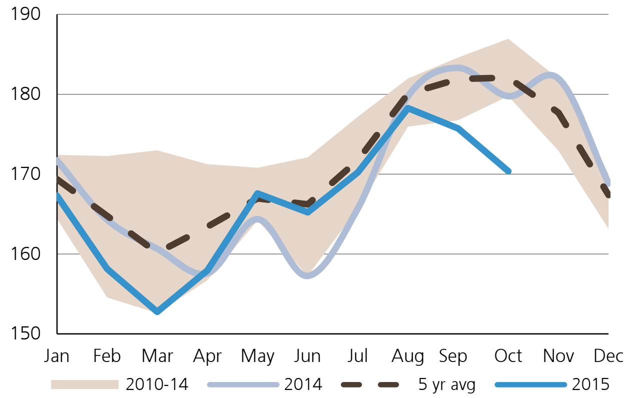
Source: IEA, UBS

Figure 23: OECD APAC Crude Stocks (Mb)



Source: IEA, UBS

Figure 24: OECD APAC Refined Product Stocks (Mb)



Source: IEA, UBS

Figure 25: UBS supply/demand balances (Mb/d)

Demand	2014	1Q15	2Q15	3Q15	4Q15E	2015E	1Q16E	2Q16E	3Q16E	4Q16E	2016E	2017E	2018E	2019E	2020E
OECD Americas	24.1	24.2	24.1	24.7	24.7	24.5	24.2	24.4	24.9	24.9	24.6	24.7	24.7	24.7	24.6
US	*19.4*	*19.6*	*19.5*	*20.0*	*20.0*	*19.8*	*19.6*	*19.8*	*20.1*	*20.1*	*19.9*	*19.9*	*19.9*	*19.9*	*19.9*
OECD Europe	13.4	13.4	13.5	14.1	13.5	13.7	13.5	13.6	14.1	13.5	13.7	13.6	13.5	13.4	13.3
OECD Asia-Pacific	8.2	8.8	7.7	7.8	8.3	8.1	8.6	7.9	8.0	8.3	8.2	8.2	8.2	8.2	8.2
Total OECD	**45.7**	**46.5**	**45.3**	**46.7**	**46.5**	**46.2**	**46.4**	**45.9**	**47.0**	**46.7**	**46.5**	**46.5**	**46.4**	**46.3**	**46.1**
FSU	4.9	4.6	4.9	5.0	4.9	4.9	4.7	4.8	5.0	4.9	4.8	5.0	5.0	5.1	5.2
China	10.3	10.6	10.9	11.0	11.1	10.9	10.9	11.2	11.3	11.5	11.2	11.5	11.9	12.2	12.5
Other Asia	12.0	12.4	12.5	12.3	12.8	12.5	12.9	13.0	12.7	13.1	12.9	13.2	13.6	13.9	14.2
Latin America	7.0	6.8	6.9	6.9	6.9	6.9	6.7	6.9	6.9	6.9	6.9	7.0	7.1	7.2	7.4
Middle East	8.0	7.7	8.3	8.6	8.0	8.2	7.9	8.4	8.9	8.2	8.3	8.6	8.8	9.1	9.3
Africa	4.0	4.1	4.1	4.0	4.1	4.0	4.2	4.2	4.1	4.3	4.2	4.3	4.3	4.4	4.5
Total Non-OECD	**46.9**	**46.7**	**48.3**	**48.4**	**48.7**	**48.0**	**47.9**	**49.2**	**49.6**	**49.6**	**49.1**	**50.2**	**51.4**	**52.6**	**53.7**
TOTAL DEMAND	92.6	93.2	93.6	95.1	95.2	94.3	94.4	95.1	96.6	96.3	95.6	96.7	97.8	98.8	99.8
Supply															
OECD Americas	19.0	19.9	19.5	19.9	19.7	19.8	19.2	18.7	19.3	19.3	19.1	19.5	20.3	20.9	21.4
US	*11.9*	*12.7*	*12.9*	*12.9*	*12.7*	*12.8*	*12.0*	*12.1*	*12.3*	*12.3*	*12.2*	*12.3*	*12.8*	*13.3*	*13.8*
OECD Europe	3.2	3.3	3.4	3.3	3.3	3.4	3.3	3.4	3.3	3.3	3.4	3.4	3.2	3.1	3.2
OECD Asia-Pacific	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total OECD	**22.7**	**23.6**	**23.3**	**23.7**	**23.5**	**23.6**	**22.9**	**22.5**	**23.0**	**23.1**	**23.0**	**23.3**	**24.1**	**24.5**	**25.1**
FSU	13.9	14.0	14.0	13.9	13.9	14.0	13.9	13.9	13.9	14.0	13.9	14.1	14.4	14.4	14.2
China	4.3	4.3	4.4	4.4	4.4	4.4	4.2	4.3	4.3	4.3	4.3	4.2	4.1	4.1	4.1
Other Asia	3.5	3.6	3.6	3.5	3.6	3.6	3.3	3.3	3.3	3.4	3.3	3.2	3.1	3.0	2.8
Latin America	4.4	4.6	4.5	4.5	4.6	4.6	4.7	4.6	4.6	4.7	4.6	4.8	4.9	5.2	5.3
Middle East	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3
Africa	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.2
Total Non-OECD	**29.8**	**30.4**	**30.2**	**30.0**	**30.1**	**30.2**	**29.8**	**29.8**	**29.7**	**30.0**	**29.8**	**29.9**	**30.1**	**30.1**	**30.0**
Biofuels	2.2	1.8	2.4	2.6	2.4	2.3	1.9	2.4	2.7	2.4	2.4	2.4	2.4	2.5	2.5
Processing Gains	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.5
Total Non-OPEC	**56.9**	**58.0**	**58.1**	**58.5**	**58.3**	**58.3**	**57.0**	**57.0**	**57.8**	**57.8**	**57.4**	**58.0**	**59.0**	**59.5**	**60.1**
OPEC non-Crude	6.3	6.4	6.5	6.5	6.6	6.5	6.6	6.7	6.8	6.9	6.7	6.8	6.8	6.8	6.8
OPEC Crude Production	**30.3**	**30.5**	**31.5**	**31.7**											
Call on OPEC Crude	**29.3**	**28.8**	**29.0**	**30.1**	**30.3**	**29.5**	**30.8**	**31.4**	**32.0**	**31.6**	**31.4**	**31.9**	**32.0**	**32.5**	**32.8**
TOTAL SUPPLY	93.6	94.9	96.1	96.7	95.2	95.7	94.4	95.1	96.6	96.3	95.6	96.7	97.8	98.8	99.8
OPEC Crude Capacity	**34.3**	**34.2**	**34.2**	**34.1**	**34.0**	**34.1**	**34.3**	**34.5**	**34.8**	**35.1**	**34.7**	**35.3**	**35.5**	**35.7**	**36.0**
OPEC Spare Capacity - at "call"	**5.0**	**5.5**	**5.2**	**4.0**	**3.7**	**4.6**	**3.4**	**3.2**	**2.8**	**3.4**	**3.3**	**3.4**	**3.5**	**3.2**	**3.2**

