Equity Research

SEB

Oil

Global

Sector Comment

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Oil Market update

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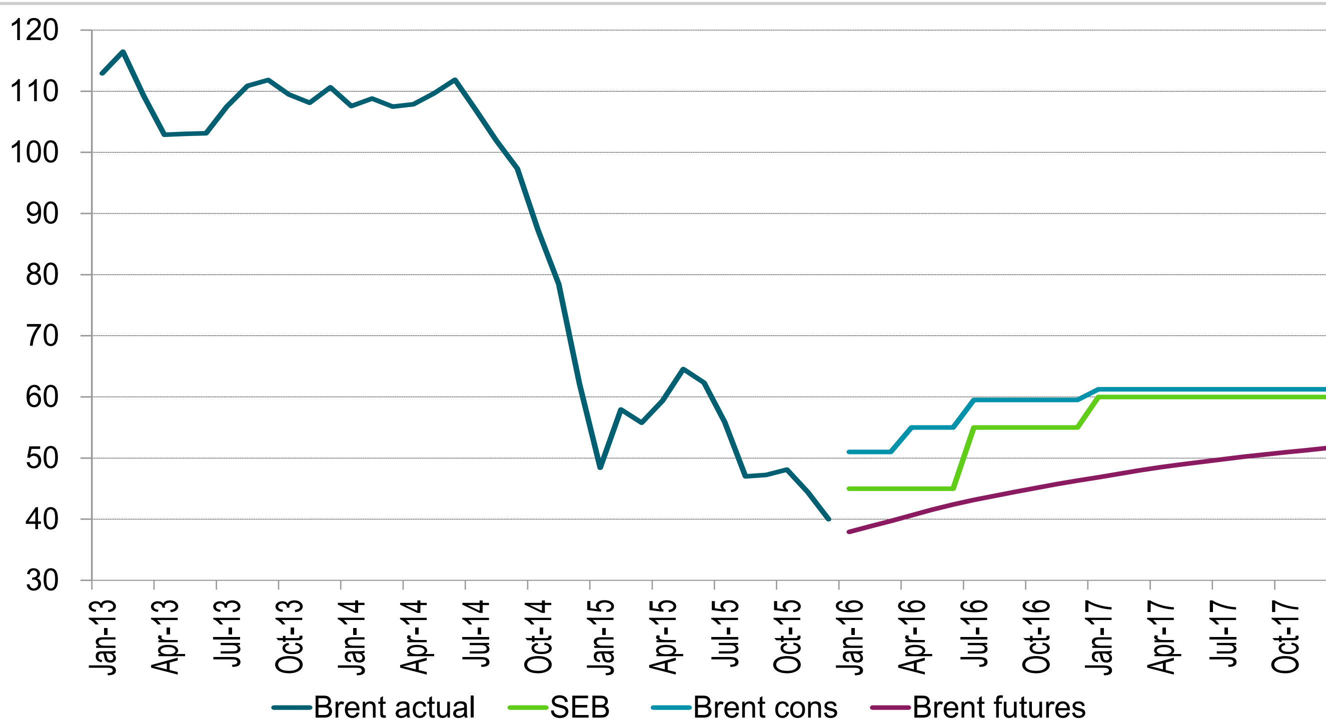
Price in a battle to balance the market

- **The oil price, not OPEC, will balance the market**
  For some time it has been clear that the oil price, and not OPEC, will have to balance the oil market. Therefore, it is up to the price to force supply in line with demand. Although not at full capacity, onshore storage is becoming increasingly stressed as crude stocks are at record highs. We expect a further strong increase in global oil inventories during H1 2016, with potentially increasing inventory stress.

- **Conventional non-OPEC supply the main outlier risk for 2016 and beyond**
  We have looked at how "Big Oil's" future production guidance has changed and found that the six largest supermajors and majors have cut their 2017 production guidance by 1.6m boe/d in total since 2013. By making certain assumptions about the oil/gas split, we find that supermajors and majors have cut their 2017 oil production estimate by 0.8m bl/d versus their 2013 estimates. Although there is no scientific formula, we estimate non-Opec, non-US production to decline by 1.3% in 2016 and by 1.6% in 2017.

- **2016 oil price forecast cut to USD 50/bl, while 2017 reiterated at USD 60/bl**
  We have cut our 2016 oil price estimate by USD 5/bl to USD 50/bl. We reiterate our oil price estimate of USD 60/bl for 2017 and USD 70/bl for 2018 and beyond. Overall, we expect OPEC to continue to choose volume over price and increase production. However, we expect healthy growth in demand, together with a negative supply-side impact on the US and non-Opec, non-US production from the ongoing large capex cuts.

Oil price and forecasts (USD/bl)



Source: SEB

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Summary

We have made marginal changes to our supply/demand balance since our previous report. However, as we believe the impact of further and sizeable stock building in H1 2016 is greater than before, we have cut our 2016 oil price forecast by USD 5/bl to USD 50/bl. We reiterate our slightly more positive oil price forecast of USD 60/bl for 2017 and USD 70/bl for 2018 and beyond.

Oil price forecast (USD/bl)

	Q1/16E	Q2/16E	Q3/16E	Q4/16E	2015E	2016E	2017E	2018E+
Old	50	50	60	60	54	55	60	70
New	45	45	55	55	53	50	60	70

Source: SEB

The main headlines in this report are:

- **Opec:** continued production growth. We see no reason for Opec to cut production as the choice of volume over price is reasonable.
- **US supply:** apparently resilient US production, but due to US GoM, we assume a 0.5m bl/d decline for 2016.
- **Supply effects on capex cuts:** we expect impact in 2016 and 2017.
- **Demand:** lower price triggers demand and we estimate growth at 1.5% (2016) and 1.7% (2017).

Overall, we expect Opec and Saudi Arabia to continue their choice of volume over price and increase production in the years to come. However, we continue to expect healthy growth in demand, along with a negative impact on the US and non-Opec, non-US production from the ongoing large capex cuts.

As a result, we expect the supply/demand balance to move from significantly oversupplied in 2015 by 1.9m bl/d to 0.6m bl/d in 2016 and a balanced market in 2017.

SEB supply/demand estimates (m bl/d)

	2013	2014	2015E	2016E	2017E
Demand					
OECD	46.0	45.7	46.2	46.3	46.3
of this:					
US	*19.0*	*19.1*	*19.6*	*19.7*	*19.7*
Europe	*14.3*	*14.1*	*14.2*	*14.2*	*14.2*
Non-OECD	45.9	47.1	48.4	49.7	51.3
of this:					
China	*10.3*	*10.6*	*11.2*	*11.6*	*12.0*
Total demand	**91.9**	**92.8**	**94.6**	**96.0**	**97.6**
Growth		*0.9*	*2.0*	*1.5*	*1.7*
Supply					
OPEC	30.5	30.3	31.7	32.5	33.4
OPEC NGL	6.2	6.4	6.6	6.9	7.1
Non-OPEC	54.7	57.0	58.3	57.5	57.1
of this:					
Non-OPEC & non-US liquids	*44.4*	*45.1*	*45.5*	*44.9*	*44.2*
US crude oil production	*7.5*	*8.7*	*9.3*	*8.8*	*8.9*
US NGL & other	*2.8*	*3.2*	*3.5*	*3.8*	*4.0*
Total supply	**91.4**	**93.8**	**96.6**	**96.9**	**97.7**
Growth		*2.6*	*3.0*	*0.2*	*0.8*
Supply/Demand-balance	**-0.6**	**1.0**	**2.0**	**0.9**	**0.1**
Global stock change (m bl)	*-204.4*	*369.8*	*733.6*	*310.4*	*26.1*
Call-on-OPEC	*31.1*	*29.3*	*29.7*	*31.6*	*33.4*
Call-on-US crude oil	*8.0*	*7.7*	*7.3*	*7.9*	*8.8*

Source: SEB

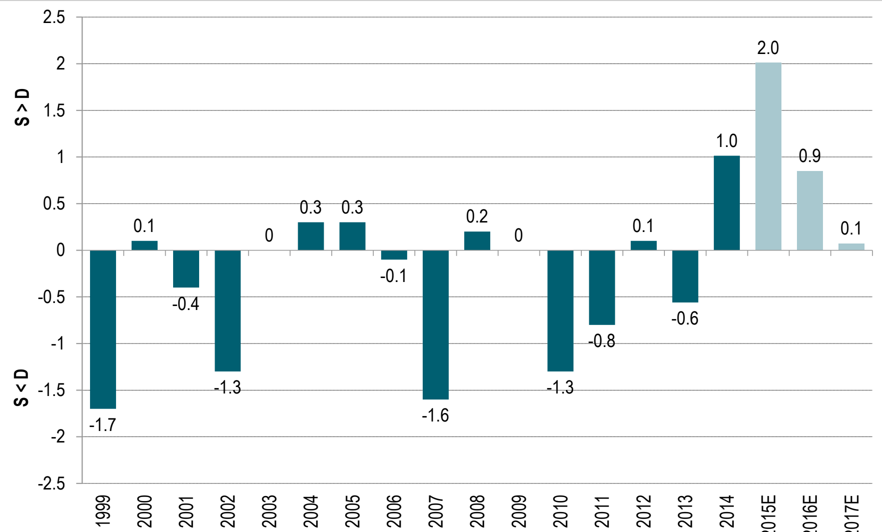
Our demand estimates are based on our global GDP forecast from the latest Nordic Outlook report (November):

