OPEC Meeting Preview

Welcome to the new oil world

- *”Say goodbye to OPEC. Internal differences are killing OPEC and its ability to influence the markets has all but evaporated. OPEC has practically stopped existing as a united organization”.* Igor Sechin, chairman of Rosneft and close ally to Putin

- *“OPEC is unlikely to take any decisions on coordinated action regarding the oil market. We see quite big disagreements inside OPEC.”* Alexander Novak, Russian Energy Minister

- *“Saudi Arabia killed OPEC and buried it.”* Senior OPEC official

Torbjørn Kjus – June 1 - 2016


Guys, we've decided it's best for all of us to stay right where we are for an indefinite period, so just hold your position, OK?
Russia
Saudi Arabia
OIL OUTPUT PEAK
OPEC MOUNTAIN
Iraq
Iran


SHOWDOWN
Saudi vs Iran
My goodness! Opec and the oil price are down for the count!
OPEC
King Salman
Ali Khamenei

Content

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No Change In OPEC Production Policy Expected Tomorrow

- All statements suggest no change in production policy – First OPEC meeting of Saudis new Energy Minister Al-Falih

- In our August report from 2013 we argued that this time it may be a better strategy for Saudi to not cut production to protect the oil price since we expected the first supply driven downturn since the 1980's. And as we know, the strategy to cut output to protect the price in the 1980's has always been seen as a failed strategy. We repeated these arguments in our October report from 2014 and listed 7 arguments for why we thought Saudi would not cut production to protect the price this time. This was also the key reason why we then had the lowest price forecast for 2015 of all the analysts in Reuters' survey for 2015 oil prices. We then forecasted an average price of 80 $/b for 2015. This was then the lowest forecast but still proved way to high in retrospect.

- We now believe it is even more relevant to believe that Saudi Arabia will not target any particular price but let the market continue to do the job of rebalancing supply and demand. The new Deputy Crown Prince bin-Salman has now for a little more than a year held the top economic position in Saudi Arabia as the Head of The Economic Council. He is a firm believer in reform and wants to make Saudi Arabia independent of oil prices as quickly as possible. That is the backdrop for his 2030 vision which was recently launched. He also replaced the long serving oil minister (21 years) Ali Al-Naimi on May 7 with the chairman of Saudi Aramco, Khalid Al-Falih.

- The new oil minister served as health minister (and also as chair of Saudi Aramco) before his new appointment. In fact it is not correct that Al-Falih is the new oil minister. His job is broadened to Energy Minister, so he has more responsibilities than Al-Naimi. Al-Falih is 56 years old and joined Aramco in 1979 after having studied engineering in Texas. He did in fact start to be more vocal about the oil market even before he was appointed Energy minister in May. It was hence very much in the cards that he would take over from Al-Naimi. All his statements so far have suggested that he is very much in favor of letting the market do the job of rebalancing supply and demand in the oil market instead of managing the price by being a swing producer. In fact he held a speech in the World Economic Forum in Davos in January where he said that Saudi Arabia might benefit from oil prices below 30 $/b because it would speed up the economic reforms to restructure the economy and hence help the country to quicker loose its addiction to oil.

- Based on the above we believe the oil world has now changed (at least as long as bin-Salman is the head of all economic policy in Saudi Arabia). Saudi Arabia will not be a swing producer any more. That role will be left for US shale producers. US shale producers are however not able to swing production up and down as quickly as Saudi Arabia. It should take 9-12 months for a meaningful ramp up in production from US shale producers which is 3-4 times slower than a possible ramp up from Saudi Arabia. We hence may be in for an oil market with larger volatility going forward.

- When it comes to the meeting tomorrow, 26 out of 27 analysts surveyed by Bloomberg do not expect any kind of production target to be agreed upon. We are among the 26. It would be a huge surprise to the market if any production limiting efforts were agreed by the cartel. No statements so far suggest that we should expect any such deal. Sources have said no production freeze proposal has been forwarded and Iran has reiterated the country's ambitions to continue to ramp up production. The key focus of the meeting is set to be the election of a new General Secretary where Nigeria, Indonesia and Venezuela have launched candidates. There is also a possibility that the cartel may allow two new members. Sudan applied for membership in October last year and also Gabon is said to be considered as rejoining OPEC. Gabon was an OPEC member from 1975-1994. A senior OPEC official from a non-gulf producer stated that Saudi Arabia has killed OPEC and buried it. He also stated that they are turning OPEC into a forum instead of an important decision making arena by promoting the inclusion of Sudan and Gabon.

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Fundamentals Improving Anyway So No Need For Freeze

- The Brent price has increased more than 80% since January and this also reduces the chance for production limiting actions

- The Oil Minister of UAE told journalists yesterday that he is happy with the oil market and that the market is about to fix itself to prices that are fair for both consumers and producers. This statement also suggest that OPEC should continue to let the market decide the oil price and that the price is about to do its job of balancing the market. The last time OPEC decided to change production to manage prices was during the financial crisis in 2008-09. There has been no policy production changes during the past 7-8 years. This stands in contrast to the period 1998-2008 when the cartel made 27 policy changes to output.

- We agree that the market is fixing itself. The headline on our presentation that we bring to customer meetings has since the start of this year been *"Non-OPEC to painfully balance the market by moving from record growth in 2014 to production declines in 2016."* We still believe this is the correct way of looking at this market and we never factored in any production limiting help from OPEC in our supply-demand balance despite being bullish to oil prices since January. In our report from January 13 we forecasted Brent prices of 50 $/b for Q2 this year. This was then way above consensus as Brent then traded at 30 $/b. We argued that one can be bullish to oil prices without production limiting policies from OPEC. We are now seeing the sings that the Saudi strategy is working and it has mainly to do with swings on the supply side rather than changes to demand. We can mention that the growth in global oil supply was 2.3 million b/d in 2014 and 2.7 million b/d in 2015, but moving into Q2-2016 the growth in global oil supply (also including OPEC of course) is gone and will probably turn net negative for the rest of the year. Our own global supply-demand balance is suggesting that global oil supply will not grow in 2016, despite OPEC supply growing 0.7 million b/d. This is the key to the rebalancing.

- May 2016 is the first month since December 2013 that our global supply-demand balance is in a deficit. The market has been helped to reach this deficit quicker than what we though at the beginning of this year particularly due to large unplanned outages in Nigeria and Canada. Canada has during May lost about 0.9 million b/d in production due to the wild fires while Nigeria has lost about 0.5 million b/d due to force majure on Forcados, Escravos, Bonny Light and Qua Iboe. All but Qua Iboe has been caused by sabotage against oil facilities executed by militant groups where The Niger Delta Avengers is the most famous. Canadian production will likely be back to prior levels by July after ramp up through June, but Nigerian output will be slow to return as militants are set to continue to attack facilities through the rest of this year.

- During the weekend Nigerian government troops attacked and killed several militants in the Niger Delta Avengers near an ENI oil pipeline. Yesterday the militants threatened more attacks on oil infrastructure as well as oil workers as revenge on these attacks. They posted the following message on their twitter account: *"To international oil companies and indigenous oil companies, it's going to be bloody this time around. Your facilities and personnel will bear the brunt of our fury."* The new Nigerian president has wowed to clamp down on the militants. This stands in contrast to bribing them to guard the oil facilities which used to be the situation with the old president. This suggest that we should not expect any end to force majure from Nigeria in the coming months.

- Yesterday Reuters published a survey on what OPEC production was in May and the survey suggested that total OPEC production fell 120 kbd to 32,52 million b/d from April. This was mainly due to the above mentioned trouble in Nigeria but also lower production in Angola, Iraq and Venezuela. Offsetting parts of this was higher production in Saudi, Kuwait and Iran. Bottom line: Do not expect any production limiting action from OPEC going forward. Non-OPEC will have to do the job, and this will happen through 2016 and 2017 through painful reductions in CAPEX and hence oil jobs.

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Tentative Program For Tomorrow's OPEC Meeting In Vienna

10.00 hrs.	**Opening Session** of the 169th Meeting of the Conference
	Attendance: All OPEC Heads of Delegation and Delegates Venue: OPEC Secretariat
12.00 hrs.	**Closed Session** of the 169th Meeting of the Conference
	Attendance: OPEC Heads of Delegation and the Acting Secretary General Venue: OPEC Secretariat
16.00 hrs.	**Press Conference** by the President of the OPEC Conference and the OPEC Acting Secretary General
	Venue: OPEC Secretariat

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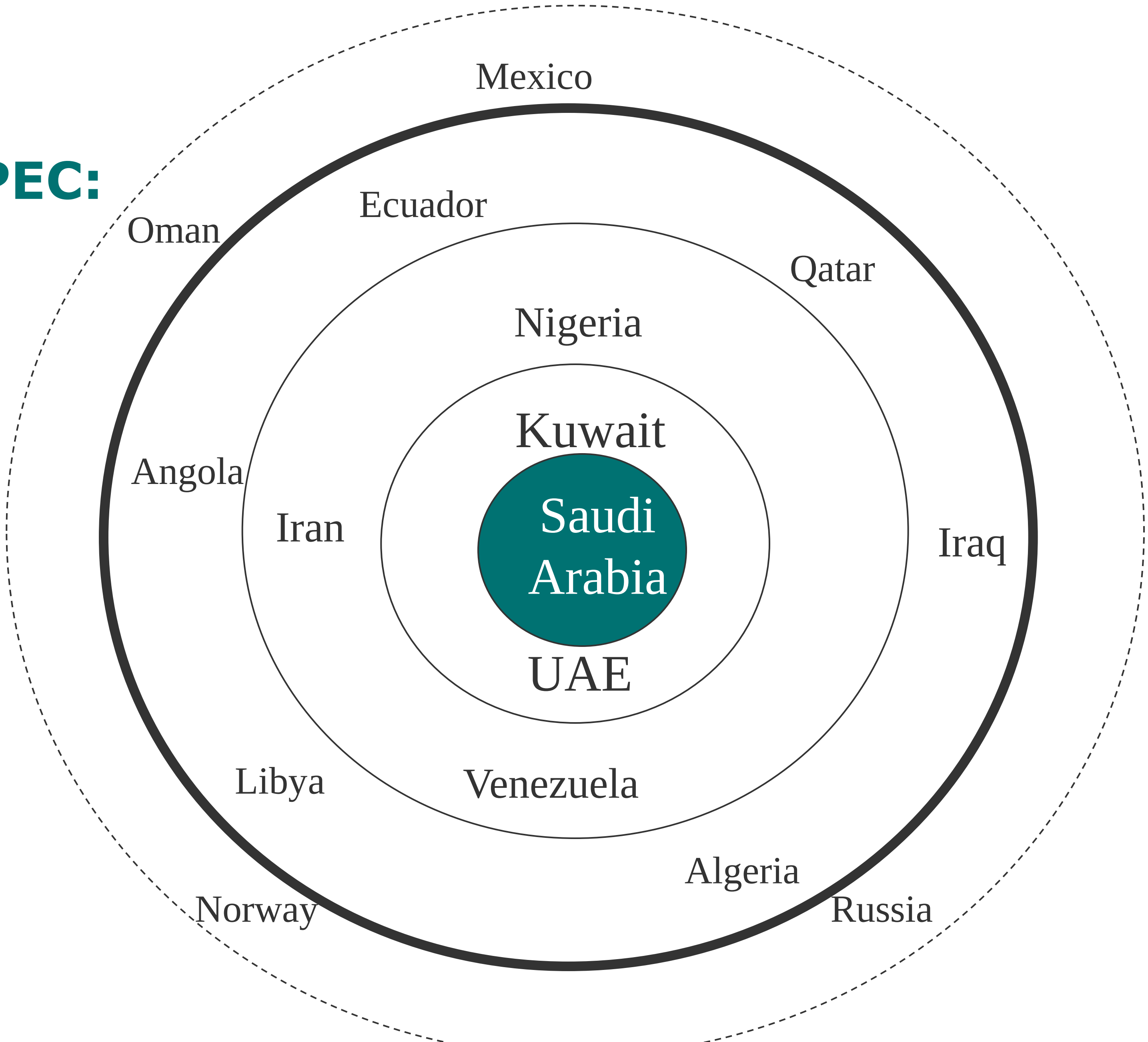
OPEC:



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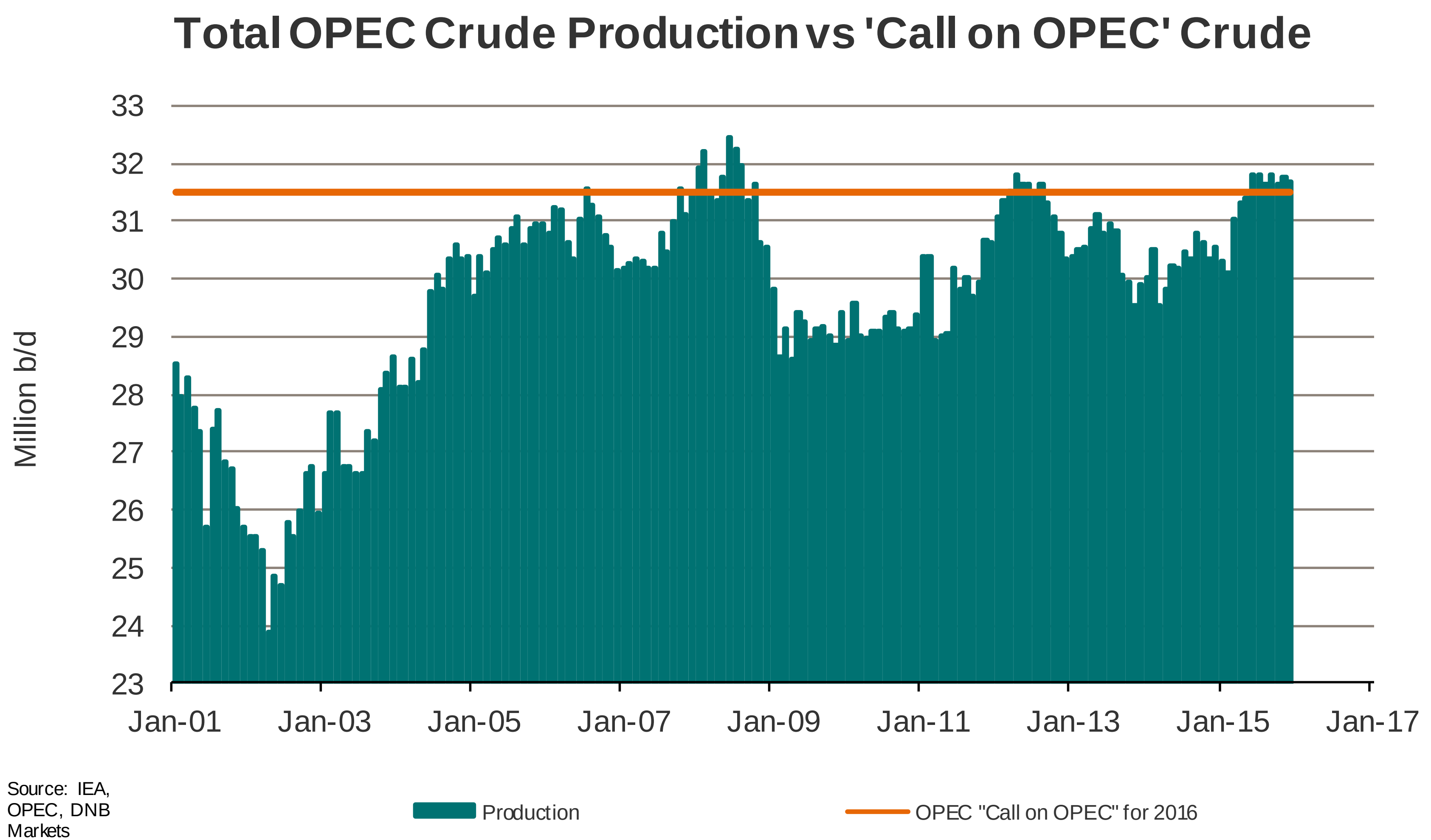
OPEC's Own Assessment Of "The Market's Call For It's Crude Oil"