Demand (mb/d change Y-o-Y)	2014	1Q15	2Q15	3Q15	4Q15E	2015E	1Q16E	2Q16E	3Q16E	4Q16E	2016E	2017E	2018E	2019E	2020E
OECD Americas	0.1	0.4	0.4	0.4	0.2	0.3	0.0	0.3	0.2	0.2	0.2	0.1	0.0	0.0	-0.1
US	*0.1*	*0.5*	*0.5*	*0.4*	*0.2*	*0.4*	*0.0*	*0.2*	*0.1*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*
OECD Europe	-0.2	0.5	0.2	0.4	0.1	0.3	0.1	0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1
OECD Asia-Pacific	-0.2	-0.1	0.0	0.1	-0.1	0.0	-0.1	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0
Total OECD	**-0.3**	**0.7**	**0.5**	**0.8**	**0.2**	**0.6**	**0.0**	**0.6**	**0.3**	**0.2**	**0.3**	**-0.1**	**-0.1**	**-0.1**	**-0.2**
FSU	0.2	0.0	0.0	-0.1	-0.1	-0.1	0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
China	0.2	0.8	0.6	0.6	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other Asia	0.2	0.3	0.4	0.5	0.7	0.5	0.5	0.5	0.4	0.2	0.4	0.3	0.3	0.3	0.3
Latin America	0.2	0.0	-0.1	-0.2	-0.2	-0.1	-0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1
Middle East	0.1	-0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.3
Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Total Non-OECD	**1.1**	**1.2**	**1.3**	**1.1**	**1.1**	**1.2**	**1.2**	**0.9**	**1.2**	**0.9**	**1.0**	**1.2**	**1.2**	**1.2**	**1.1**
TOTAL DEMAND	0.8	1.9	1.8	1.9	1.3	1.7	1.2	1.5	1.5	1.1	1.3	1.1	1.1	1.0	1.0