Estimated global GDP growth (%)

Global GDP Growth	2014	2015E	2016E	2017E
United States	2.4	2.5	2.9	2.6
Japan	-0.1	0.6	1.1	0.8
Germany	1.6	1.5	2	2.1
China	7.3	6.9	6.5	6.3
United Kingdom	2.9	2.4	2.5	2.6
Eurozone	0.9	1.5	2	2.1
Nordic countries	1.6	2.1	2.3	2.2
Baltic countries	2.8	2	2.7	3.3
OECD	1.9	2.1	2.4	2.4
Emerging markets	4.7	4	4.5	5
World, PPP	**3.4**	**3.1**	**3.6**	**4**

Source: SEB

Oil market balance (m bl/d)

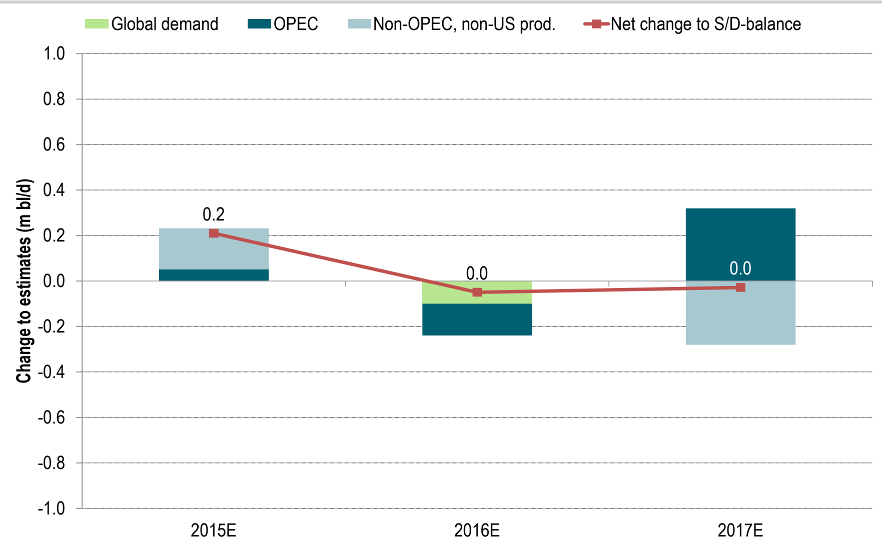


Source: SEB, IEA

Changes to supply/demand balance

We have only made smaller changes to our supply and demand estimates, where the main changes are a slight shuffling of Opec volumes from 2016 to 2017 and revising non-Opec, non-US production slightly down for 2017. In sum, the marginal changes net out so the overall balance is unchanged since our previous report.

Changes to our supply-demand estimates (m bl/d)



Source: SEB

Key highlights

- **The impact on supply from capex cuts:** Identifying the impact on production from the large capex cuts is not easy. However, we have shed some light on this issue by looking at how “Big Oil’s” future production guidance has changed over the previous couple of years. We found that the six largest supermajors and majors have cut their 2017 production guidance by an aggregate 0.8m bl/d compared with their 2013 estimates.
- **Borrowing base redetermination – fewer cuts than expected:** Ahead of the redetermination process for US onshore players, large cuts to borrowing bases were expected, with some surveys forecasting a 39% cut to borrowing bases on average. Many of the redetermination processes have been completed, and we have conducted a survey and tracked 22 US onshore companies with a total of USD 26.2bn in borrowing base ahead of the redetermination. In our survey, we find that borrowing bases were cut on average by 9%, much less than expected, but fairly large.
- **Resilient US production due to US GoM:** Despite a dramatic cut in activity with the oil rig count down more than 60% over the last year and onshore capex down by more than 40% in 2015, production has proven to be resilient, with September production at 9,326k bl/d compared with an April peak of 9,585k bl/d. However, the growth in recent months has increasingly come from the US Gulf of Mexico and more than 70% of the September crude production growth of 376k bl/d was sourced from growth in the Gulf of Mexico production.
- **Opec production expected to increase:** Overall, we expect OPEC members to increase exports over the years to come. All members will need higher volumes if they were to compensate for lost revenue due to lower oil price. However, Saudi Arabia is progressing to make more room for OPEC oil as capacity is taken out of the market (e.g. 25% capex cut in 2015 and 15% in 2016). We expect Opec volumes to increase by 1.4m bl/d in 2015, 0.5m bl/d in 2016 and 1.2m bl/d in 2017.
- **Iran floating storage – less need to worry:** Since the Iran nuclear deal was signed in July, the size and the potential release of barrels held in floating storage have been a disturbing element in the oil market. However, we believe that there are limited reasons to be concerned about Iran’s floating storage as the amount of oil held in floating storage in 2011 (prior to sanctions implemented in January 2012) varied between 19m bl and 34m bl, with an average of 26.3m bl compared with the current volume of 38m bl.
- **Demand:** Only marginal changes to our demand estimates. Growth in oil demand received a significant boost this year due to a steep fall in the oil price, pent-up demand after several years of depressed OECD demand in the wake of the global financial crisis and a colder than normal northern hemisphere winter. Demand in 2016 is unlikely to receive the same magnitude of support and, therefore, we estimate 1.5% demand growth next year. However, for 2017 we estimate the growth in demand to increase to 1.7%, along with stronger global growth.

Price dynamics and reflections

During the previous few months, the oil price has declined while US crude oil production has moved sideways since the end of August. While this partly reflects higher production in the US Gulf and in Alaska, it also reflects continuously lower US shale oil break-even levels. US shale oil productivity continues to rise, drilling speeds continue to increase and the shale oil cost curve is constantly shifting lower. US shale oil production is holding up better than we had expected at lower prices than we had expected.

For the coming half year, we expect longer dated oil contracts to be under some bearish pressure, meaning limited upside potential. A sideways to stronger US dollar is likely to be bearish for both front-end and longer dated prices. A dynamic US shale oil cost curve, as well as declining costs in conventional oil production, is likely to impact longer dated crude oil prices. In addition, producers are more eager to sell on the price curve at higher prices rather than the spot price in the current strong contango market. However, oil consumers increasingly prefer to purchase oil at spot prices rather than fixing prices at higher levels out on the curve. This creates a bearish balance on the forward curve, helping to push it lower.

H1 2016 inventory build to put pressure on prices

We have lowered our Brent crude oil price outlook for H1 2016 from USD 50/bl to USD 45/bl as a consequence of the overall picture for H1 2016 of rising stocks and deep contango, in combination with a price discovery process (which has revealed lower break-even levels for US shale oil production). The global oil market has been running a constant surplus since early 2014. As plenty of storage capacity has been available, the market has accepted storing the surplus and not to quickly force supply to be equal to demand. However, while onshore storage capacity is available, storage levels now stand at record highs and capacity is potentially starting to be stressed. H1 is seasonally a stock building period and stocks are likely to increase more than normal during H1 2016 as the market is running a surplus. Therefore, it is increasingly imperative for supply and demand to become aligned or for the contango in the market to become so large that the discount in spot prices versus forward prices can finance offshore storage if onshore storage capacity becomes stressed. A risk could be periods of low prices during H1 2016, if storage capacity diminishes. If this occurs, the prices may be low enough to slow US shale oil production so that the market becomes balanced.

From surplus to balance in H2 2016

We expect the forward month Brent crude oil price to recover to USD 55/bl and the comparable WTI contract to recover to USD 52/bl on average in H2 2016. As the oil market moves from surplus to balance, the oil price can move from where it enforces a significant decline (greater than we have estimated) in US shale oil production during H1 2016 to a level where US shale oil production is at steady production. Admittedly, it is difficult to identify the price for the “steady state production” with the rapid development in technology, costs and profitability in the US shale oil sector. The contango is likely to be deep as global oil inventories will be higher than today. Therefore, a WTI forward month price of USD 52/bl (USD 3/bl spread to Brent) with deep contango implies that the 15-month WTI forward contract should price at about USD 60/b at that point in time. This is important as we believe the 15-month WTI contract is a good proxy for what the oil from a new shale oil well can actually be sold and hedged at. Therefore, this price is an important deciding factor for a shale oil producer’s investment decision. Although a WTI 15-month price of USD 60/bl could stimulate new US shale oil production, we believe there are a few elements that could hamper an immediate and strong recovery in US shale oil activity. Strained cash flow and the need to pay down debt are likely to be the most important dimensions.

A balanced market in 2017

Barring a rapid decline in conventional non-OPEC crude oil production, our main scenario is for a close to balanced market in 2017 with global oil inventories starting to decline in H2 2017. From there onwards, the oil market needs to draw down some 350mbl in surplus OECD oil inventories to bring it back to normal. There are likely to be elevated oil inventories outside of the OECD region and maybe a higher than normal number of drilled, but uncompleted (DUCs) wells in the US. If the oil market starts to run a full 1mbpd deficit by mid-2017, then global oil inventories may be back to normal at the earliest by mid-2018.