Source: IEA, OPEC, DNB Markets

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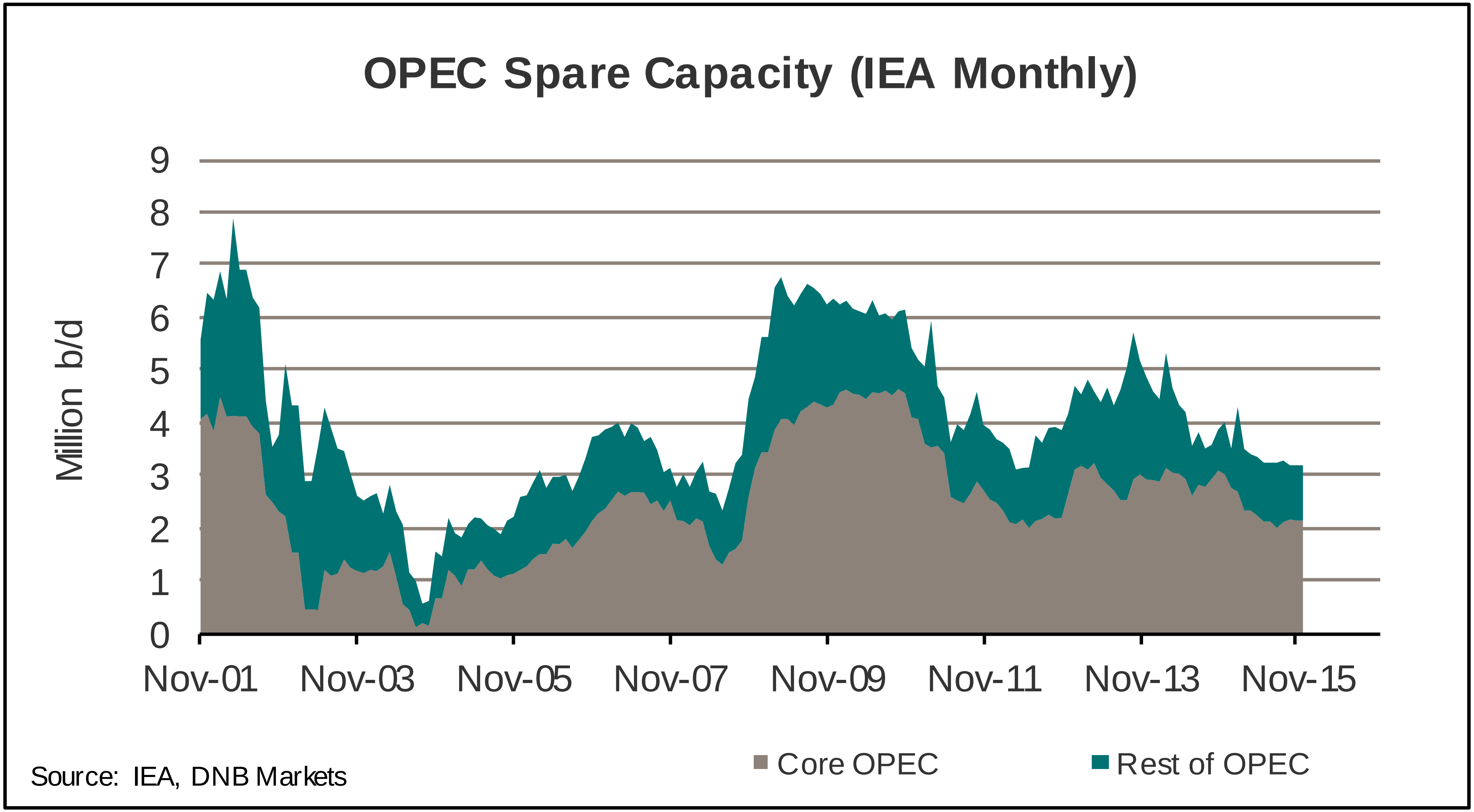
OPEC Spare Capacity



Source: IEA Monthly Oil Market Reports

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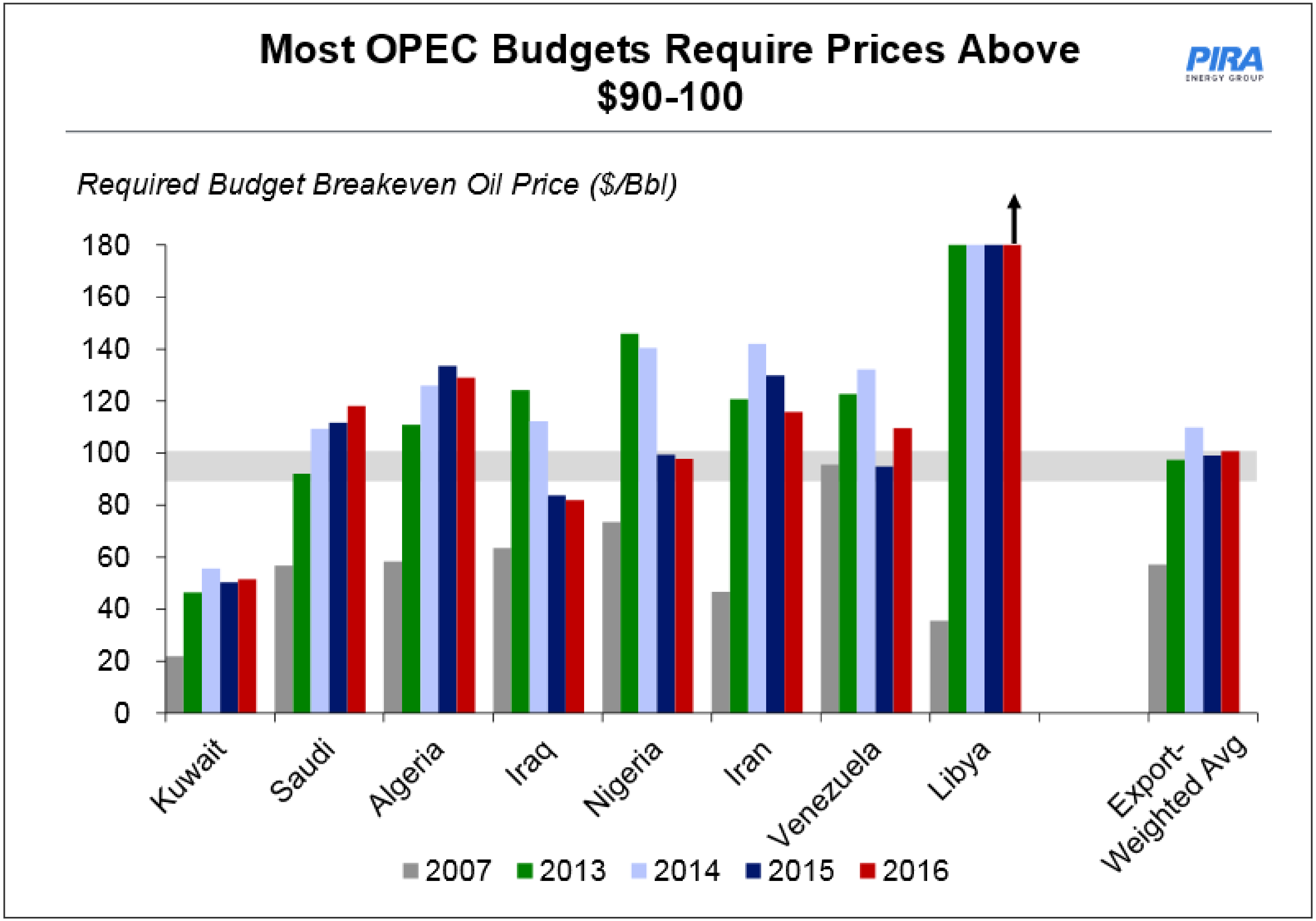
Most OPEC Countries Struggle With The Current Oil Price

- On average a 90-100 $/b oil price is required to balance the budgets



Source: PIRA

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The Saudi Royal Family (Source Wikipedia)

Abdul Aziz (Ibn Saud)
- King: 1902-1953
- Founded Saudi Arabia in 1932
- 22 wives (4 at a time)
- 45 sons of which 6 have been kings

King Saud
- King: 1953-1964
- Forced out

King Faisal
- King: 1964-1975
- Killed

King Khalid
- King: 1975-1982
- Heart Attack

King Fahad
- King: 1982-2005
- Stroke

King Abdullah
- King: 2005-2015
- Regent since 1995
- Unifying and popular
- 6 sons

King Salman
- 80 years old
- Full brother of King Fahad
- 25th son of Ibn Saud
- Well regarded
- Trusted mediator
- Had a stroke in 2010
- Pro economic reforms
- , but slow for social reasons
- Has 11 sons

Crown Prince Sultan
- Died 23.10.2011

Crown Prince Nayef
- Ultra conservative
- 23rd son of Ibn Saud
- Full brother of King Fahad
- Died 16.06.2012

Former Crown Prince Muqrin
- Relieved from his position April 2015

New Crown Prince bin Nayef
- 55 years old, son of late Crown Prince Nayef
- Educated in the US - Political Science
- The most pro-American Saudi minister
- First successor from the third generation

New Deputy Crown Prince Mohammad bin Salman
- 30 years old
- Son of King Salman
- Defence minister from January 2015
- Head of Economic council - January 2015

The Saudi Price Target

- Both upwards and downwards pressure

- •Internal domestic budget
- •Fighting taxation in consumer countries
- •Political pressure from other OPEC countries
- •Weak US dollar

100 $/b Brent?
80 $/b Brent?
60 $/b Brent?
No target?

- •Long term sustainability
  - •Demand
  - •Non-OPEC supply (US shale, global offshore, oil sand)
  - •Slower transition to another world energy mix
- •Political pressure from big consumer countries
- •Hurting Iran's economy

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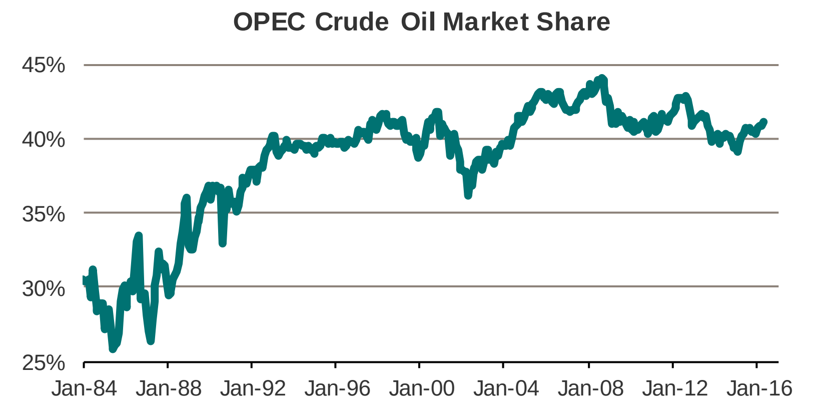
Historical Market Share – OPEC & Saudi Arabia

- Current OPEC market crude oil share is 41.1% - Current Saudi Arabia market share is 12.8%
- Lowest Saudi market share last 25 years has been 10.2% - Would equal 8.2 million b/d now
- Saudi Arabia average crude oil market share since 1994 is 11.9% - Would equal 9.5 million b/d now



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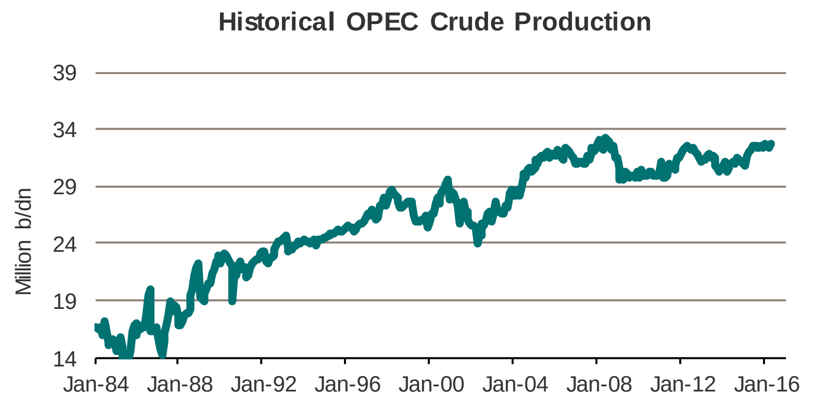

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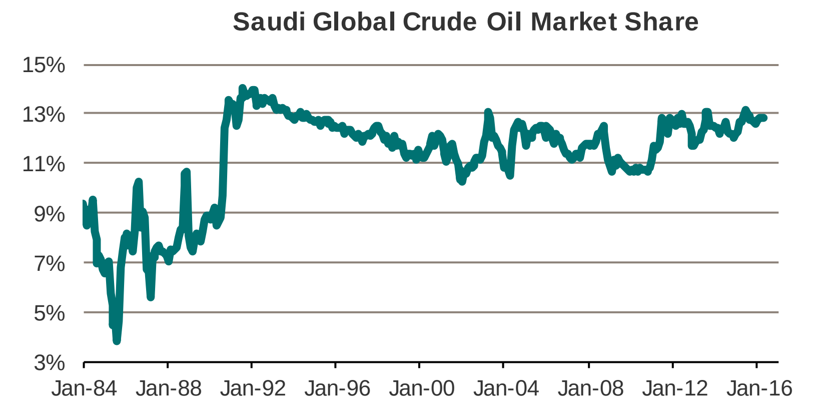

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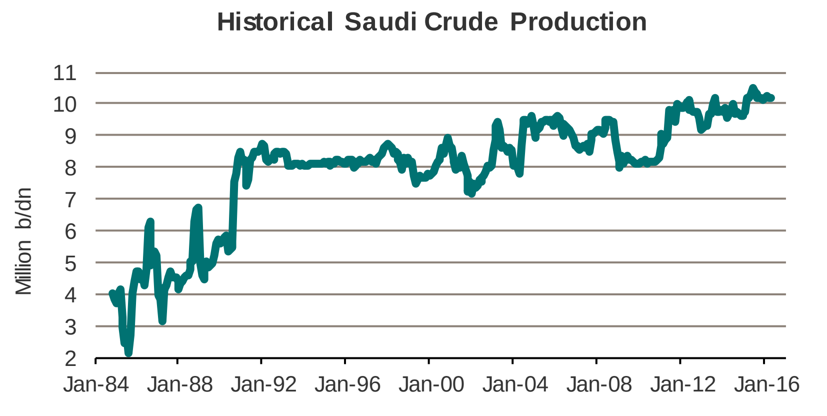