Supply (mb/d change Y-o-Y)	2014	1Q15	2Q15	3Q15	4Q15E	2015E	1Q16E	2Q16E	3Q16E	4Q16E	2016E	2017E	2018E	2019E	2020E
OECD Americas	1.8	1.7	0.7	0.7	0.0	0.8	-0.7	-0.8	-0.7	-0.4	-0.6	0.3	0.8	0.6	0.5
US	*1.7*	*1.6*	*1.1*	*0.7*	*0.0*	*0.9*	*-0.6*	*-0.8*	*-0.6*	*-0.4*	*-0.6*	*0.1*	*0.5*	*0.5*	*0.5*
OECD Europe	0.0	-0.1	0.3	0.3	-0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.2	0.1
OECD Asia-Pacific	0.0	-0.1	-0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total OECD	**1.9**	**1.5**	**0.9**	**1.0**	**-0.1**	**0.9**	**-0.6**	**-0.8**	**-0.7**	**-0.4**	**-0.6**	**0.4**	**0.7**	**0.4**	**0.6**
FSU	0.1	0.1	0.2	0.1	0.0	0.1	-0.1	0.0	0.0	0.1	0.0	0.2	0.3	0.0	-0.2
China	0.0	0.1	0.1	0.2	0.0	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0
Other Asia	0.0	0.1	0.1	0.1	0.0	0.1	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1
Latin America	0.2	0.4	0.2	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2
Middle East	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Africa	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.1
Total Non-OECD	0.3	0.6	0.6	0.3	0.0	0.4	-0.6	-0.4	-0.3	-0.2	-0.3	0.1	0.2	0.0	-0.1
Biofuels	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0
Processing Gains	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Total Non-OPEC	**2.4**	**2.2**	**1.5**	**1.3**	**0.0**	**1.3**	**-1.0**	**-1.1**	**-0.6**	**-0.5**	**-0.8**	**0.5**	**1.0**	**0.5**	**0.6**
OPEC non-Crude	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.0	0.0	0.0
OPEC Crude Production / Call on OPEC Crude	-0.2	0.5	*-1.1*	*-0.4*	*-0.2*	*-0.7*	0.3	*-0.1*	*1.9*	*1.4*	*1.9*	*0.5*	*0.1*	*0.5*	*0.3*
TOTAL SUPPLY	2.4	2.9	3.2	2.7	-0.1	2.2	-0.5	-1.0	-0.2	1.1	-0.1	1.1	1.1	1.0	1.0

Source: UBS, IEA, EIA, national statistics agencies inc. ANP and NPD. Note: UBS S/D balances assume OPEC produces at 'call' in forecast periods. OPEC does not include Indonesia

Figure 26: 2015/16 real GDP growth assumptions (%)

	IEA		EIA		OPEC		UBS	
	2015	2016	2015	2016	2015	2016	2015	2016
Global	3.1	3.6	2.3	2.7	3.1	3.4	3.1	3.4
Euro Area	1.5	1.6	n/a	n/a	1.5	1.5	1.5	1.8
UK	2.5	2.2	n/a	n/a	n/a	n/a	2.4	2.4
Japan	0.6	1.0	n/a	n/a	0.8	1.2	0.5	1.3
Korea	2.7	3.2	n/a	n/a	n/a	n/a	2.6	2.4
USA	2.6	2.8	2.5	2.7	2.4	2.5	2.5	2.8
Canada	1.0	1.7	n/a	n/a	n/a	n/a	1.1	2.2
Russia	-2.7	0.5	n/a	n/a	-3.2	0.3	-3.7	-0.4
India	7.3	7.5	n/a	n/a	7.4	7.6	7.1	7.6
China	6.8	6.3	n/a	n/a	6.8	6.4	6.9	6.2

Source: IEA, EIA, OPEC, UBS. Note: EIA global GDP growth assumption is given in oil-consumption-weighted terms.

Statement of Risk

In history, oil prices have proved consistently unpredictable because so many political, geological, and economic trends and events affect the supply of and demand for oil

Oil prices are extremely volatile in the short, medium and long term, as they are frequently affected by inherently unpredictable events, including natural disasters

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12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	49%	33%
Neutral	FSR is between -6% and 6% of the MRA.	40%	26%
Sell	FSR is > 6% below the MRA.	12%	18%
Short-Term Rating	**Definition**	**Coverage[3]**	**IB Services[4]**
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%

Source: UBS. Rating allocations are as of 30 September 2015.
1:Percentage of companies under coverage globally within the 12-month rating category. 2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
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