2016 forecast revised down, while long-term estimates are unchanged

We have adjusted our price outlook for 2016 from USD 55/bl to USD 50/bl. We maintain our 2017 price outlook of USD 60/bl.

Shale oil dynamics – big, fast and flexible

Through its rapid growth and magnitude, US shale oil was an important factor of the oil price decline in 2014 and 2015. While now in decline, US shale oil is likely to be a major, important factor for years to come if not least through its flexibility. This cycle is potentially different with US shale oil. If the oil price rises too much, too soon, then US shale oil supply will quickly respond. A partial price rise will be needed in order to bring US shale oil production from a slow down to steady state.

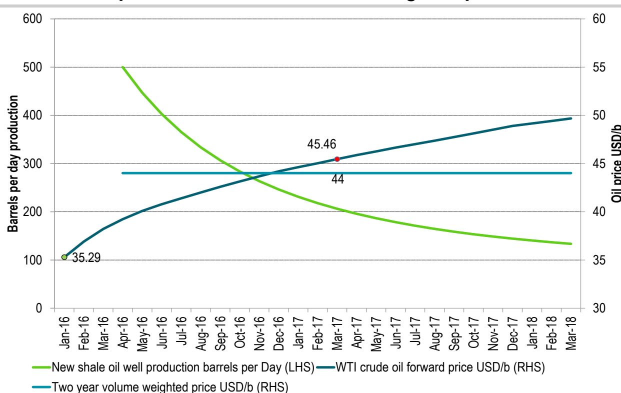
Contango in the forward crude oil curve is blurring the price picture

In discussing US shale production, we can simplify and state that it is "controlled" by two parameters:

- The rational that NPV is the controlling factor of profitability and can be expressed by, e.g. the 15-month forward contract.
- The cash flow available, which controls the ability to invest and the spot price is most important.

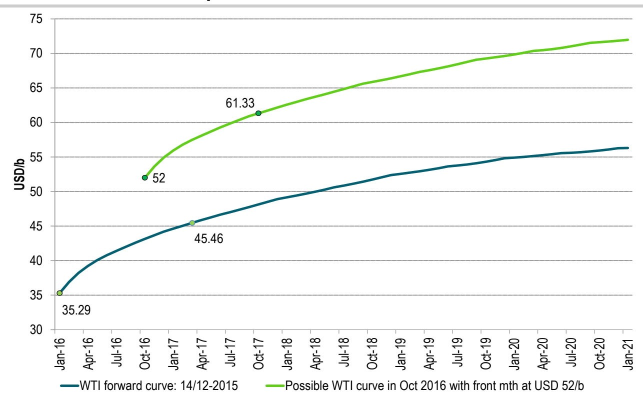
Shale oil producers are impacted by the oil curve in two different ways. The forward month contract or the spot crude oil price impacts the cash flow of US shale oil producers, but is highly dependent on price hedges in place when the existing production was started. New investments are currently scaled to match the running cash flow and this cash flow is slowing. However, the profitability for a new well is decided by the volume weighted forward prices for the next two to five years. Although the forward month WTI contract is USD 35.3/bl at the time of writing, the 15-month WTI forward price is USD 45.5/bl. Therefore, more potential shale oil wells are profitable than what the forward month price of USD 35.3/bl may indicate. We have used the 15-month WTI price as an approximate measure and indication for the profitability of a new shale oil well as it is an approximation of the volume weighted price of the first two years of crude oil volume streaming from a new shale oil well starting to produce four months from now.

Forward WTI prices vs. shale oil volume weighted price



Source: SEB, Bloomberg

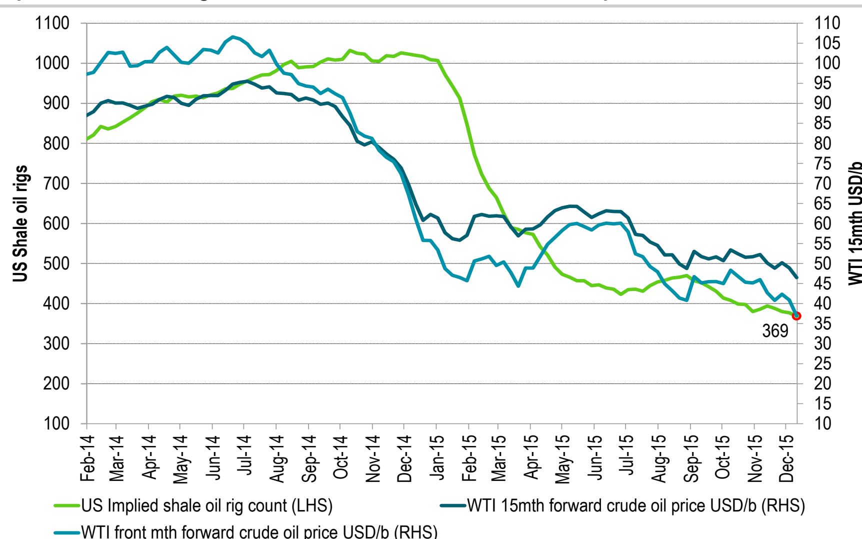
Possible forward WTI price curve in H2 2016



Source: SEB, Bloomberg

As we expect global oil inventories to be higher in H2 2016 than they are today, we expect the contango in the forward price curve to be more or less as deep as it is today, unless the market experiences a rapid and substantial deficit in H2 2016, in which case the contango may be less deep. Available cash among US shale oil players may be scarce in H2 2016 and hold back investments in new supply. However, profitability for new shale oil investments may be high if the WTI forward month contract is USD 52/bl, in combination with a deep contango placing the forward 15-month WTI price at USD 60/bl or higher. Therefore, there may be incentive to invest, even though it could be hampered by limited cash flow and availability of capital. The previous time the WTI month price was above USD 60/bl was during May and June 2015, when it averaged USD 63.2/bl. Thereafter the implied US shale oil rig count increased by 47 to a total of 470 or 100 rigs more than the current 369.

Implied US shale oil rig count versus 1-month and 15-month WTI prices



Source: SEB, Bloomberg

Shale oil sensitivity and magnitude

Assuming that an average rig drills two wells per month and that each well yields 500bl/d in the first month, each rig produces some 1,000bl/d in the first month. Furthermore, if we assume that the monthly decline of the current production base is 7-10%, this implies some 350,000bl/d per month. Therefore, it would take some 350 shale oil rigs to keep US shale oil production steady today. Potential 10% p.a. well production productivity for the next three years will bring this towards 250. The fact that US shale oil production today is in decline indicates to us that maybe 100 of today's shale oil rigs currently drill wells that are drilled, but uncompleted (DUCs). Over the last year, up to 50 shale oil rigs easily moved in and out of the market during a four week period, with declines above 200 amid the most intense lay-off period. Our estimate is that 50 added rigs will lead to an additional 50,000bl/d some four months later and in the ballpark of 400,000bl/d added production 15 months later if the rigs are kept drilling through the period. Therefore, +/-50 US shale oil rigs cover oil demand growth uncertainty, even though if it is somewhat delayed. An added 125 US shale oil wells will be enough to cover a loss of around 1m bl/d after 15 months, compared with a potential loss of supply by 1m bl/d from the Middle East.

Oil price forecast (USD/bl)

	Q1/16E	Q2/16E	Q3/16E	Q4/16E	2015E	2016E	2017E	2018E+
Old	50	50	60	60	54	55	60	70
New	45	45	55	55	53	50	60	70

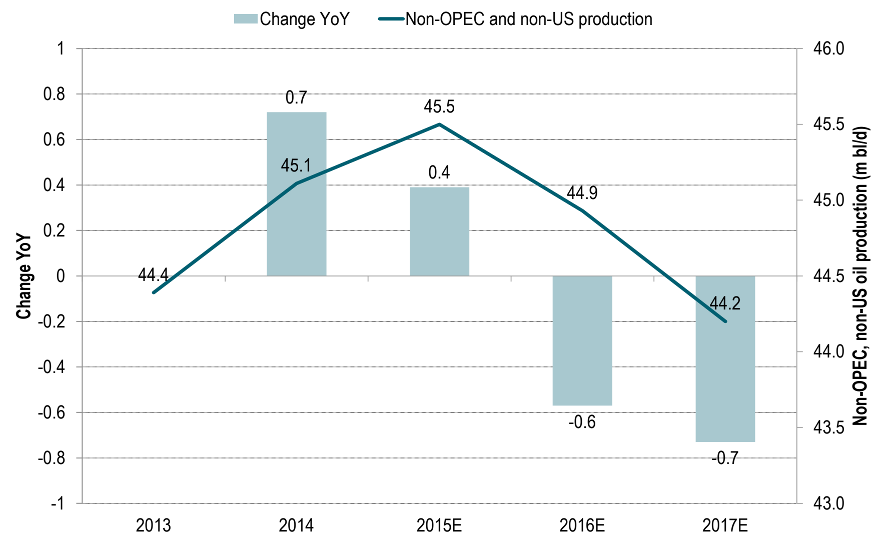
Source: SEB

Supply

The impact on supply from capex cuts

Understanding the full impact on the supply from the ongoing capital discipline and capex cuts is not an easy task. However, we have shed some light on this issue by using different sets of approaches (e.g. adjustments to production guidance, investigating pace of FIDs, etc.) and find that the current extreme capex cuts and activity slowdown will dent non-Opec, non-US production. As a result, although there is no scientific formula, we estimate 45.5m bl/d in 2015 with a decline of 1.3% in 2016 and a further decline of 1.6% in 2017 to 44.2m bl/d –we have revised down 2017 by 0.3m bl/d since our previous report (*Surplus in decline*).