Source: IEA

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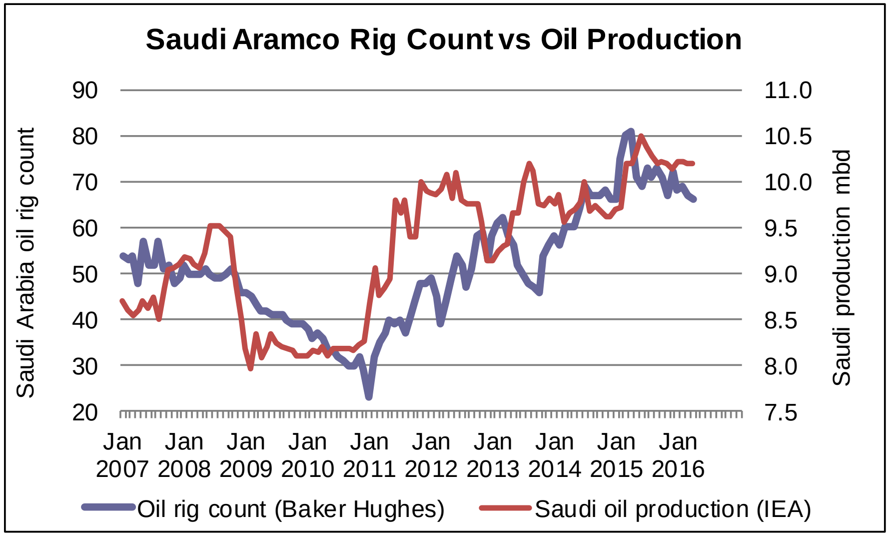
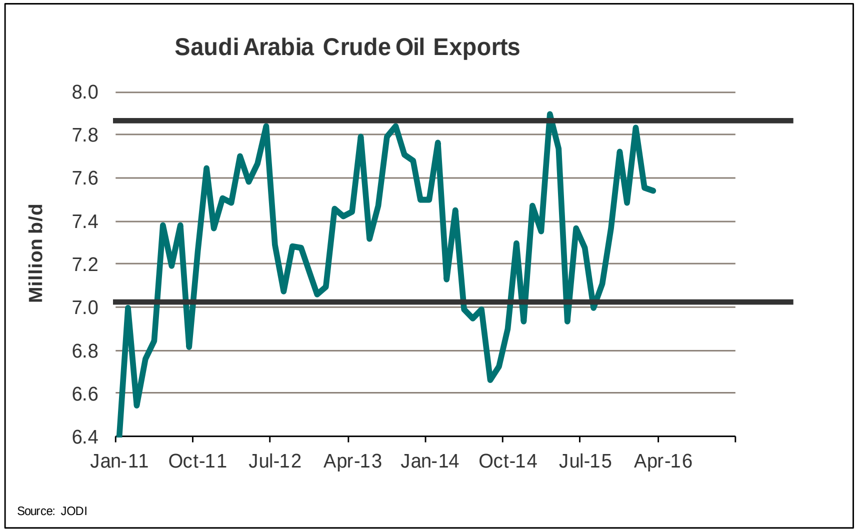
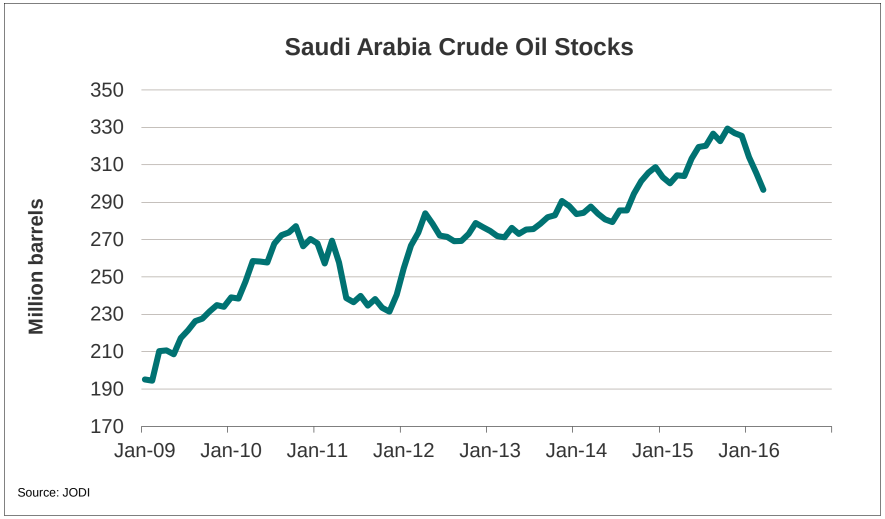
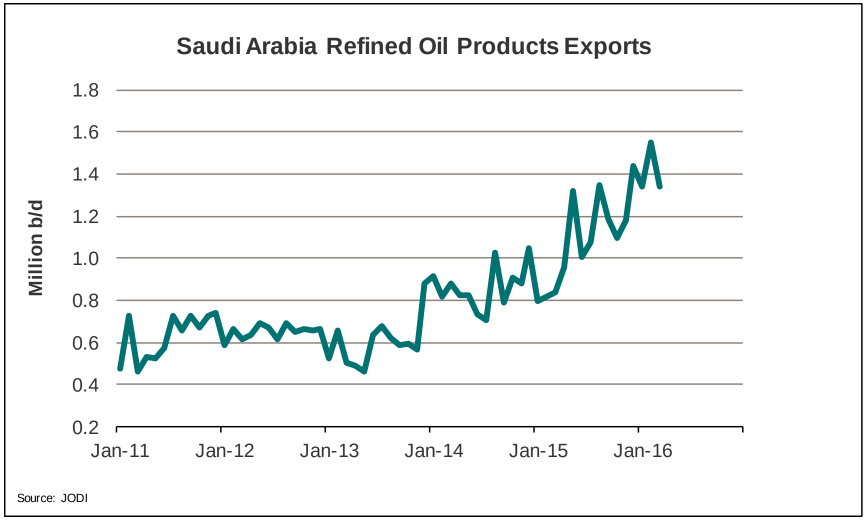
Saudi Rig Count Peaking – No Growth In Crude Exports

- Saudi rig count peaking – Saudi had to increase its crude production to feed the new large refineries









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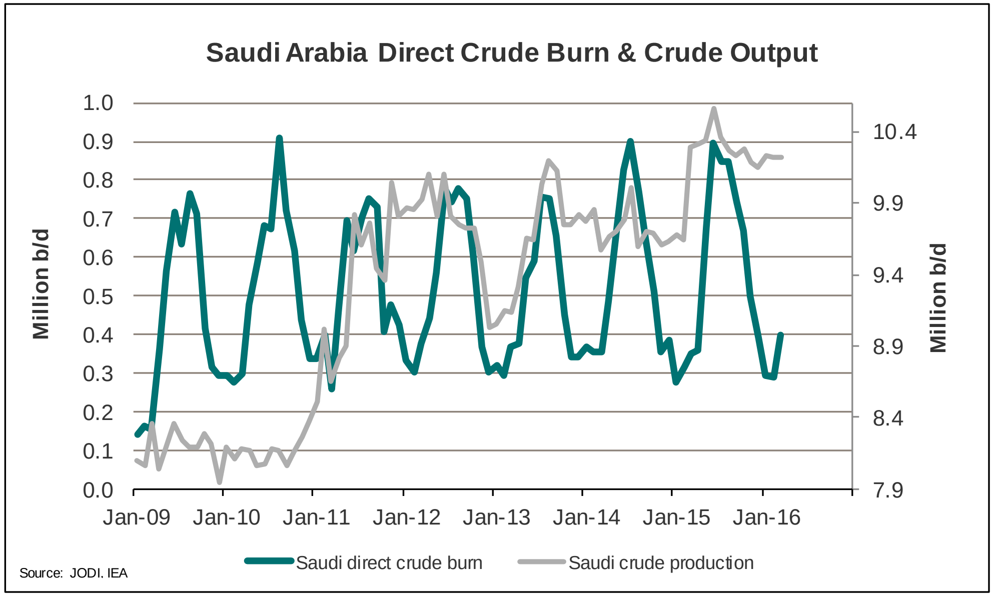
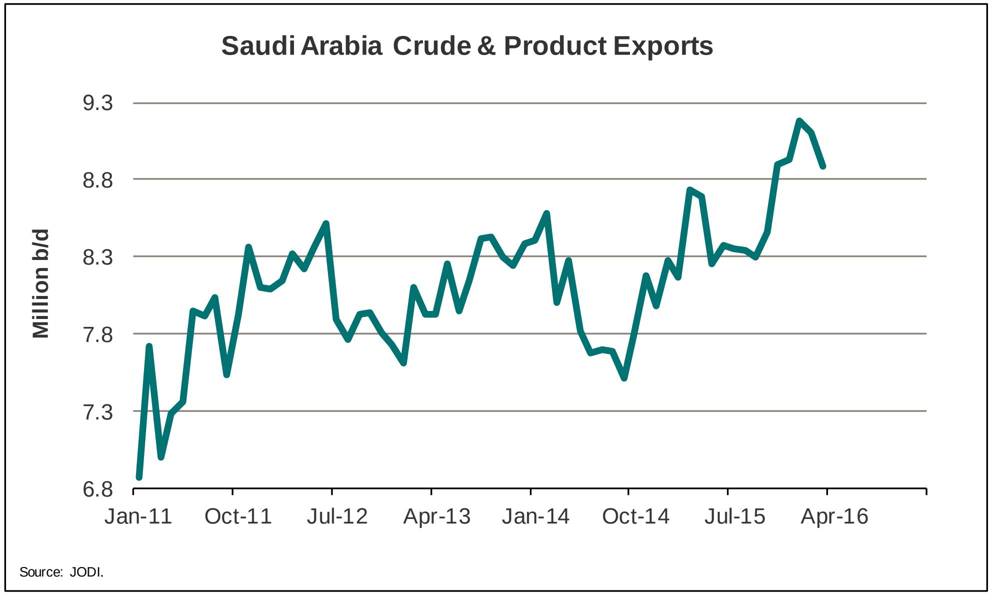
Expect No Change In Saudi Output Policy

- Production set to rise towards the summer, but will again fall back in the autumn





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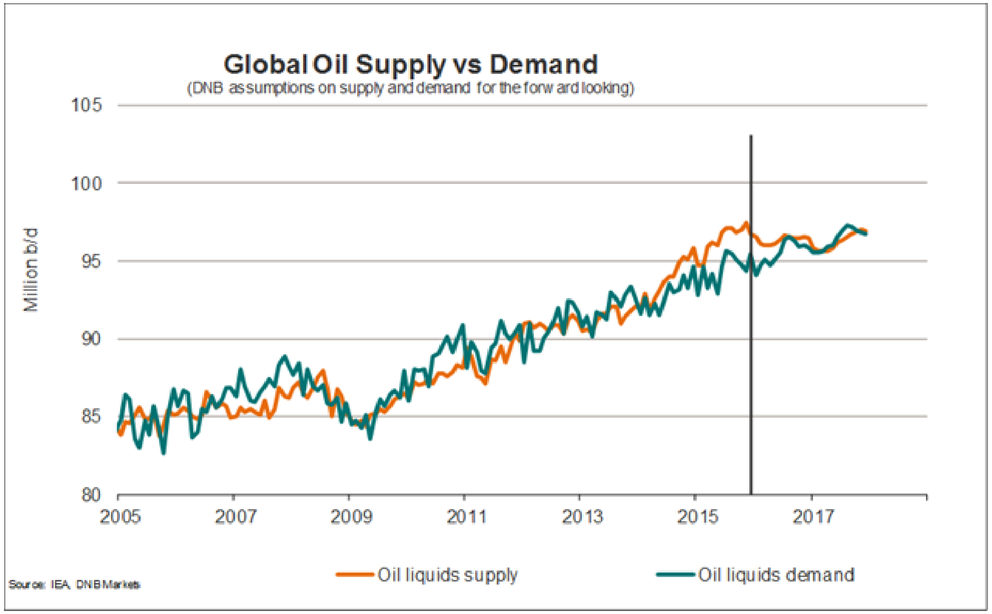
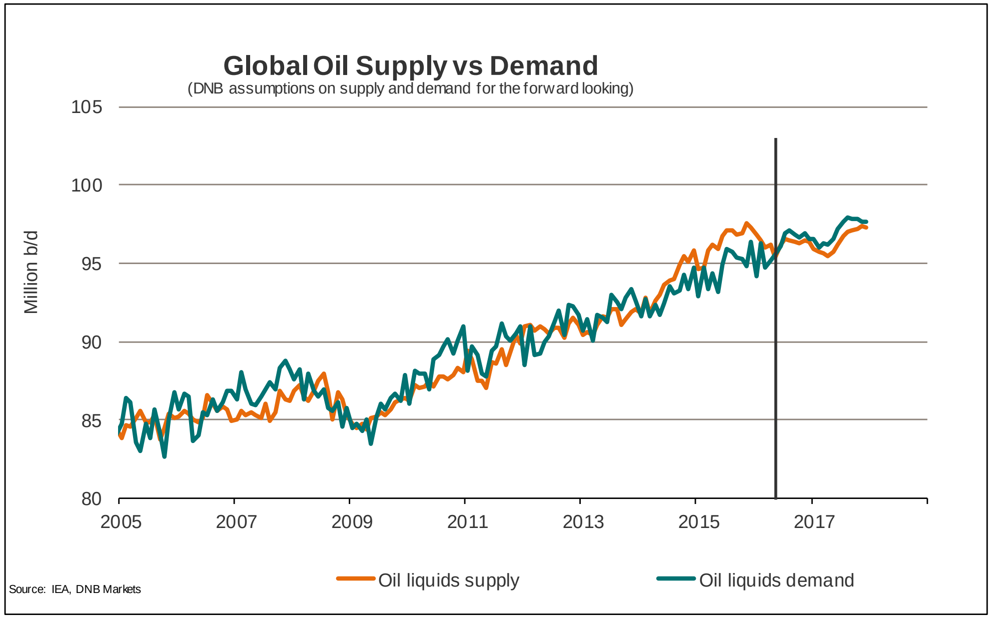
The Starting Point For The Rebalancing Has Improved

- The over supply for Q4 has been revised down from 2.2 million b/d to 1.75 million b/d since February

IEA Feb report as starting point



IEA May report as starting point



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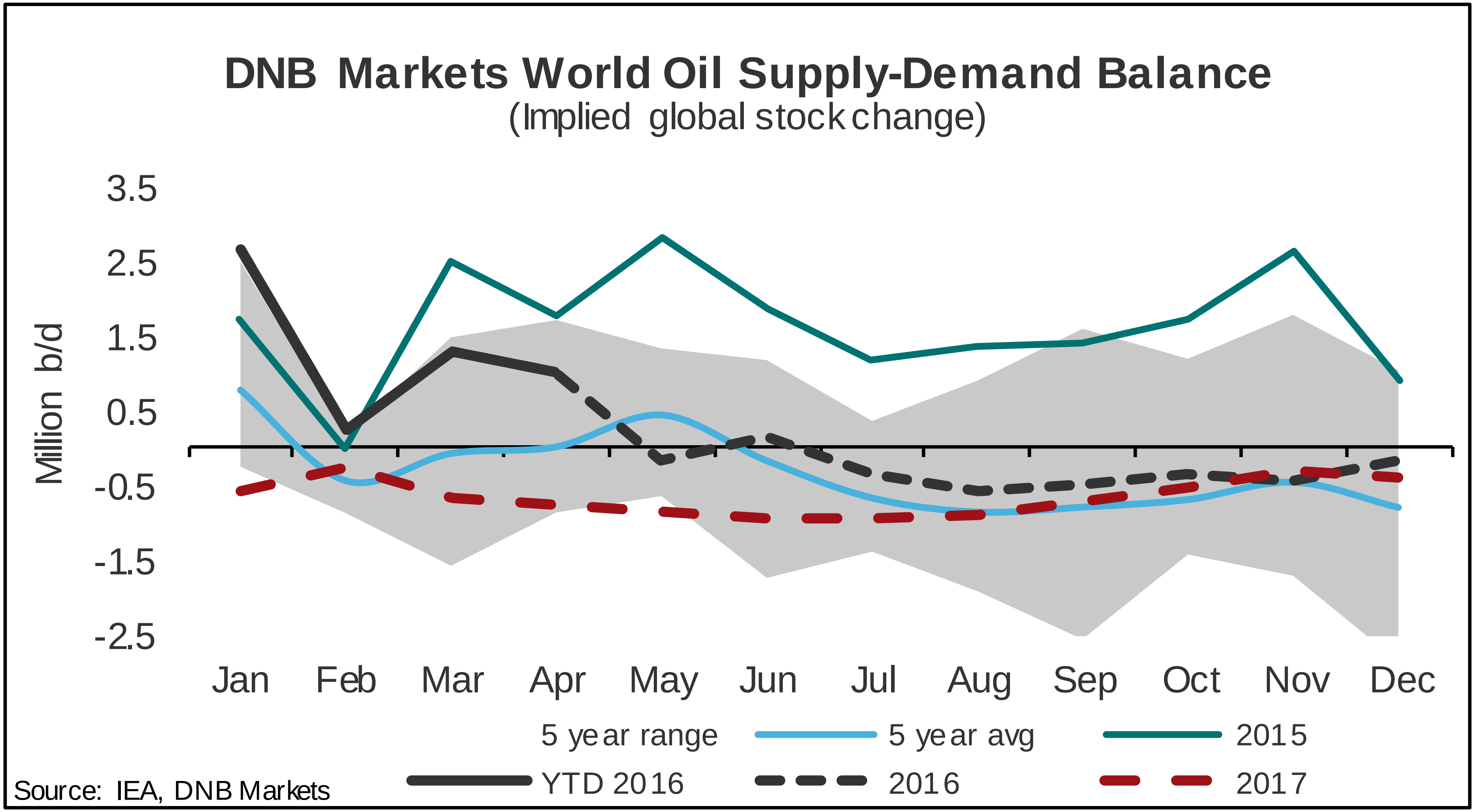
Global Oil Stock Draws Expected From Q3-2016

- Since the balance was less weak than originally reported by the IEA, the rebalancing will happen quicker



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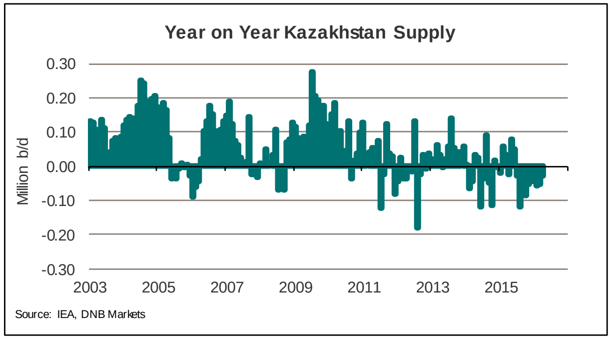
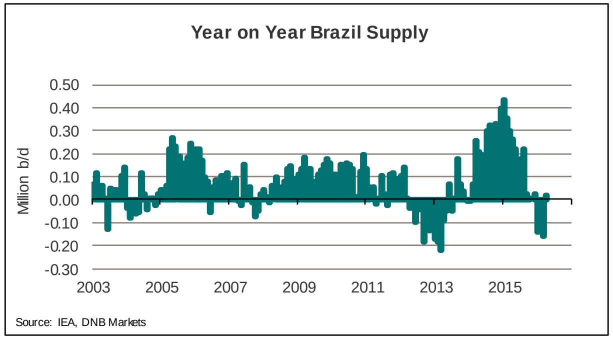
Which Countries Are Struggling With Output?

- Growth rates about to disappear in many countries, it is not only a US story



Source: IEA, DNB Markets



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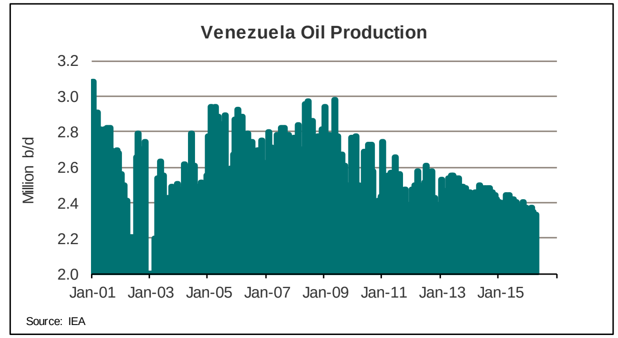

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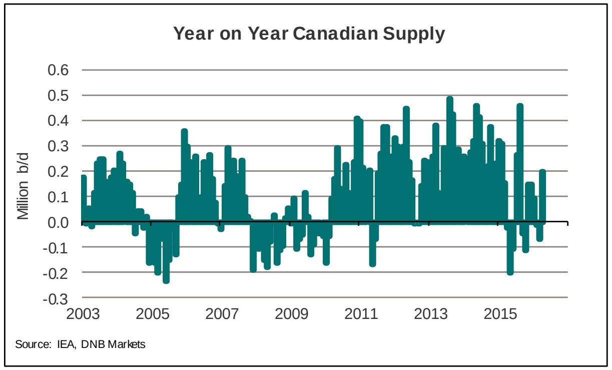

Source: IEA, DNB Markets

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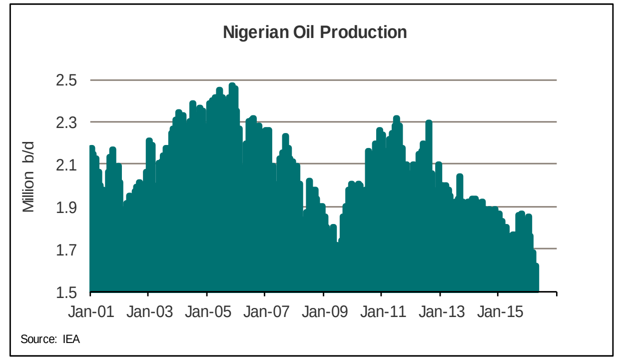

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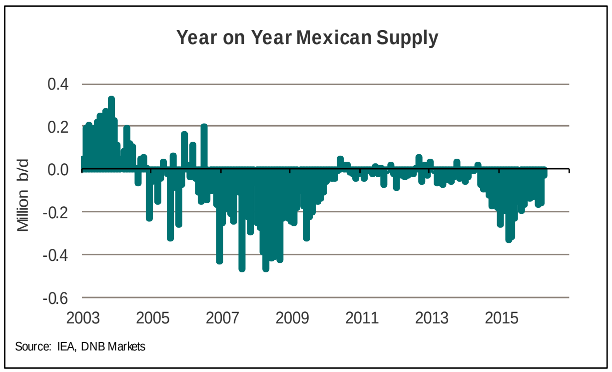

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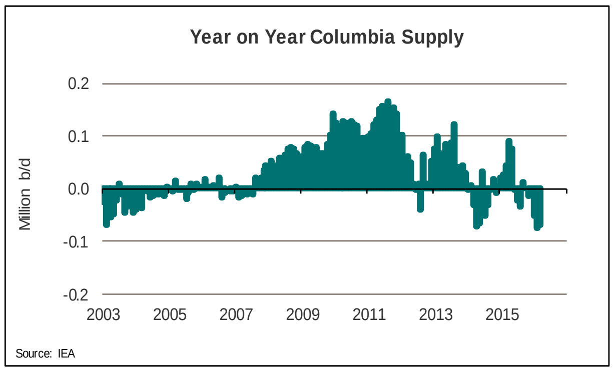

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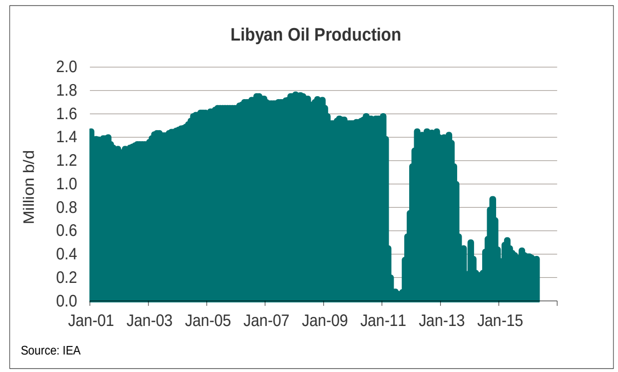

Source: IEA

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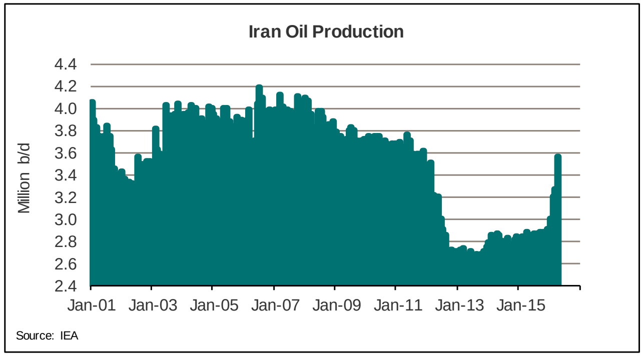
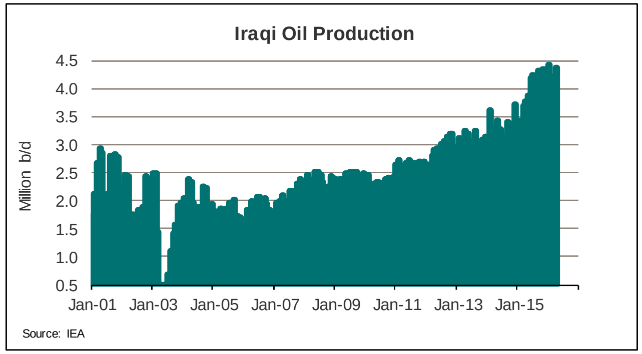
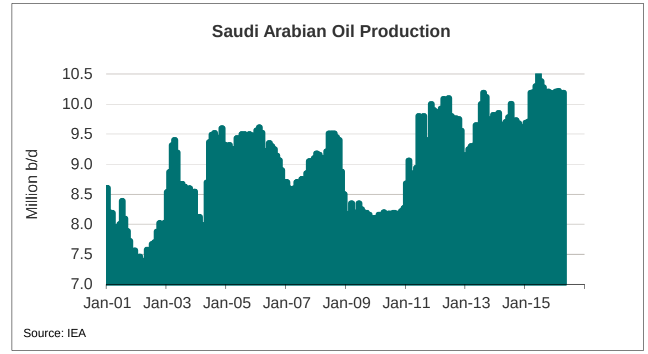
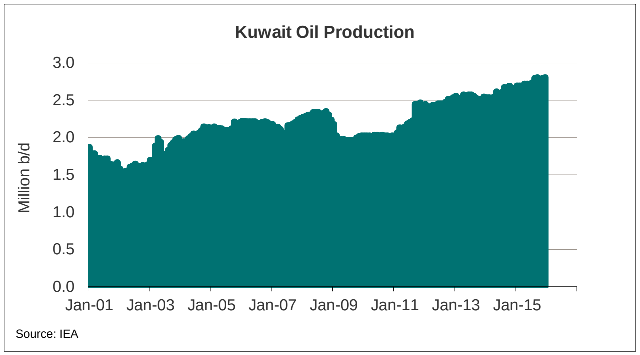
Who Is Increasing?

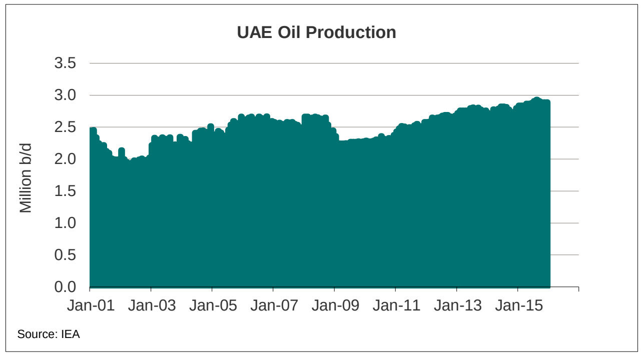
- Russia, Iran, Iraq, Kuwait, UEA and Saudi – But Iraq and Saudi at peak? – And can Iran go further up to 4 mbd short term???

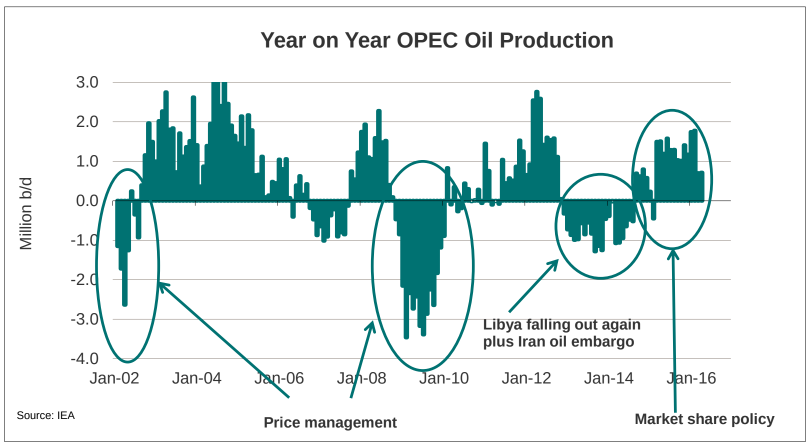


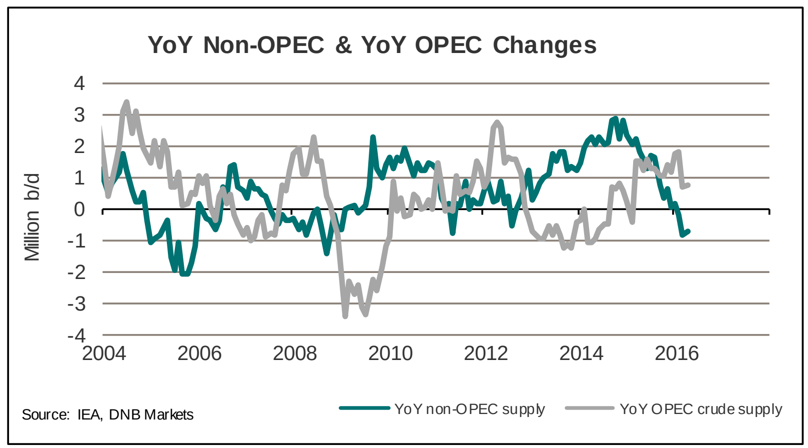












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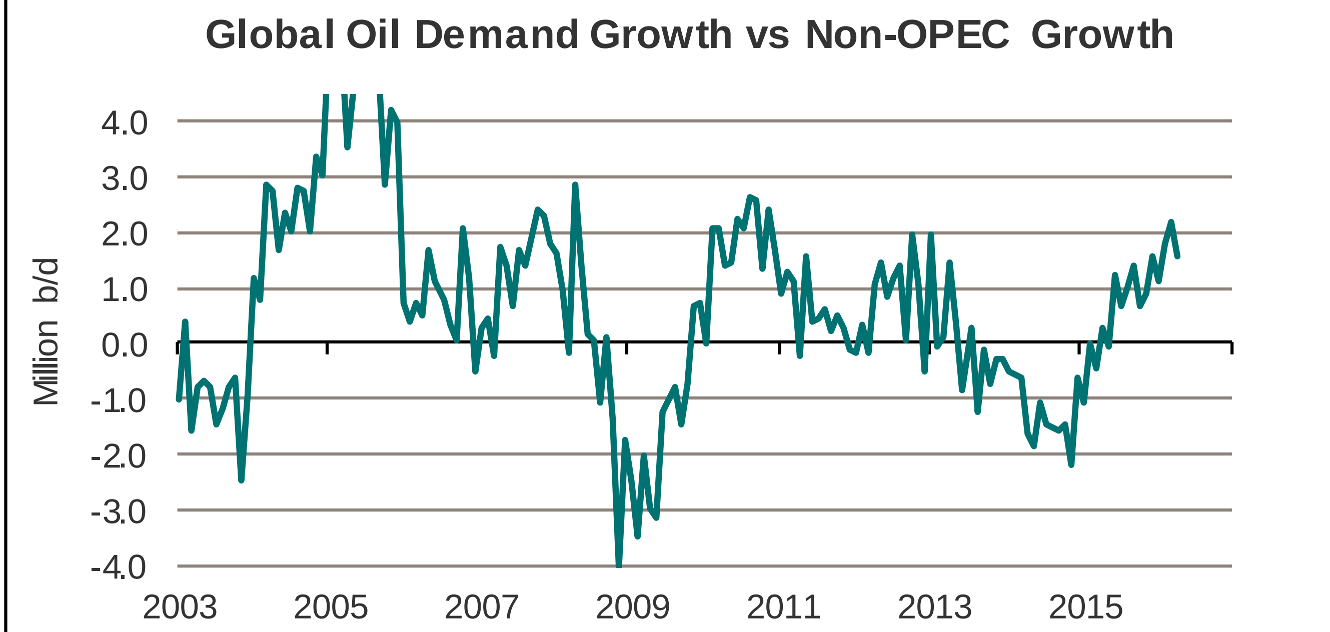
Changes In The Supply-Demand Balance Are Happening