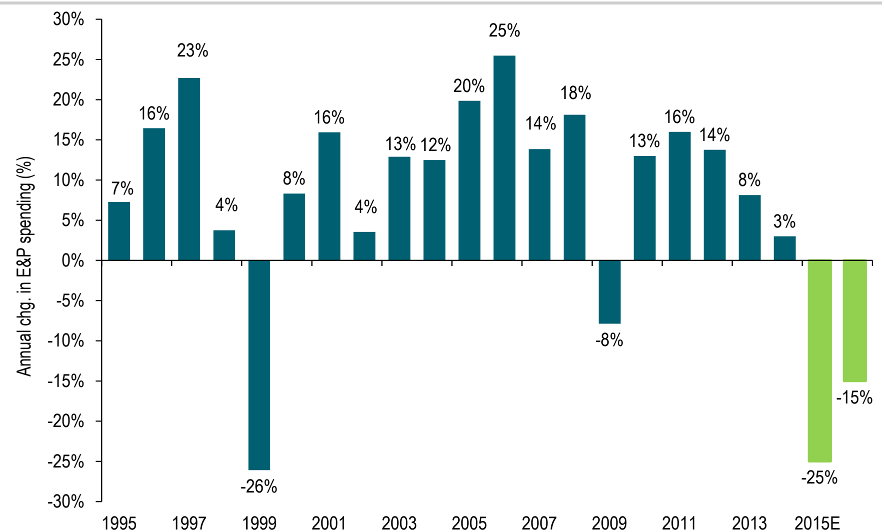
Non-Opec, non-US oil production and y-o-y change (m bl/d)



Source: SEB

In our annual E&P Survey issued in August (*Pitch dark before any shimmer of light*) we estimated global upstream spending to drop 25% in 2015 and an additional 15% in 2016. The survey covers 39 of the world's largest oil companies, constituting 60-70% of global spending and combined oil production of 39m bl/d, or 45% of global production.

Annual change in global upstream spending



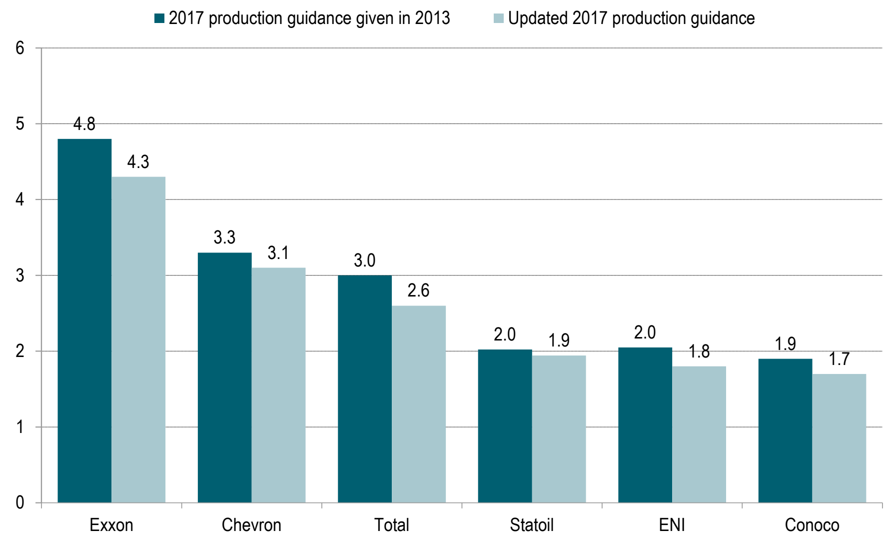
Source: SEB

As an approach to determine how this extreme drop in activity impacts future supply, we have looked at how "Big Oil's" future production guidance has changed over the last couple of years. By investigating how the 2017 production guidance has changed from the one provided in 2013 and the current guidance for the six largest supermajors and majors (BP and Shell excluded because of lack of production guidance), we find that a total of 1.6m boe/d have "disappeared" from the 2017 oil and gas supply. By assuming the split between oil and gas is the same as their current production split (except for Exxon where we have the detailed split), we find that in aggregate they have cut 2017 oil production by 0.8m bl/d compared with their 2013 estimates. We understand that this is not a perfect exercise as:

- Some of the drop is inorganic, meaning it does not account for asset sales.
- The oil and gas share is approximated based on current split (except for Exxon).
- Project scheduling and delays.
- Quota and concessions could have been amended in the period.

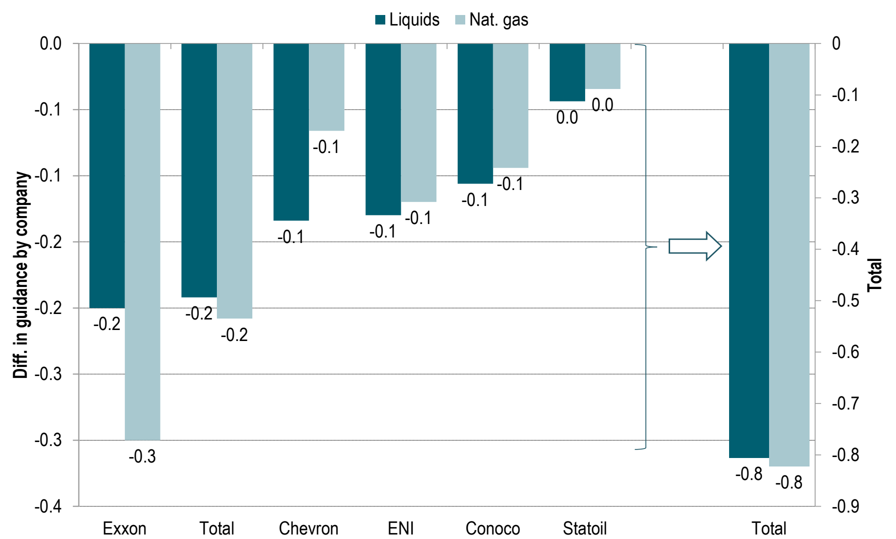
However, we find the large decline in production guidance is interesting in relation to the large spending drop. In addition, it illustrates the changed focus and strategy in the industry from growth-centric to cash flow neutrality-focused.

2017 production guidance provided in 2013 and current (m boe/d)



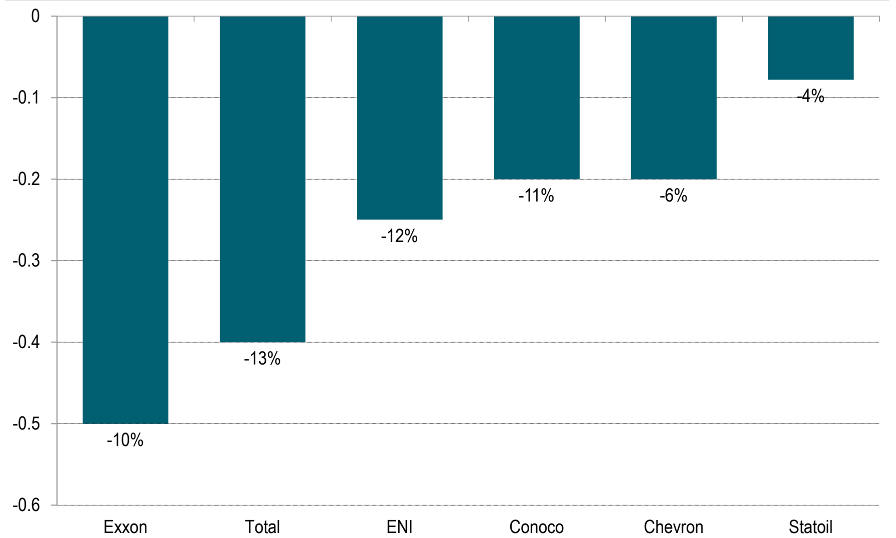
Source: SEB, Company filings

Change to 2017 production guidance from 2013 to date (m boe/d)



Source: SEB, Company filings

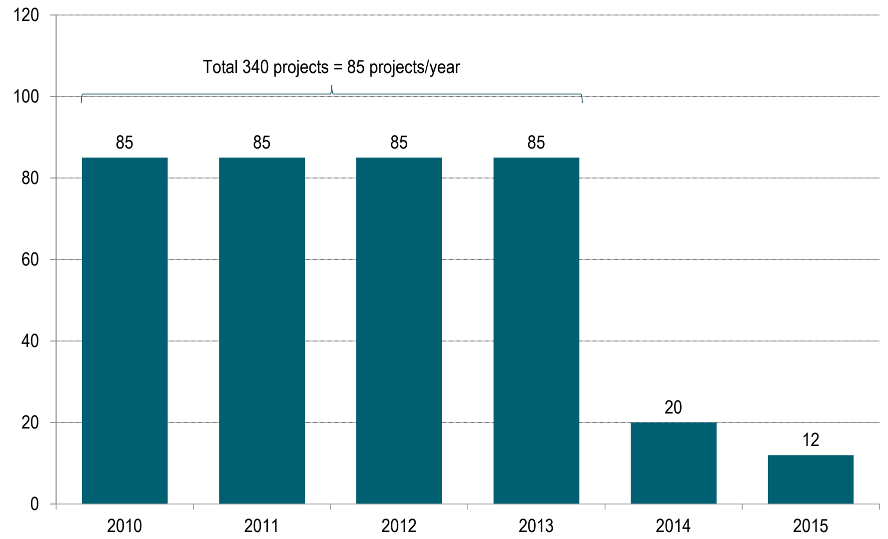
Change to 2017 total production guidance from 2013 to date (m boe/d)



Source: SEB, Company filings

The reduced activity is clearly visible in the significantly reduced pace of project sanctions and final investment decisions (FIDs). From 2010 to 2013 a total of 340 projects were sanctioned (globally excluding US onshore), corresponding to some 85 projects per year on average. This “FID count” dropped to only 20 in 2014 and so far this year is only 12 projects sanctioned. This will eventually impact (i) the reserve replacement ratios and (ii) the supply side of the equation as fewer hydrocarbons are brought on stream to the market.

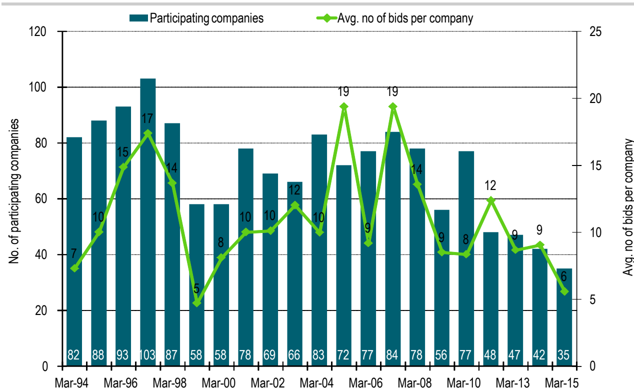
Number of FIDs taken per year



Source: SEB, WoodMac

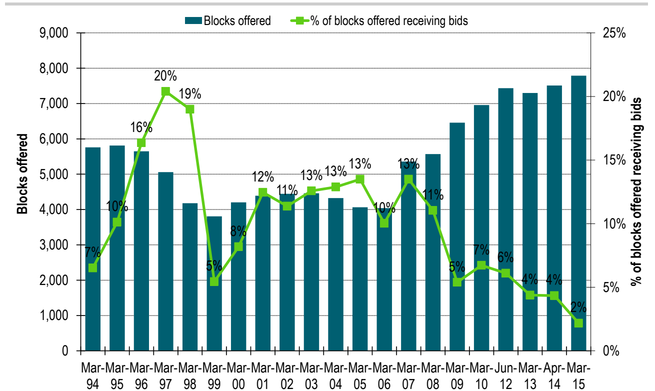
Other industry data on the effect of lower investments and changed focus to cash flow-neutrality is found in, for instance, participation in licensing rounds. For instance, participation in the central US GoM licensing round has dropped significantly in recent years from 70-80 companies before 2010 to 35 companies in the March 2015 licensing round. Furthermore, the share of blocks receiving bids has decreased significantly to only 2% in the last central GoM licensing round.

US Central GoM licensing rounds – number of companies



Source: SEB

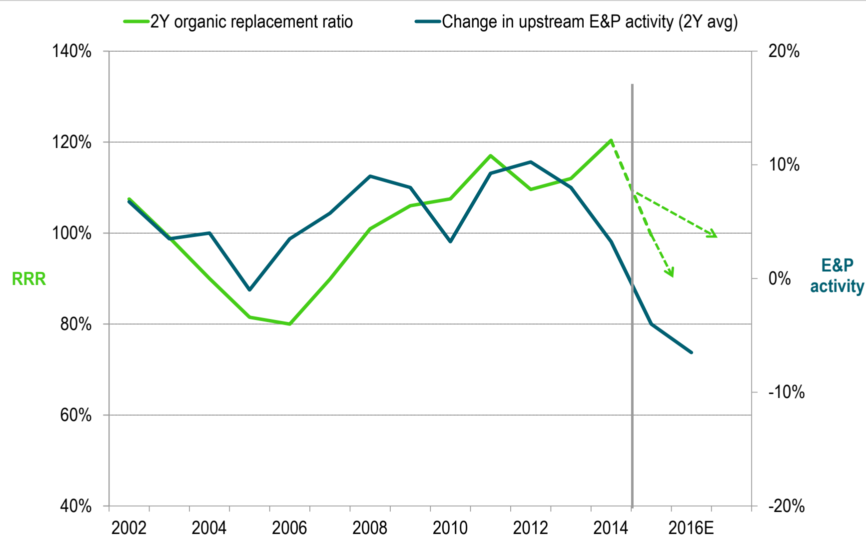
US Central GoM licensing rounds – blocks offered and bid ratio



Source: SEB

Furthermore, in our annual E&P Survey issued in August (*Pitch dark before any shimmer of light*), we sought to add colour to the correlation between upstream activity and reserve replacement as logically activity determines the amount of oil and gas found/sanctioned. By using nominal E&P upstream budgets adjusted for inflation/deflation through the IHS CERA indexes, and using this as a proxy for underlying change in activity, we found reasonable correlation between replacement ratios and changes in activity. Based on our expected drop of 25% to 2015 budgets, and average deflation of 10% according to IHS, this suggests that activity will fall 15% this year. This activity drop will be followed by further drop in 2016. This, in turn, will impact RRRs as less oil and gas is found and sanctioned, and therefore impact oil supply down the road.

Organic RRR and proxy upstream E&P activity*



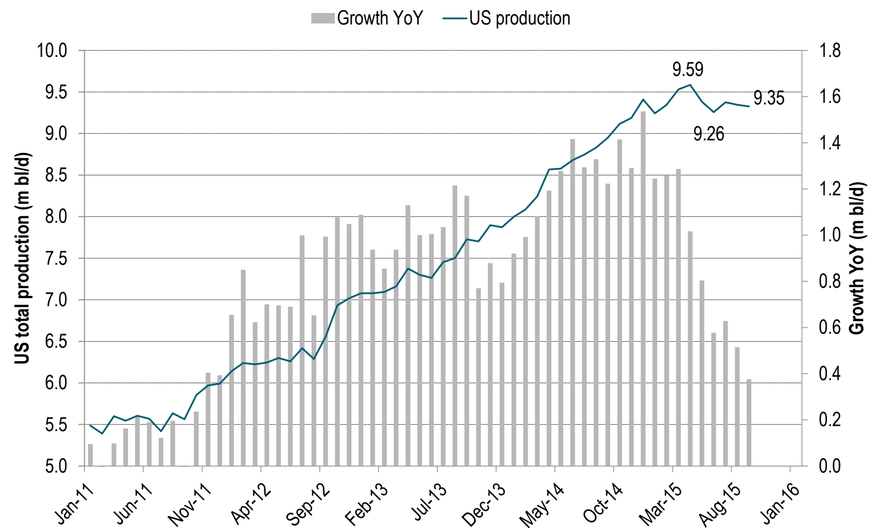
*Change in E&P activity defined as nominal budget changes less price inflation/deflation

Source: SEB, IHS

The source of US production growth

Despite a dramatic cut in activity with oil rig count down more than 60% over the last year and onshore capex down by more than 40% in 2015, production has proved to be resilient. YTD (Jan-Sep), the US crude production growth is 957,000bl/d with peak production in April of 9,585,000bl/d. However, production is clearly slowing and September (last actual data) production of 9,326,000bl/d puts the y-o-y growth at 376,000bl/d (while weekly figures indicate current growth at 160,000bl/d).

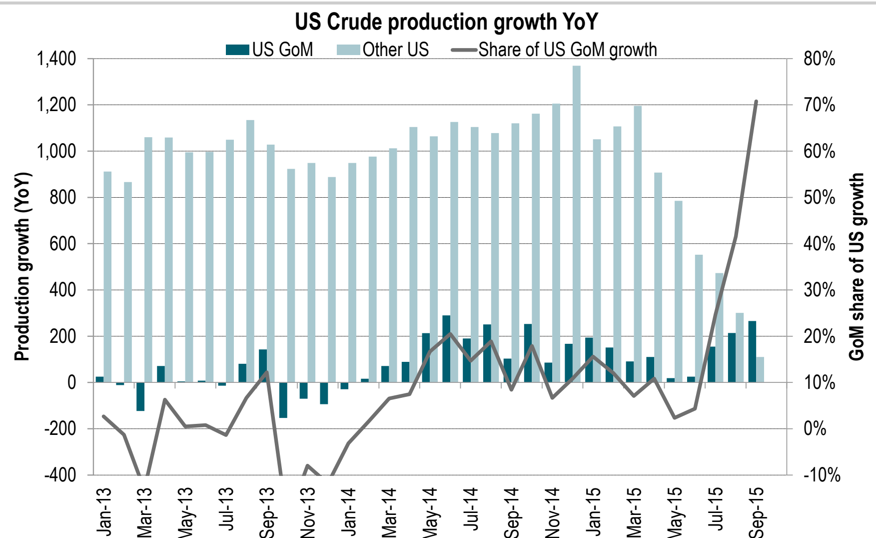
US crude production and growth (m bl/d)