- The price is doing its magic. If demand keeps on growing more than non-OPEC supply we need more and more from OPEC



Source: IEA

OPEC Change	Apr/2016	May/2016	Jun/2016	Jul/2016	Aug/2016	Sep/2016	Oct/2016	Nov/2016	Dec/2016	Jan/2017	Feb/2017	Mar/2017	Apr/2017	May/2017	Jun/2017	Jul/2017	Aug/2017	Sep/2017	Oct/2017	Nov/2017	Dec/2017
Algeria		-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-75	-80	-85	-90	-95	-100
Angola/Cabinda		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ecuador		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia		-3	-6	-9	-12	-15	-18	-21	-24	-27	-30	-33	-36	-39	-42	-45	-48	-51	-54	-57	-60
Iraq		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran		140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
Kuwait		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Libya		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
Neutral Zone		0	0	0	0	0	0	0	0	200	300	400	400	400	400	400	400	400	400	400	400
Nigeria		-320	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220	-220
Qatar		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia		80	160	240	320	250	180	110	40	40	40	40	40	110	180	250	320	250	180	110	40
United Arab Emirates		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Abudhabi		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Dubai		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sharjah/Ras Al Khaimah		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Venezuela		-20	-40	-60	-80	-100	-120	-140	-160	-180	-200	-220	-240	-260	-280	-300	-320	-340	-360	-380	-400
OPEC		**-108**	**64**	**136**	**208**	**130**	**52**	**-26**	**-104**	**88**	**180**	**272**	**264**	**326**	**388**	**450**	**512**	**434**	**356**	**278**	**200**

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Large Capex Cuts In 2016 For US Shale Players

- At 52 $/b WTI average price the companies have available cash to keep output flat, but not without outspending free cash flow

Lifting costs in $/b (incl. G&A costs & County/State tax)	15
Interest rate:	5%
WTI price ($/b)	52
NGL's price as percentage of crude price:	35%

Company name:	Anadarko	Devon	Chesapeake	EOG	Apache	Hess	Continental	Murphy	Pioneer	SM Energy	Whiting	Cimarex	Concho	EP Energy	Sanchez	Oasis	Average	Sum
Crude production 2016 kbd (reduced according to guiding)	**295**	**173**	**107**	**263**	**259**	**216**	**132**	**111**	**116**	**43**	**107**	**47**	**92**	**52**	**19**	**41**	130	2,073
Achieved crude price diff average to WTI in 2015 ($/b)	-2.0	-8.3	-5.7	-1.2	-1.0	-2.7	-8.1	-4.1	-6.1	-7.5	-8.0	-5.7	-7.7	-5.2	-5.9	-5.9	-5	
Assumed crude diff average to WTI in 2016 ($/b)	-1.0	-7.3	-4.7	-0.2	0.0	-1.7	-7.1	-3.1	-5.1	-6.5	-7.0	-4.7	-6.7	-4.2	-4.9	-4.9	-4	
Achieved crude price at assumed WTI price $/b	51.0	44.7	47.3	51.8	52.0	50.3	44.9	48.9	46.9	45.5	45.0	47.3	45.3	47.8	47.1	47.1	48	
Revenue from crude sales million USD	5,493	2,820	1,853	4,975	4,917	3,963	2,164	1,979	1,990	721	1,756	813	1,518	902	320	711	2,306	36,895
NGL's production kbd (Assumed equal to 2015)	**130**	**136**	**76.7**	**77**	**62.2**	**39**	**0**	**10.2**	**38.6**	**44**	**14.2**	**35.6**	**0**	**14.7**	**15.7**	**0**	43	694
NGL price $/b (Assumed equal to 2015)	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18	
Revenue from NGL's sales million USD	864	903	510	512	413	259	0	68	256	292	94	236	0	98	104	0	288	4,610
Natural gas production (million cubic meters/day)	**66.1**	**45.6**	**82.1**	**35.8**	**32.0**	**16.6**	**11.9**	**12.1**	**10.2**	**13.5**	**3.0**	**13.1**	**7.5**	**5.9**	**2.9**	**1.0**	22	359
Natural gas price $/cm	**0.08**	**0.08**	**0.08**	**0.08**	**0.10**	**0.15**	**0.08**	**0.10**	**0.08**	**0.09**	**0.08**	**0.09**	**0.08**	**0.08**	**0.09**	**0.08**	0	
Revenue from natgas sales million USD	1,930	1,332	2,397	1,045	1,168	909	347	442	298	443	88	430	219	172	96	29	709	11,346
Revenue pr year million USD	8,286	5,055	4,760	6,531	6,498	5,131	2,511	2,489	2,544	1,457	1,938	1,480	1,737	1,171	520	741	3,303	52,850
Total production of oil equivalents in 2015	**836**	**680**	**679**	**572**	**535**	**375**	**222**	**208**	**204**	**176**	**165**	**164**	**143**	**110**	**53**	**51**	323	5,173
Guided 2016 oil equivalents production	**778**	**616**	**639**	**529**	**487**	**340**	**200**	**183**	**225**	**145**	**133**	**151**	**139**	**94**	**50**	**48**	297	4,756
Guided 2016 change in oil equivalents production	-7%	-9%	-6%	-8%	-9%	-9%	-10%	-12%	10%	-18%	-19%	-8%	-3%	-15%	-5%	-6%	-8%	
Lifting costs USD (based on total oil equivalents output)	4,577	3,723	3,719	3,133	2,929	2,053	1,215	1,139	1,117	964	903	898	783	602	288	276	1,770	28,319
Long Term debt by end 2015 (million USD)	**15,718**	**12,137**	**10,376**	**6,654**	**8,777**	**6,544**	**7,116**	**3,041**	**3,207**	**2,518**	**5,198**	**1,500**	**3,332**	**4,812**	**1,747**	**2,302**	5,936	94,979
Interest rate costs 2016 (million USD)	786	607	519	333	439	327	356	152	160	126	260	75	167	241	87	115	297	4,749
Interest rate costs as % of revenues	9%	12%	11%	5%	7%	6%	14%	6%	6%	9%	13%	5%	10%	21%	17%	16%	9%	
Total Debt Ratio (Year End- 2015) LT debt to total capital	**50%**	**50%**	**79%**	**34%**	**68%**	**24%**	**60%**	**36%**	**27%**	**58%**	**52%**	**35%**	**32%**	**89%**	**87%**	**50%**	52%	
Calculated free cash flow 2016	2,923	726	523	3,066	3,130	2,750	940	1,198	1,267	367	775	507	787	329	145	349	1,236	19,782
CAPEX 2014	**9,508**	**6,988**	**5,307**	**8,247**	**9,903**	**5,274**	**4,716**	**3,680**	**3,576**	**1,975**	**2,968**	**2,108**	**2,589**	**2,033**	**805**	**1,400**	4,442	71,077
CAPEX 2015	**6,067**	**5,308**	**3,238**	**5,013**	**4,811**	**4,321**	**3,080**	**2,550**	**2,393**	**1,494**	**2,497**	**979**	**2,511**	**1,433**	**664**	**705**	2,942	47,064
Reduced CAPEX in 2015	36%	24%	39%	39%	51%	18%	35%	31%	33%	24%	16%	54%	3%	30%	18%	50%	34%	
Guided reduction in CAPEX for 2016	55%	75%	52%	61%	67%	40%	70%	68%	16%	53%	80%	36%	52%	51%	66%	35%	58%	27,174
Guided CAPEX for 2016	**2,700**	**1,308**	**1,550**	**1,975**	**1,600**	**2,592**	**920**	**825**	**2,000**	**705**	**500**	**630**	**1200**	**700**	**225**	**460**	1,243	19,890
CAPEX 2016 if living within cash flow	2,923	726	523	3,066	3,130	2,750	940	1,198	1,267	367	775	507	787	329	145	349	1,236	19,782
Reduced CAPEX in 2016 if living within free cash flow	-3,144	-4,582	-2,715	-1,947	-1,681	-1,571	-2,140	-1,352	-1,126	-1,127	-1,722	-472	-1,724	-1,104	-519	-356	-1,705	-27,282
New Equity Capital/Bond Loans in 2016 (by May 2016)	3,000	1,487		1,000		1,121			1,614		477		819			185		9,703
CAPEX cut in 2016 if living within free cash flow	**-52%**	**-86%**	**-84%**	**-39%**	**-35%**	**-36%**	**-69%**	**-53%**	**-47%**	**-75%**	**-69%**	**-48%**	**-69%**	**-77%**	**-78%**	**-51%**	**-58%**	

WTI price needed to see free cash flow in 2016 equal to 2015 CAPEX would be 85 $/b on average for these players

The number of new producing wells fell below 1000 in Q1-2015 after having stayed above that number for 27 months in a row. 12-months moving average production flattened out in Q3-2015 as new wells fell to 600-800 per month. If we look at capital required to add 700 wells per month it should require about 60 billion USD per year if the all in cost per well is 7 billion USD. If we assume that on average the shale industry needs to add about 700 wells per month to keep production flat it does in other words mean that the companies above need to start up about 350 wells per month in order to keep shale output flat. 7 million USD multiplied by 350 wells per month equals 30 billion USD per year. If we put in a WTI price of 52 $/b we calculate available free cash flow for the 16 companies above to be 20 billion USD in total. This is after lifting costs and interest rate costs. These companies represent about half of US shale output. They have so far raised 10 billion USD in new equity/new loans so they have 30 billion USD available to drill new wells in 2016 if the price is 52 $/b and if they raise no further capital.
Conclusion is: If it costs 7 billion USD all in per well and the WTI price average 52 $/b for a year the companies have the available capital to drill the required wells to keep production flat. But if the WTI price average 40 $/b the capital requirement increase by 10 billion USD.

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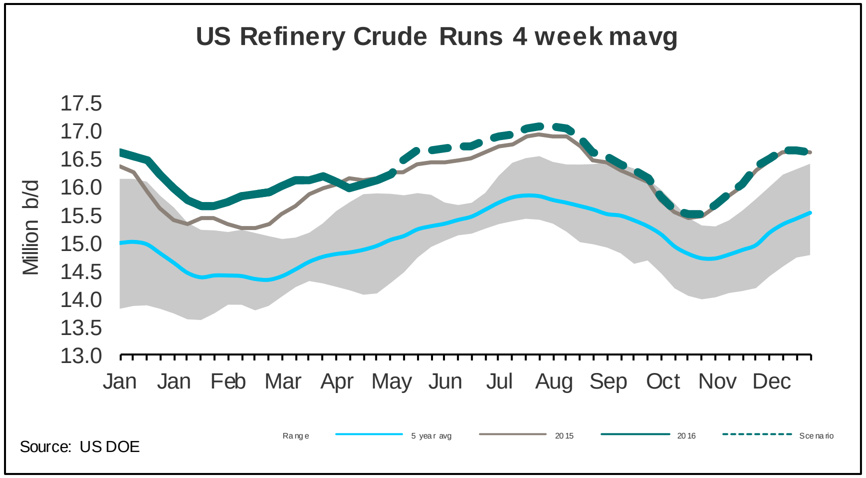
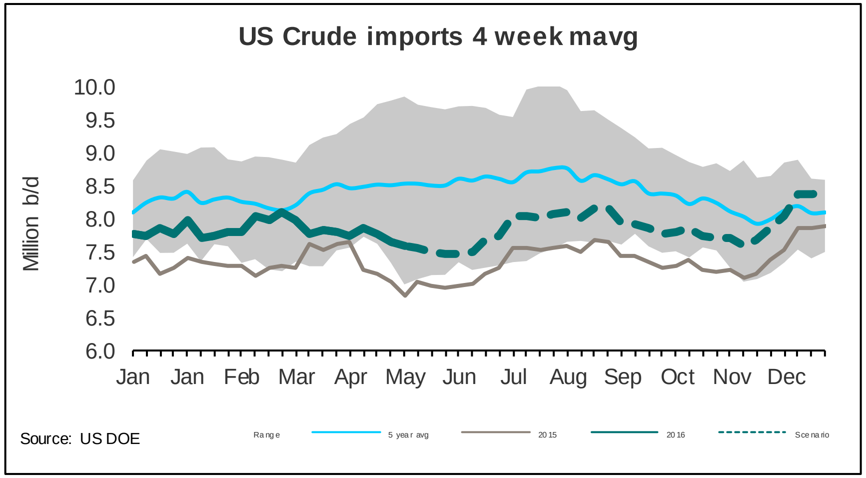
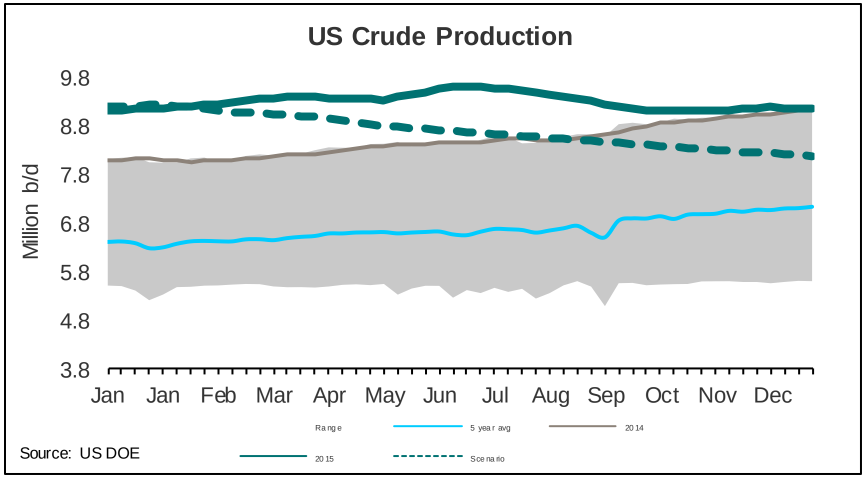
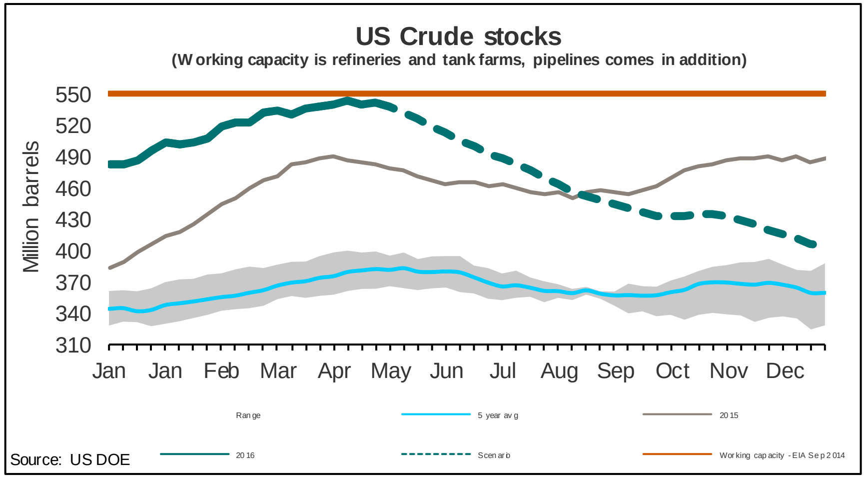
Scenario For US Crude Stocks Development In 2016