Source: SEB, Bloomberg

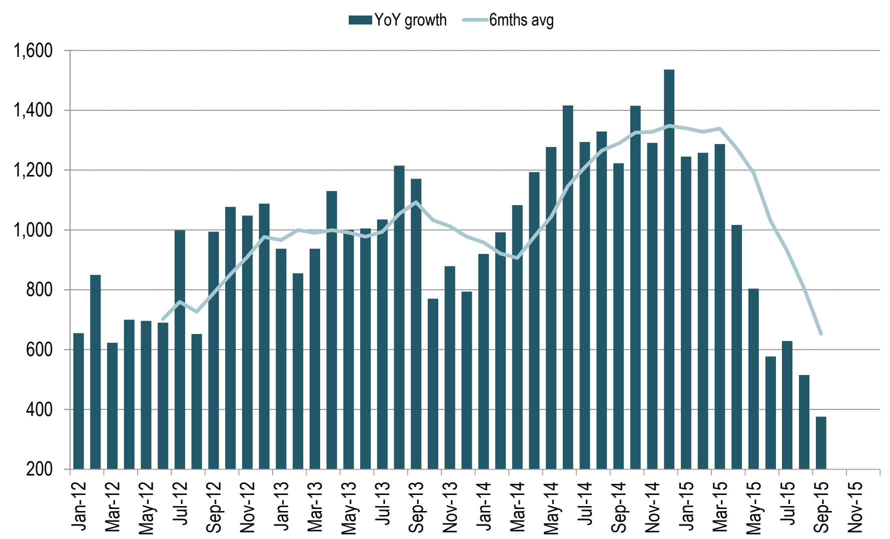
However, the growth in recent months has increasingly come from the US Gulf of Mexico. More than 70% of the September crude production growth of 376,000bl/d was sourced from growth in Gulf of Mexico production. “Other US” production growth in September slowed to 110,000bl/d.

The source of US production growth



Source: SEB, Bloomberg

Growth in US crude production (YoY, 1,000 bl/d)

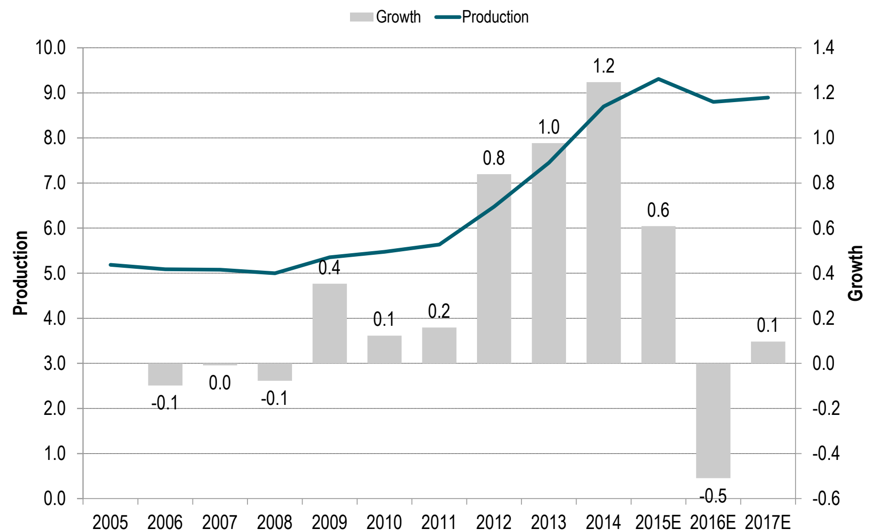


Source: SEB, Bloomberg

Our production estimates for the US are largely unchanged, but we have increased our US exit-rate (December) production forecast from 8.8m bl/d to 9-9.1m bl/d.

However, due to revisions of prior months' numbers for US production, our 2015 production estimate is unchanged at 9.3m bl/d – a growth of 0.6m b/d (down from 1.3m bl/d in 2014). For 2016, we expect US production of 8.8m bl/d, down 0.5m bl/d from 2015, and 8.9m bl/d in 2017, up 0.1m bl/d from 2016.

US crude production and growth estimates (m bl/d)



Source: SEB

Redeterminations – smaller cuts than expected

Many of the US onshore players have revolving credit facilities restricted to the borrowing base, which is reserve-based, meaning the value the banks place on the reserves (debt capacity is based on the discounted future cash flows of the contemplated assets).

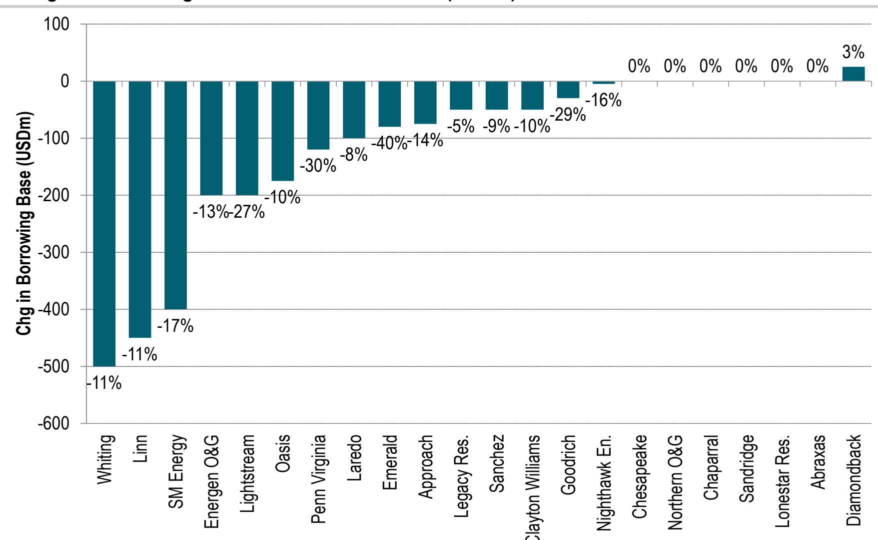
The borrowing base is subject to redeterminations by the banks (annual or semi-annual) and for the companies with semi-annual redeterminations the "autumn season" has recently ended.

Before the recent redetermination process, large cuts to borrowing bases were expected with some surveys forecasting a 39% cut to borrowing bases on average. Many of the redetermination processes have been completed and we have carried out a survey and tracked 22 US onshore companies with a total of USD 26.2bn in borrowing base ahead of the redetermination. In our survey, we find that borrowing bases were cut on average by 9%, much less than expected, but fairly large. The reasons for the smaller than expected cuts are:

- **Additional collateral:** Banks have taken a tighter grip by moving *unsecured* credit facilities to *secured* credit facilities (e.g. Chesapeake's USD 4bn facility that was kept intact, but moved to a secured credit facility).
- **Equity raises:** Some companies have recently raised equity (e.g. Diamondback Energy).
- **Stricter covenants:** Banks have imposed stricter covenants on some debt facilities.
- Additional **hedge** positions by the companies.
- **Banks** have been **supportive** to avoid a domino effect of liquidity shortfall.

Therefore, the redeterminations were maybe more gentle than expected and not a catalyst for steeper capex cuts or additional activity reductions.

Change in borrowing base in redeterminations* (USDm)



* list not exhaustive

Source: SEB, company filings

Change in borrowing base in redeterminations* (USDm)

Borrowing Base Company	Old (USDm)	New (USDm)	Change (USDm)	Change (%)
Whiting	4,500	4,000	-500	-11
Linn	4,050	3,600	-450	-11
Chesapeake	4,000	4,000	0	0
SM Energy	2,400	2,000	-400	-17
Oasis	1,700	1,525	-175	-10
Energen O&G	1,600	1,400	-200	-13
Laredo	1,250	1,150	-100	-8
Legacy Res.	950	900	-50	-5
Lightstream Resources	750	550	-200	-27
Diamondback	725	750	25	3
Northern O&G	550	550	0	0
Sanchez	550	500	-50	-9
Chaparral Energy	550	550	0	0
Approach	525	450	-75	-14
Sandridge	500	500	0	0
Clayton Williams	500	450	-50	-10
Penn Virginia	395	275	-120	-30
Emerald	200	120	-80	-40
Lonestar Res.	180	180	0	0
Abraxas	165	165	0	0
Goodrich	105	75	-30	-29
Nighthawk En.	32	27	-5	-16
Sum	**26,177**	**23,717**	**-2,460**	**-9**

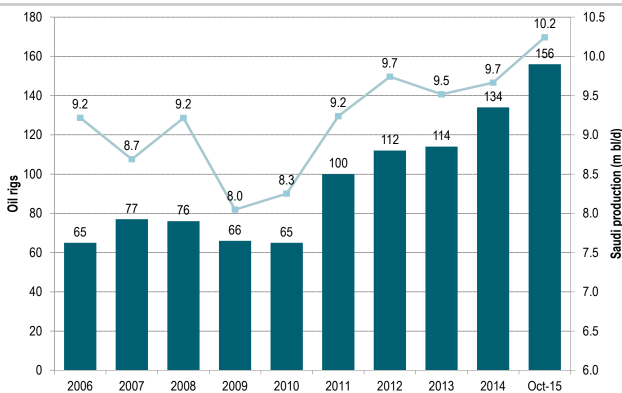
Source: SEB, company filings, * list not exhaustive