- What happens to US crude stocks in 2016? (exports is assumed to be the average for 2016; 0.5 mbd)









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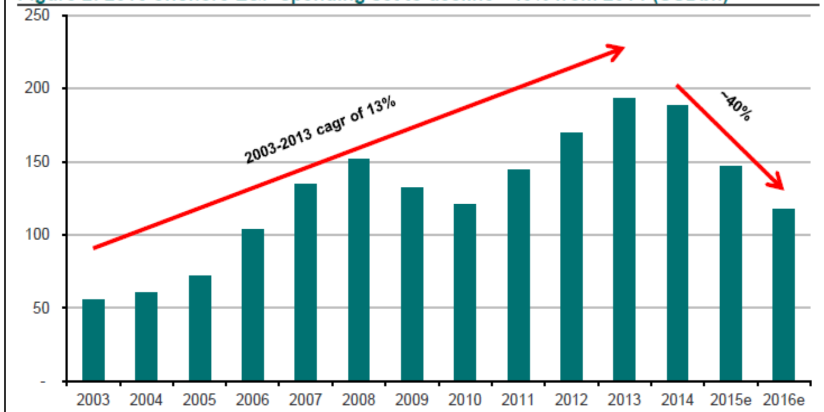
Enormous Cuts In Global Oil Spending Will Continue in 2016

- This sets the stage for lower production/lower production growth in the future

Peer group	2015 upstream E&D capex (US$M)	2016 upstream E&D capex (US$M)	y-o-y change in upstream E&D capex (US$M)	y-o-y change in upstream E&D capex (%)
MLP	210	70	- 140	-67%
NOC	64,715	51,612	- 13,103	-20%
Mid/Small-Cap	48,088	29,193	- 18,895	-39%
Major	147,194	119,090	- 28,104	-19%
Large-Cap	79,861	47,603	- 32,258	-40%
	340,068	**247,568**	**- 92,500**	**-27%**

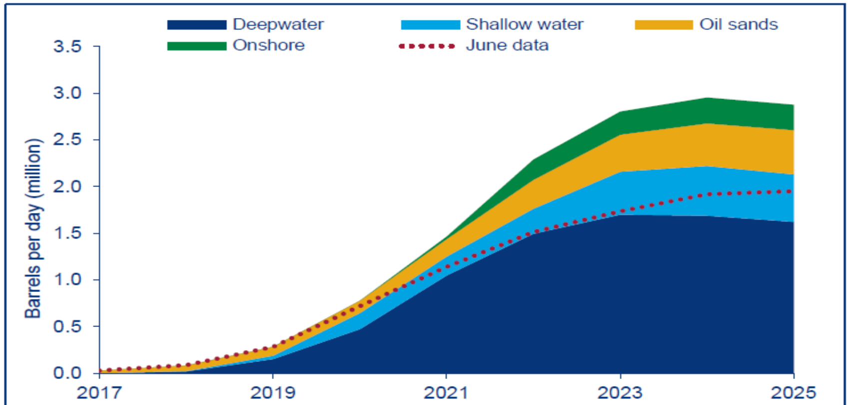
Source: Wood Mackenzie, company announcements 124 companies

Figure 2: 2016 offshore E&P spending set to decline ~40% from 2014 (USDbn)



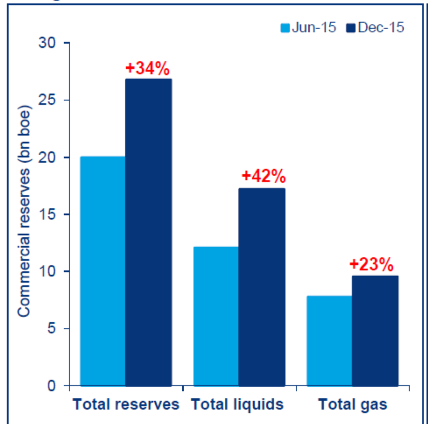
Source: Companies, DNB Markets

Liquids production impacted by project FID delays



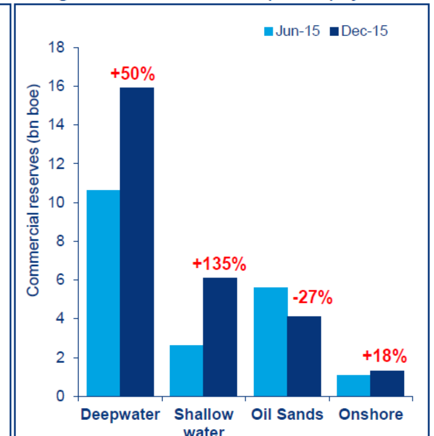
Source: Wood Mackenzie's Upstream Data Tool

Changes in total deferred reserves since June



Source: Wood Mackenzie

Changes in deferred reserves (bn boe) by theme



Source: Wood Mackenzie

Shell's decision to axe a Canadian project shows extent of the downturn

ft.com > companies > energy >

Unusually — and in contrast to the $200bn-plus of future spending shelved by energy companies since last year's crude price collapse — work on Carmon Creek was well under way. This was no flight of fancy. Shell had already taken the decision to invest: it was clearing the site, procuring major equipment, building accommodation for staff, and starting work on wells.

ConocoPhillips to exit deepwater exploration by 2017

Oct 29 2015, 15:25 ET | About: ConocoPhillips (COP) | By: Carl Surran, SA News Editor

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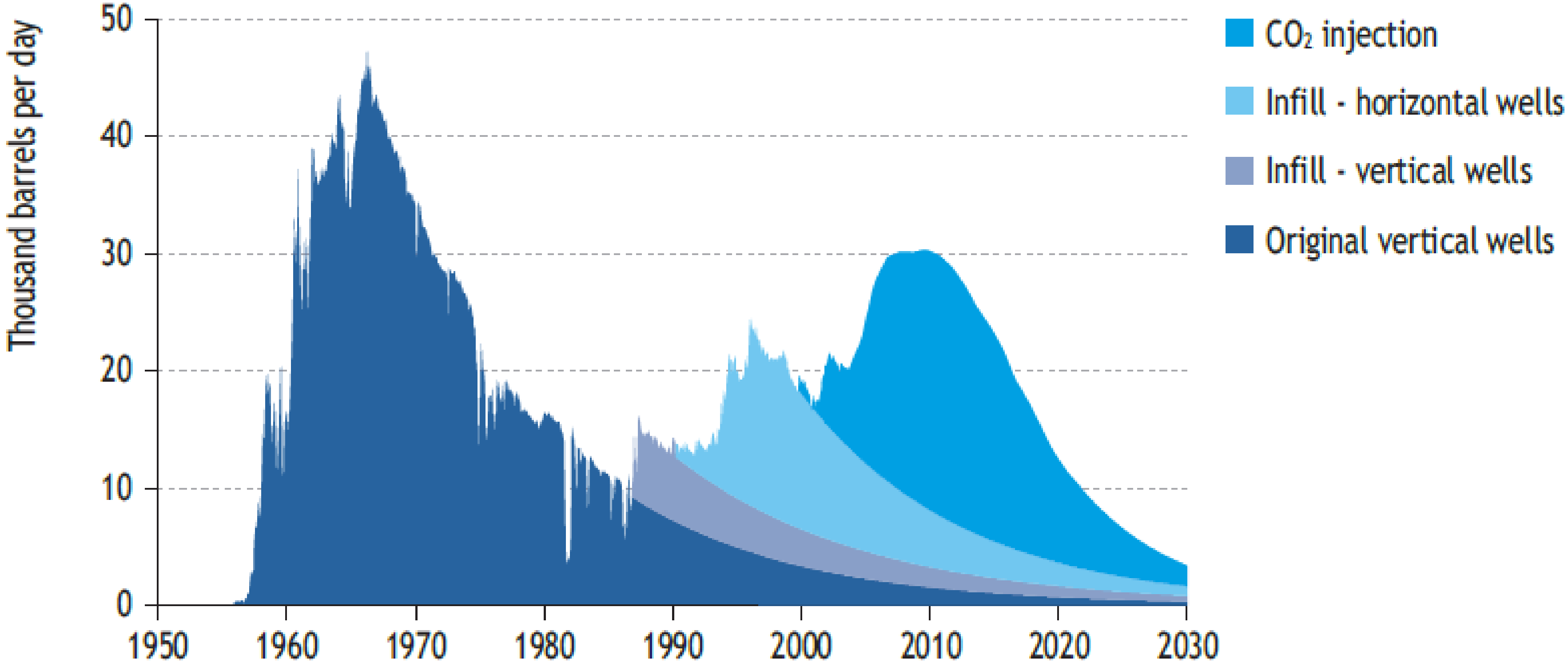
Totally Different Production Path Without Infill Drilling

- Source: IEA World Energy Outlook 2008 Decline Rate Study

Figure 9.8 • A case study of oil reserves growth: the impact of technology on oil production from the Weyburn field in Canada



Source: PTRC Weyburn-Midale website (www.ptrc.ca).

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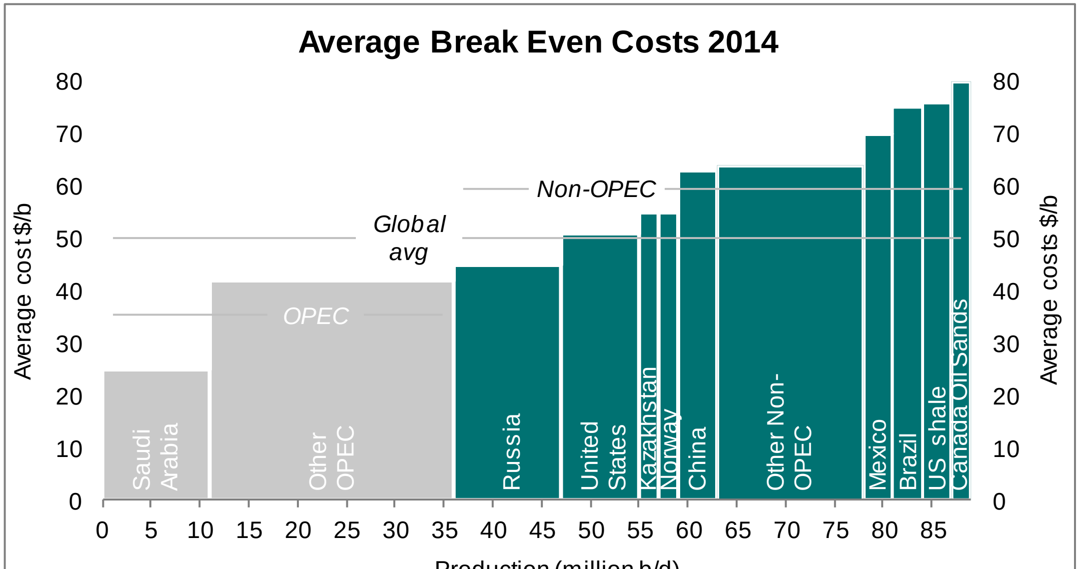
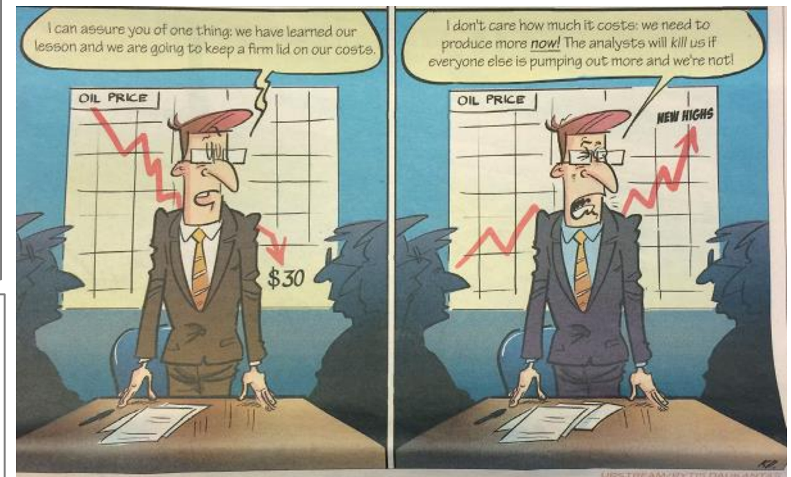
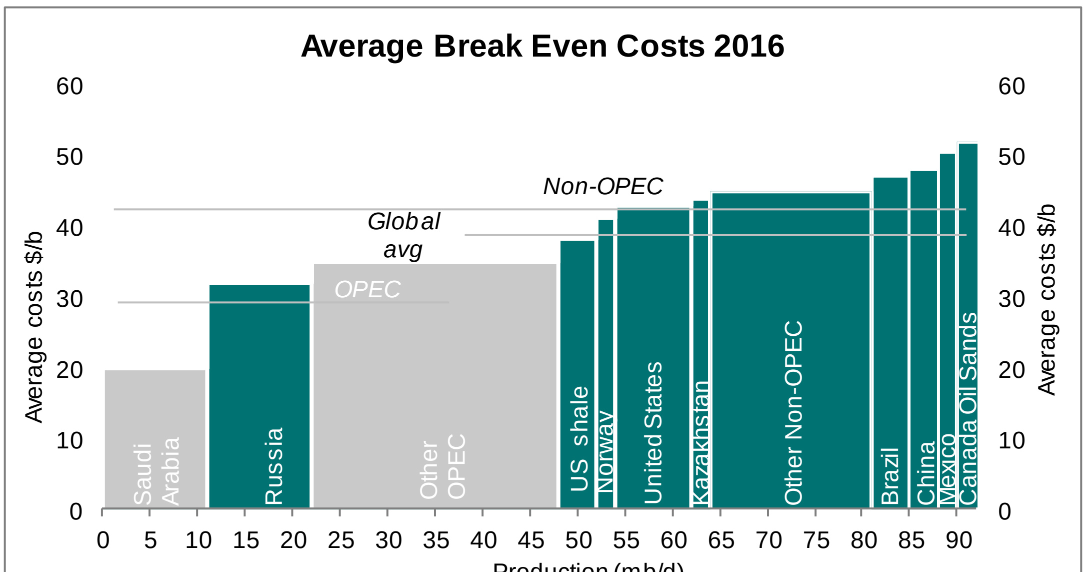
Break Even Costs On Average Down 20-25% Since 2014