Opec – no cuts expected

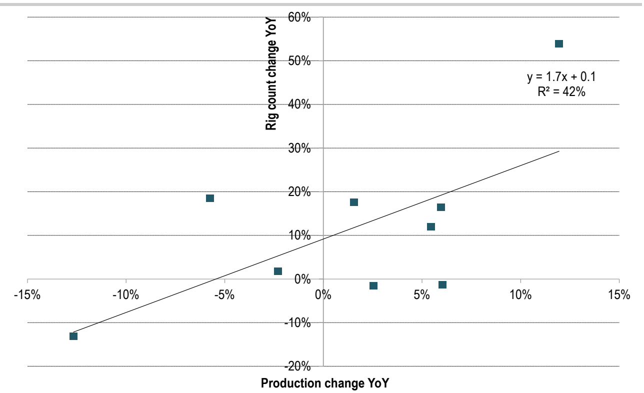
In dire need for income, most of Opec's members are presumably opting for higher export volumes in order to compensate for lost revenue due to the lower price, both in the short-term and further down the line. Overall, we expect Opec members to increase exports over the years to come to reflect a need for higher revenue and export volumes. Saudi Arabia's choice of volume over price is reasonable as it would need 10m bl/d in crude oil exports at USD 70/bl to be indifferent compared with 7m bl/d exports with a USD 100/bl oil price. Saudi Arabia's capital buffer is sufficient to hold it floating for the nearest years, but something needs to be done in order to maintain a future sustainable economic situation.

So far, the number of oil rigs in operation in Saudi Arabia has increased 16% y-o-y and 50% since 2011. In addition, we expect Iran to soon increase exports as sanctions are lifted in Q1 2016 and thereafter raise production and exports towards 2020. We believe Iraq is on an expanding path, rapidly increasing exports in 2015, but more slowly in 2016. We believe Libya will eventually move back to operation with more than 1m bl/d offline due to a civil war which is disrupting oil supply.

Saudi Arabia oil rig count (LHS) and production (m bl/d, RHS)



Change in Saudi Arabia oil rig count and production

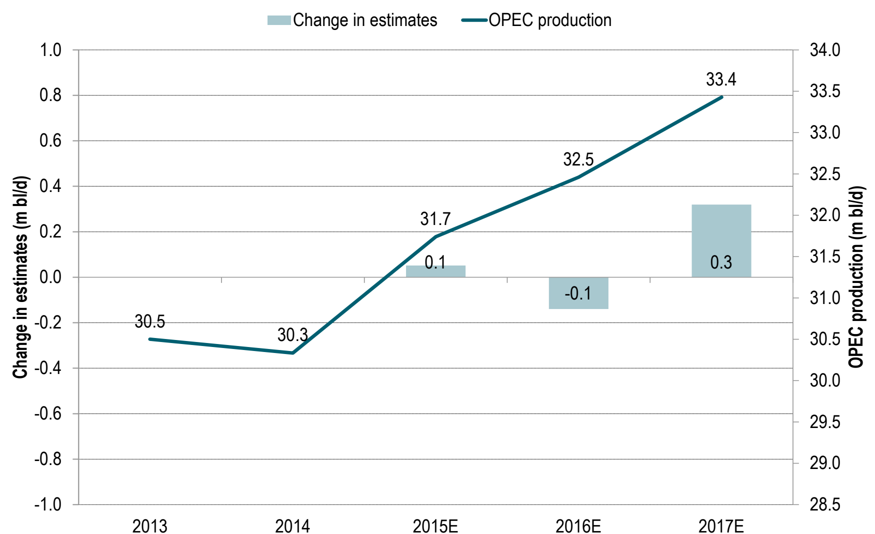


Source: SEB, OPEC, Bloomberg

We have made minor changes to our Opec supply estimates and mainly shuffled some smaller volumes from 2016 to 2017 and increased our 2017 estimate somewhat. Our forecast 2017 Opec production is revised up by 0.3m bl/d by assuming further ramp-up in Iran together with a continued increase in Saudi Arabian production.

Overall, we expect Opec volumes up 1.4m bl/d in 2015, 0.7m bl/d in 2016 and 1.0m bl/d in 2017.

OPEC production and changes to estimates (m bl/d)



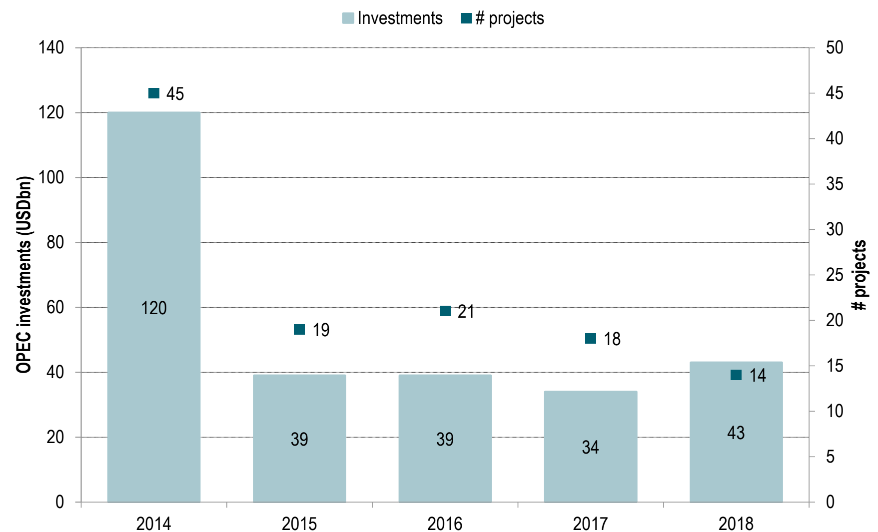
Source: SEB

Estimated Opec production (m bl/d)

	2015E	2016E	2017E
Algeria	1.1	1.1	1.2
Angola	1.8	1.9	1.9
Ecuador	0.5	0.6	0.6
Iran	2.8	3.2	3.6
Iraq	4.0	4.0	4.2
Kuwait	2.8	2.8	2.8
Libya	0.4	0.4	0.5
Nigeria	2.0	2.0	2.0
Qatar	0.7	0.7	0.6
Saudi Arabia	10.3	10.5	10.7
UAE	2.9	3.0	3.1
Venezuela	2.5	2.3	2.3
Total	**31.7**	**32.5**	**33.4**
Growth	*1.4*	*0.7*	*1.0*
NGL	6.6	6.9	7.1

Source: SEB

OPEC upstream investment plans (USDbn)*



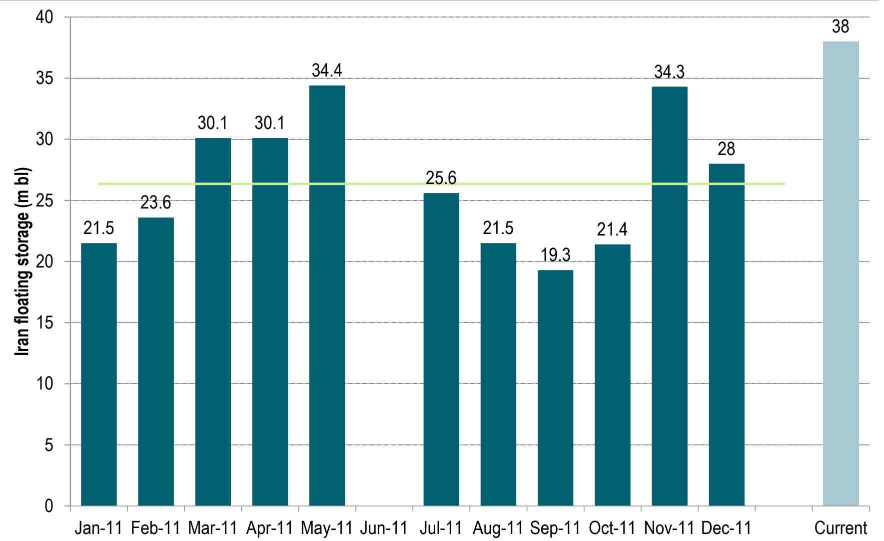
* approximated from chart

Source: OPEC, SEB

Iranian floating storage – less worries

Iran and the P5+1 signed the Joint Comprehensive Plan of Action (JCPOA) in July and a roadmap for lifting sanctions against Iran was then in sight. Since then, the size and the potential release of barrels held in floating storage have been a disturbing element in the oil market. However, we believe that there are limited reasons to be concerned about Iran's floating storage. By looking at the amount of oil held in floating storage in 2011, ahead of the sanctions implemented in January 2012, we see that the current level of 38m bl is not alarming compared with the 2011 period (average of 26.3m bl). As a result, in our estimates we have assumed a gradual decrease of Iranian floating storage, but not a total withdrawal to zero as there is always some oil in floating storage.

Iranian floating storage 2011 and current (m bl)



Source: SEB, IEA

Demand

We have made minor changes to our oil demand outlook (2016 demand cut by 0.1m bl/d). Our global GDP growth outlook for 2015 and 2016 was revised marginally lower in our Nordic Outlook in November while it was revised slightly higher for 2017.