- Global average was 50 $/b in 2014 when oil prices were 100 $/b plus, now the average is 40 $/b



Source: Company Reports, Energy Aspects





Source: Company Reports, Energy Aspects

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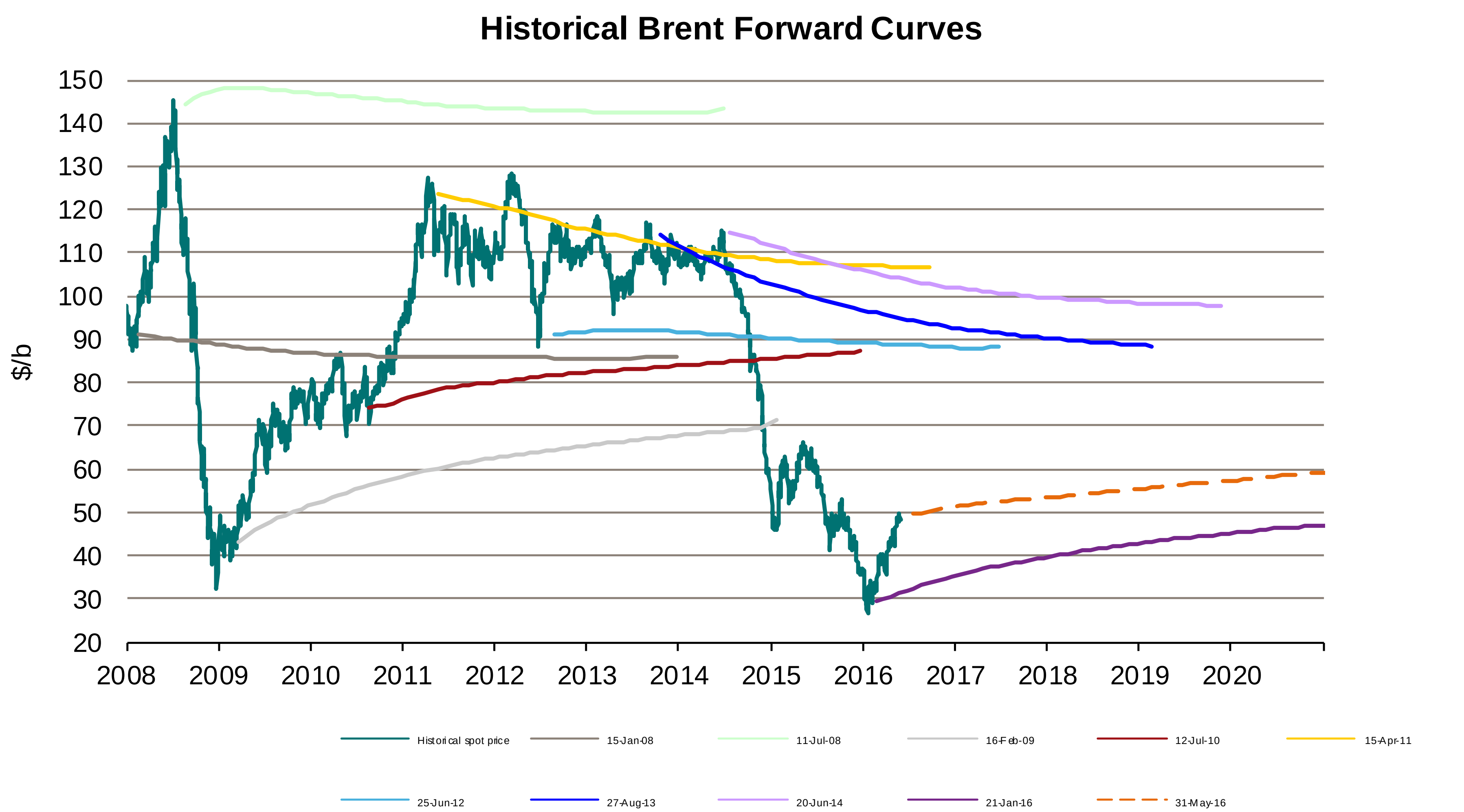
The Long End Of The Forward Curve Had Fallen Too Much



Source: Reuters, DNB Markets

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Strong Price Response To Demand In Key Countries

- Total oil demand growth up to 1.8 mbd in 2015, YoY demand growth still decent

Demand change in %	Change 2011	Change 2012	Change 2013	Change 2014	Change 2015	YoY Last 3 mts	2016 YTD Chg:	Forecast 2016	Forecast 2017
North America (Canada, Mexico)	1.4 %	0.8 %	-0.7 %	-1.4 %	-1.9 %	-1.1 %	-0.8 %	-0.9 %	-1.0 %
US	-1.1 %	-2.4 %	2.5 %	0.8 %	1.5 %	1.2 %	0.6 %	1.5 %	0.0 %
OECD Europe	-3.1 %	-2.8 %	-1.5 %	-1.2 %	1.9 %	0.2 %	0.0 %	0.3 %	0.5 %
Australia, New Zealand, Japan, Korea, Chile	0.3 %	4.1 %	-1.3 %	-2.6 %	-0.2 %	-3.8 %	-3.0 %	-3.0 %	-3.0 %
Europe/Africa Med & FSU	3.7 %	1.5 %	0.1 %	3.4 %	0.4 %	3.6 %	3.9 %	2.3 %	1.5 %
Middle East AG excl. Iran and Saudi	3.4 %	7.6 %	3.1 %	-1.0 %	2.6 %	2.3 %	2.4 %	2.1 %	2.0 %
Iran	0.5 %	2.2 %	2.4 %	-0.6 %	-3.6 %	1.6 %	1.8 %	1.9 %	2.0 %
Saudi Arabia	4.4 %	6.8 %	-0.3 %	5.9 %	4.6 %	-0.8 %	-0.4 %	0.5 %	1.0 %
Asia Pacific/East Africa excl. China and India	2.2 %	2.8 %	4.6 %	3.0 %	3.5 %	3.7 %	3.8 %	3.9 %	4.0 %
China	4.8 %	3.8 %	4.6 %	3.4 %	6.5 %	3.0 %	3.0 %	2.8 %	1.7 %
India	5.1 %	5.1 %	1.1 %	2.1 %	5.8 %	9.8 %	9.9 %	9.3 %	9.0 %
West Africa	3.5 %	4.2 %	4.4 %	0.9 %	3.8 %	3.0 %	2.8 %	2.3 %	2.0 %
Latin America (excl. Mexico)	1.9 %	4.4 %	1.3 %	2.6 %	-0.6 %	-1.1 %	-1.2 %	-1.1 %	-1.0 %
Total World	**0.9 %**	**1.2 %**	**1.4 %**	**1.1 %**	**2.0 %**	**1.3 %**	**1.3 %**	**1.4 %**	**1.1 %**

Demand change in Million b/d	Change 2011	Change 2012	Change 2013	Change 2014	Change 2015	YoY Last 3 mts	2016 YTD Chg:	Forecast 2016	Forecast 2017
North America (Canada, Mexico)	63	34	-38	-63	-86	-47	-34	-45	-40
US	-227	-457	472	147	292	224	121	286	6
Europe	-474	-413	-215	-170	263	22	4	43	99
Australia, New Zealand, Japan, Korea	32	332	-115	-215	-17	-324	-259	-235	-222
Total OECD	**-606**	**-505**	**104**	**-301**	**453**	**-125**	**-168**	**50**	**-157**
Europe/Africa Med & FSU	270	115	11	263	30	277	297	175	125
Middle East AG excl. Iran and Saudi	78	174	77	-28	65	57	60	54	54
Iran	10	40	35	-16	-68	28	33	35	38
Saudi Arabia	115	192	-17	177	144	-30	-17	9	39
Asia Pacific/East Africa excl. China and India	174	228	386	265	312	343	353	367	387
China	433	365	450	352	690	339	343	314	200
India	169	175	42	79	215	389	392	377	387
West Africa	42	53	57	11	52	43	41	34	28
Latin America (excl. Mexico)	118	276	88	173	-44	-75	-80	-79	-62
Total Non-OECD	**1,408**	**1,619**	**1,130**	**1,275**	**1,396**	**1,371**	**1,421**	**1,287**	**1,195**
North America	-164	-423	435	84	207	177	87	242	-34
Europe/Africa Med & FSU	-204	-298	-205	93	293	299	301	219	224
Middle East AG/Asia Pacific/East Africa	1,010	1,507	859	613	1,341	802	904	923	882
Middle East AG	202	407	96	134	141	55	76	98	130
Asia Pacific/East Africa	808	1,100	763	480	1,200	747	828	824	752
West Africa	42	53	57	11	52	43	41	34	28
Latin America (excl. Mexico)	118	276	88	173	-44	-75	-80	-79	-62
Total World	**802**	**1,114**	**1,234**	**974**	**1,849**	**1,246**	**1,252**	**1,337**	**1,039**

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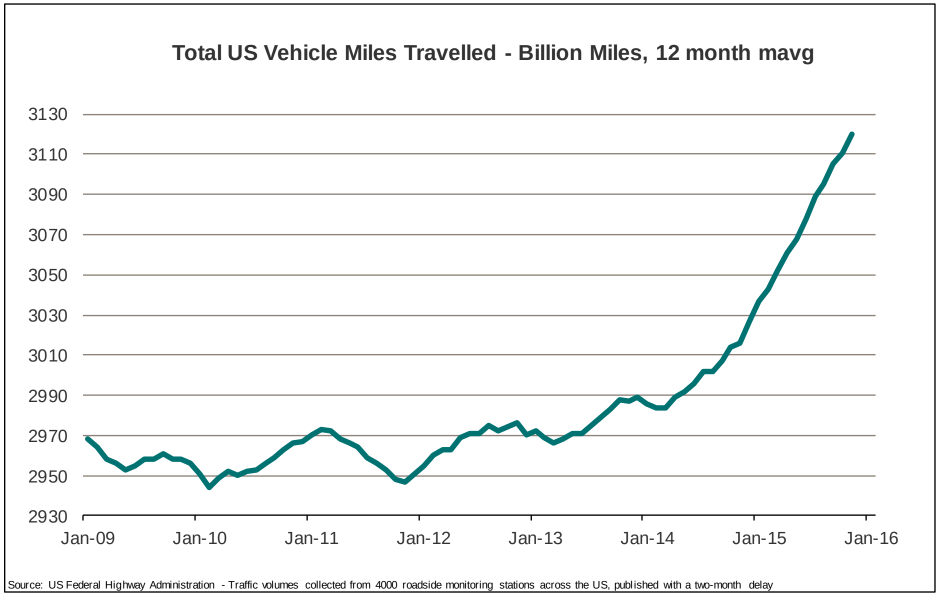
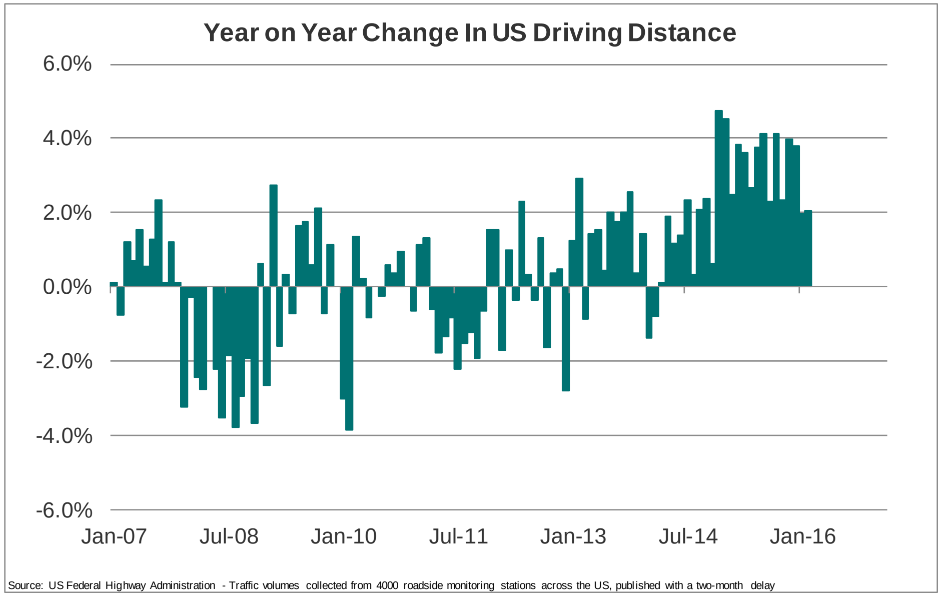
Driving Distance On The Rise As Gasoline Prices Drop

- Lower oil prices are incentivizing more driving





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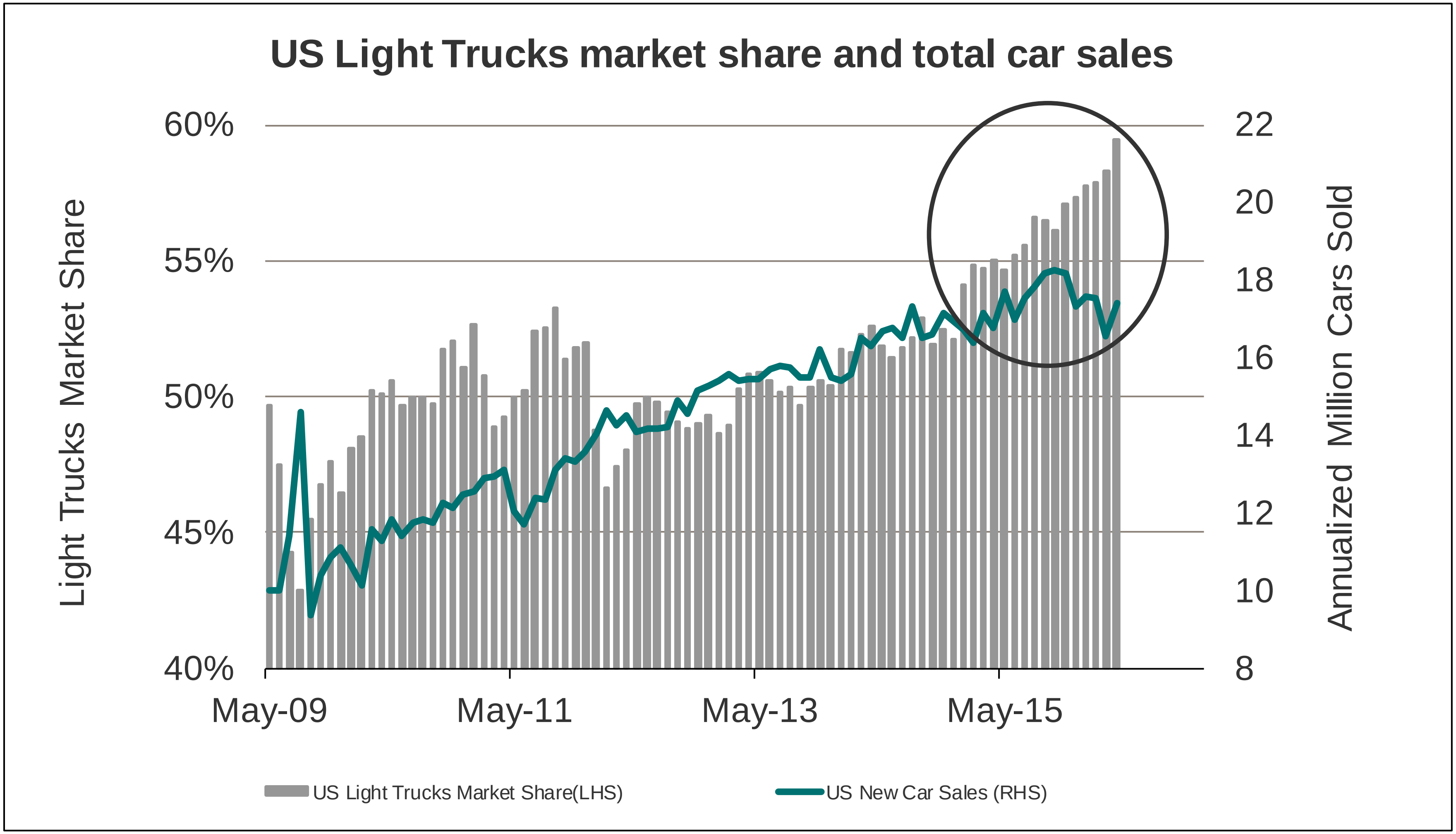
US SUV Market Share Expanding Again