Changes to global GDP growth estimates in our Nordic Outlook (%)

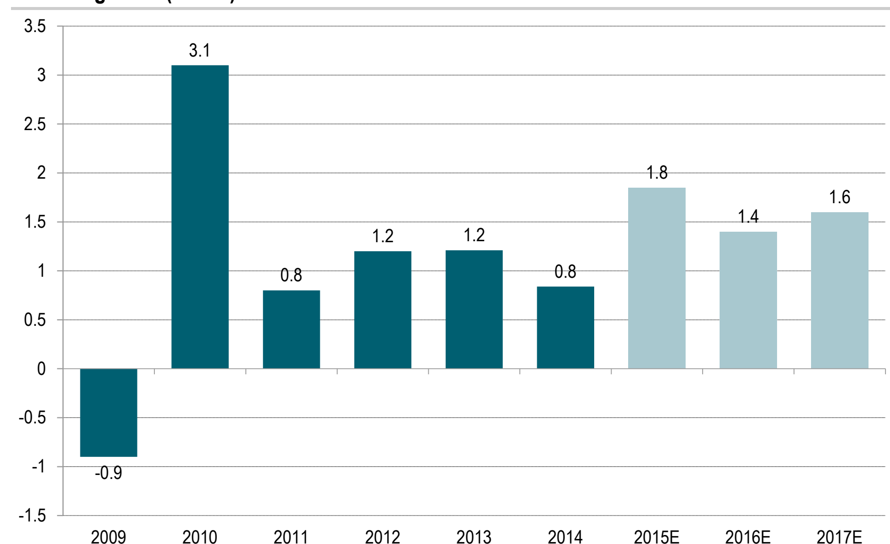
Global GDP Growth	2015E	2016E	2017E
August 2015			
OECD	2.2	2.6	2.4
Non-OECD	4	4.8	5.1
World	**3.2**	**3.8**	**3.9**
November 2015			
OECD	2.1	2.4	2.4
Non-OECD	3.9	4.6	5.3
World	**3.1**	**3.6**	**4**
Change			
OECD	-0.1	-0.2	0
Non-OECD	-0.1	-0.2	0.2
World	**-0.1**	**-0.2**	**0.1**

Source: SEB

While this has a marginal bearish impact on demand along the 2015, 2016 and 2017 time-line, it has been countered by a revision of 2014 with a higher oil demand base line. Here we use IEA's oil demand estimate for 2014 as our base-line and IEA has revised this up by 120,000bl/d since August.

Oil demand growth received a significant boost this year due to a steep fall in the oil price, pent-up demand after several years of depressed OECD demand in the wake of the global financial crisis, as well as a colder than normal northern hemisphere winter. Demand in 2016 is unlikely to receive the same magnitude of support and we estimate 1.5% growth in demand next year. However, for 2017 we expect the demand growth to pick up to 1.7% along with stronger global growth. Current contracting demand in Russia and Brazil is likely to turn sideways to higher respectively in 2017.

Demand growth (m bl/d)



Source: SEB, IEA

Mild weather could pose a risk to 2016 demand

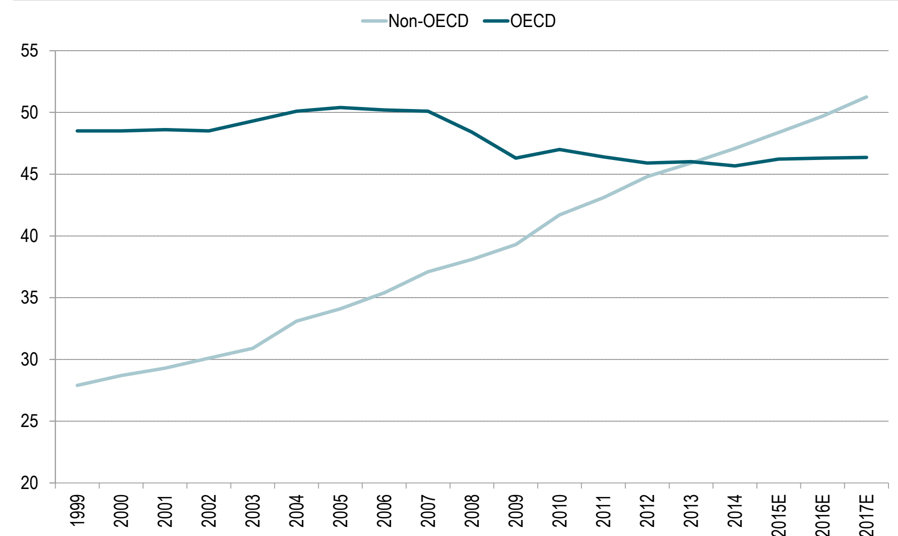
We believe there some downside risk to oil demand in 2016. Winter temperatures for the Northern Hemisphere are forecasted to be warmer than normal. While this is highly uncertain, it is worth noting that there is likely to be the second strongest El-Nino on record during the coming six months, with a potentially strong impact on normal weather patterns. For 2015, there has been an unusual 1.2% expansion in OECD oil demand. We have some concerns that OECD demand could revert to its pattern of declining demand, which has been in place since 2005 as the drive for energy efficiency has been a stronger factor than economic growth. However, this pattern has been highly impacted by the global financial crisis and therefore difficult to quantify.

Demand growth to range between 1% and 2%

In total, we expect global oil demand next year to increase by 1.4 mbpd on average, which is equal to 1.5%. We assume that the fair uncertainty range for demand next year is between 1% and 2%, barring some kind of hard landing in China, which would bring it lower. Therefore, we estimate oil demand growth of 1.4 mbpd +/- 0.5 mbpd. An interesting perspective here is that +/-50 US shale oil rigs will approximately increase or decrease US crude oil production by 0.4 mbpd after 12 months in operation. So far this year, 50 shale oil rigs can move in and out of activity within a month following changes in prices and circumstances. Therefore, US shale oil flexibility and responsiveness is highly capable to respond to changes in demand.

Non-OECD oil demand and the GDP growth outlook for this group of countries are becoming increasingly important due to the fact that its oil demand has been higher than the OECD countries since 2013. We estimate non-OECD GDP growth to accelerate to 5.3% in 2017 with oil demand growth of 3% pa that year.

Non-OECD and OECD demand (m bl/d)



Source: SEB, IEA

Risks

There are risk factors to our base case and we have identified some of the downside and upside risks.

Downside risks
Although we expect the Brent crude oil price to average USD 50/bl in 2016 and USD 60/bl in 2017, there are downside risks to this assumption.

- **Storage capacity:** Our projection of USD 50/bl for 2016 is based on the assumption that there is sufficient storage capacity available to store the running surplus in the oil market. However, if this is not the case, a steeper contango could be needed (to enable e.g. floating storage) and an even more depressed spot oil price.
- **Iran comeback:** Iranian officials have commented that Iran could return to almost pre-sanction level production some three to six months after sanctions are lifted. Although far from our base case, if this is the case it would depress an already oversupplied market.
- **US dollar:** As the Fed is likely to increase interest rates soon (Fed meeting 16 December), it could lead to further strengthening of the dollar with potentially negative effects on the oil price.

Upside risks
Some of the upside risks we identify are:

- **Impact from capex cuts:** Several oil projects have been postponed and our E&P Spending survey shows that capex is cut by 25% in 2015 and further by 15% in 2016. As a result, this has the potential to have a greater effect on the depletion rate in conventional oil from 2017/18 and onwards than we have estimated. This is the classic recipe for a bust and boom cycle, which has been witnessed many times before in commodities in general and oil specifically.
- **OPEC capability and willingness:** While US shale oil has and will become increasingly competitive and cost efficient over the coming years, it is unlikely that it will be able to ramp up to fill a potential gap of 2.5-3.5 mbl/d/year alone. For this it will need increasing supply from Opec in order to balance the market. As the MENA region is far from stable and supply from Opec cannot be taken for granted, this represents a clear risk. As we have seen over the last few years, declining production from Opec may just as easily be on the agenda as increasing production. In addition, it is far from certain that Opec wants to plug the deficit widening in 2018 and may instead choose to ride out the potential boom in oil prices.
- **US production:** Although US production has proved resilient so far, the low prices in the market have made major inroads on the activity. Given the nature of US production, the activity halt could have an even greater impact on US production than estimated.

Target prices and risks

Target price definition and associated risks
Our target price is the analyst's assessment of what total return an investor should expect over the coming six to 12 months. The target is based on fundamental equity research and other factors at the analyst's discretion. Please refer to published reports on the individual companies for a detailed description of the target price methodology.

Risk levels
The risk level is the analyst's view of the uncertainty in the earnings forecasts based on an assessment of the company's business model, operating risk as well as financial risk. We use two risk levels with the following explanations:

- **Normal risk:** All forecasts involve uncertainty and we view companies in this risk level to have normal forecast risks
- **High risk:** The earnings forecasts are more uncertain than for an average listed company due to business model, operating risk, financial risk or any other reason at the analyst's discretion. All companies with shorter track record than 12 months as a listed company are by definition classified as high risk according to SEB.

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Unrated	Company not covered, or we are not allowed to have a recommendation for compliance reasons		

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