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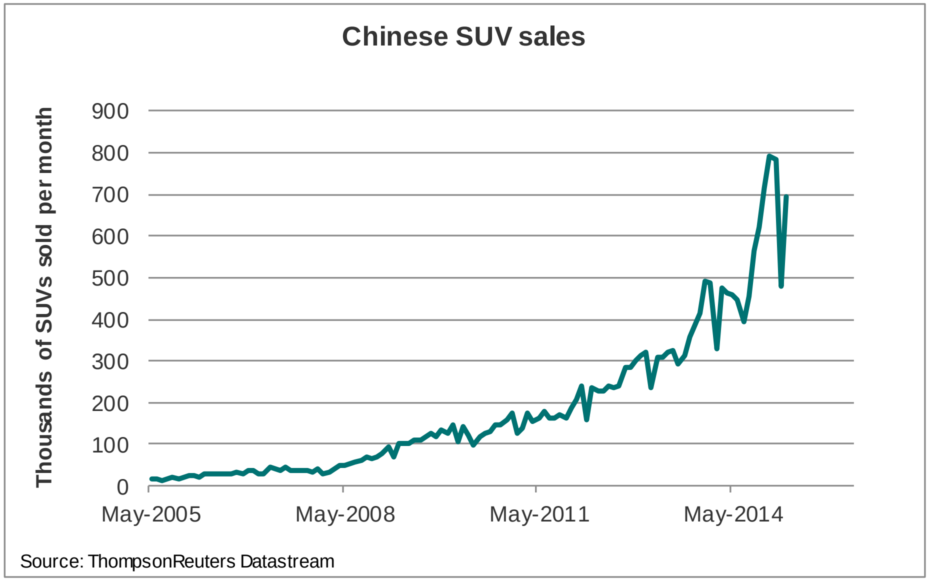
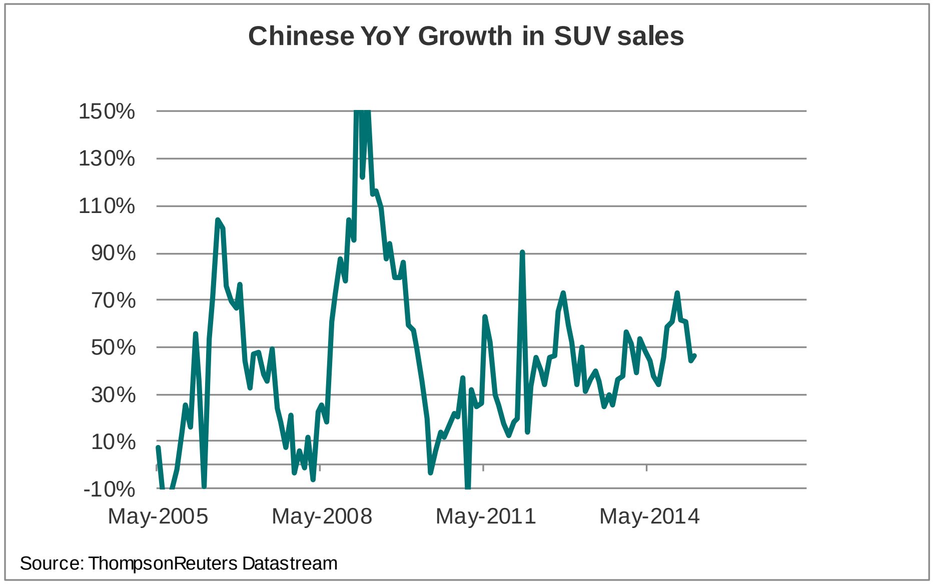
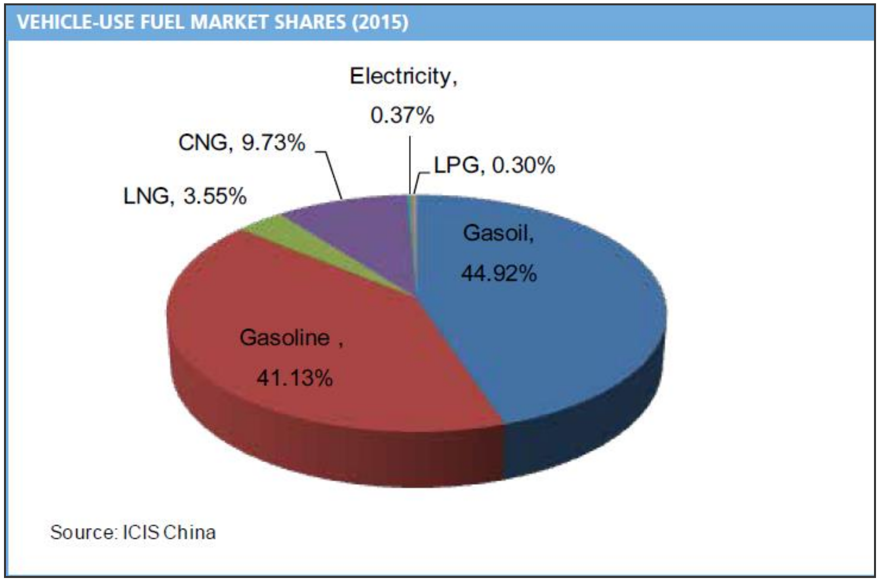
Maybe Not That Strange That Gasoline Demand Is Growing??

- With Chinese SUV sales up 51% in 2015 it is maybe not that strange that gasoline demand is performing strongly







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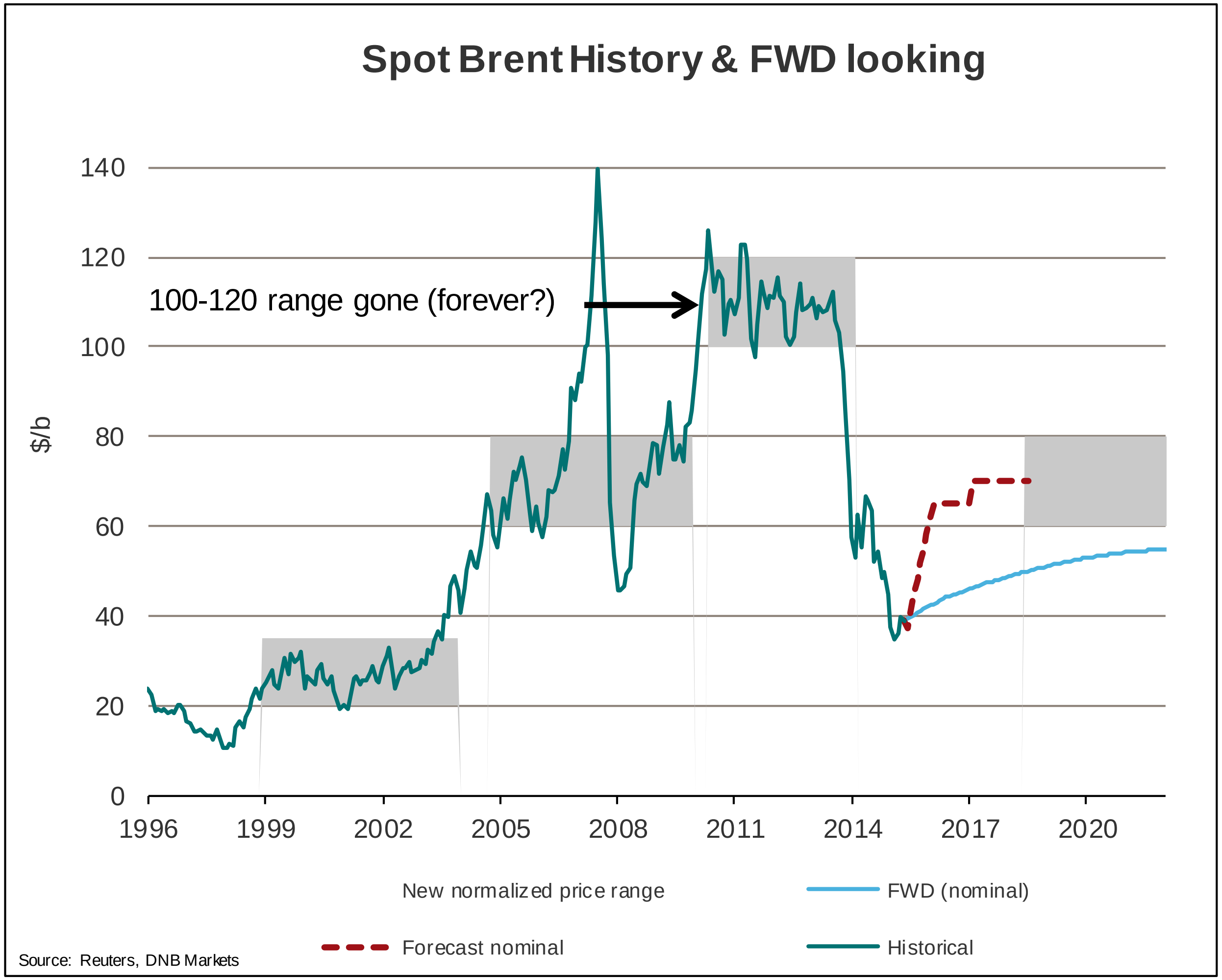
Long Term Oil Price Forecast – March 4th

(The forecast is for the rolling 1st month ICE Brent future contract)

	Historical Nominal $/b
2001	24.4
2002	25.0
2003	28.8
2004	38.3
2005	54.5
2006	65.1
2007	72.4
2008	97.3
2009	61.7
2010	79.5
2011	111.3
2012	111.7
2013	108.7
2014	99.5
2015	53.6
	Price target Nominal $/b
3 months	45
6 months	55
12 months	65
24 months	70
2019-2023	60-80



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Long Term Oil Price Forecast Unchanged As Prices Are Up

(The forecast is for the rolling 1st month ICE Brent future contract)

	Historical Nominal $/b
2001	24.4
2002	25.0
2003	28.8
2004	38.3
2005	54.5
2006	65.1
2007	72.4
2008	97.3
2009	61.7
2010	79.5
2011	111.3
2012	111.7
2013	108.7
2014	99.5
2015	53.6
	Price target Nominal $/b
3 months	45
6 months	55
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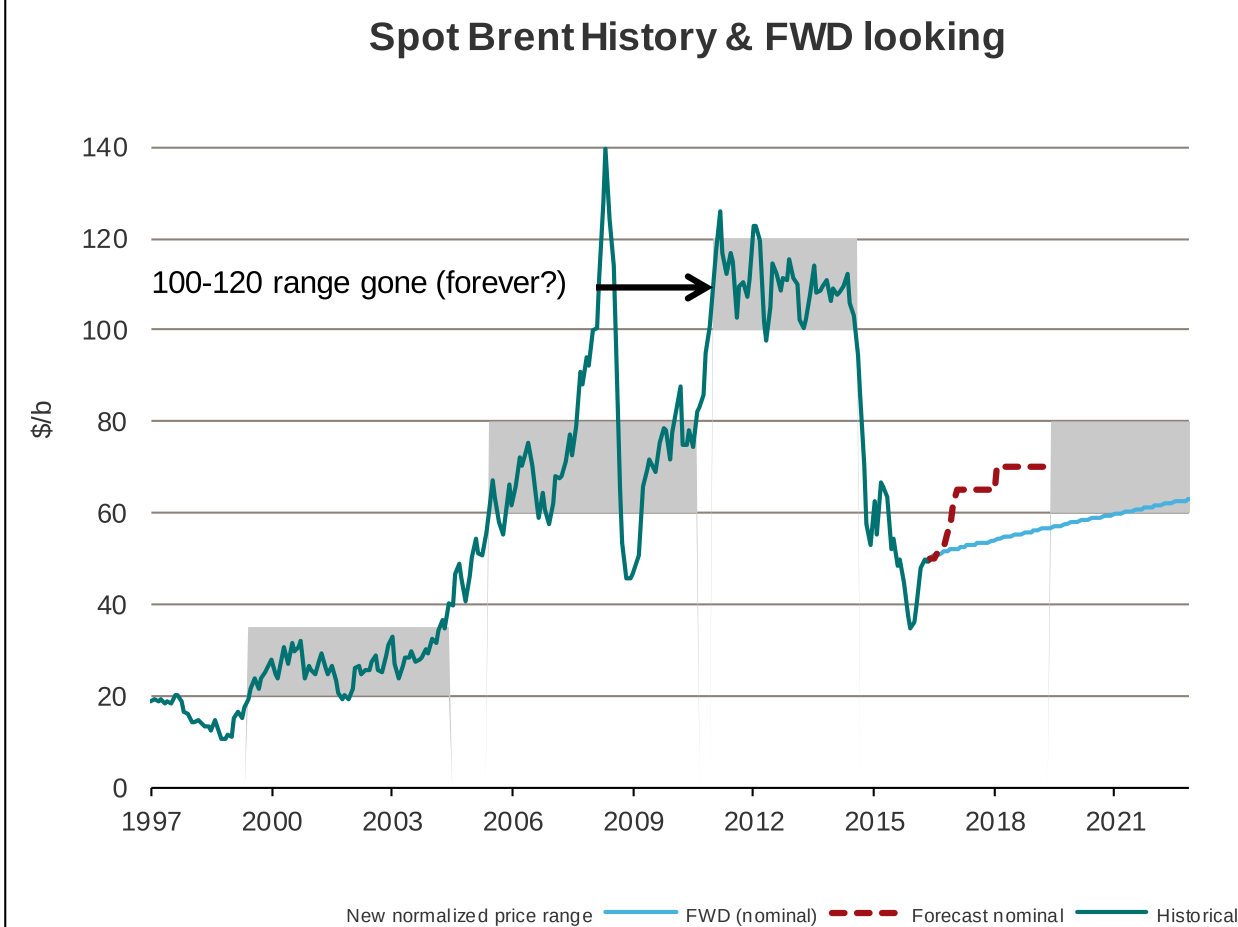
24 months	70
2019-2023	60-80



Source: Reuters, DNB Markets

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