Oil prices to dip in 4Q13 and beyond, as market tightness eases

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SECTION 1

Markets relaxing after extreme tightness due to supply outages

Price forecasts ($/bbl)

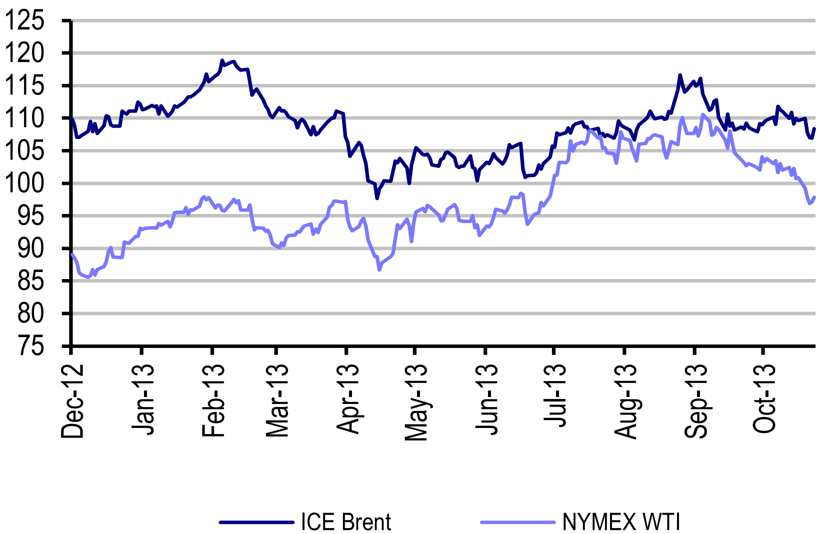
	Forecast	2012	1Q13	2Q13	3Q13	4Q13E	2013E	1Q14	2Q14E	3Q14E	4Q14E	2014E	2015E	2016-20E
ICE Brent	Present	111.70	112.57	103.35	109.65	105.00	107.64	100.00	98.00	105.00	97.00	100.00	95.00	92.00
	Strip of Oct 1					108.00	108.39	105.81	103.96	102.39	100.94	103.28	97.76	90.47
	Consensus					107.00	108.14	107.50	104.00	106.5	-	107.00	106.50	104.00
NYMEX WTI	Present	94.20	94.41	94.17	105.77	95.00	97.34	92.00	92.00	99.00	91.00	93.50	89.00	86.00
	Strip of Oct 1					102.27	97.21	100.41	97.52	94.99	93.10	96.51	89.10	82.42
	Consensus					103.00	99.34	101.50	97.75	99.00	-	101.00	101.50	97.00

Source: Bloomberg, UBS

- **Crude prices to dip in 4Q13E** (avg: Brent $105; WTI $95/bbl).
- **2014E will see further price slide**: Brent $100, on strong non-OPEC supply growth of +1.6 mb/d offsetting incremental demand of +1.2 mb/d.
- We maintain our **post-2015 crude forecast for Brent ($92/bbl)** and WTI ($86/bbl) as supply growth exceeds incremental demand and OPEC spare capacity more than doubles as a result.

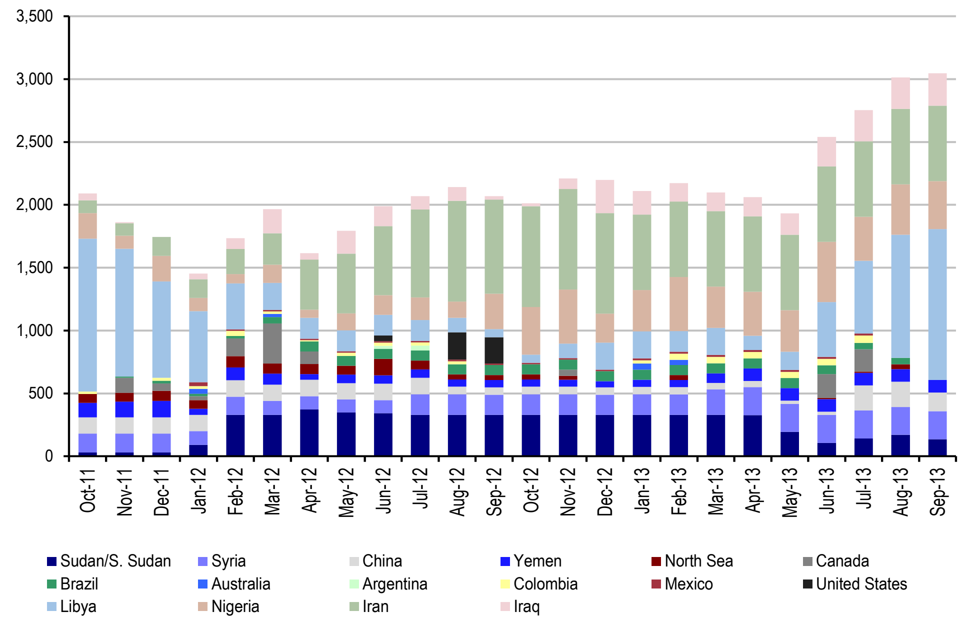
3Q13 hit by supply issues in MENA; recovery in sight now?

Crude Futures Benchmarks ($/bbl)



Source: Bloomberg, UBS

Estimated Production Outages (kb/d)



Source: EIA, UBS

- **Brent averaged ~$110/bbl in 3Q13**, in line with our estimate, as markets were supported by supply outages, macro recovery and geopolitical risk.
- **WTI averaged a higher-than-expected ~$106/bbl in 3Q** as US refineries ran at 8-year highs due to strong margins, and WTI's swing to near-term backwardation encouraged a sharp drawdown in Cushing stocks.
- **Including Iran, nearly 3 mb/d of production, was shut-in in August and September,** mainly in MENA countries. But situation improving as we head into 4Q13.

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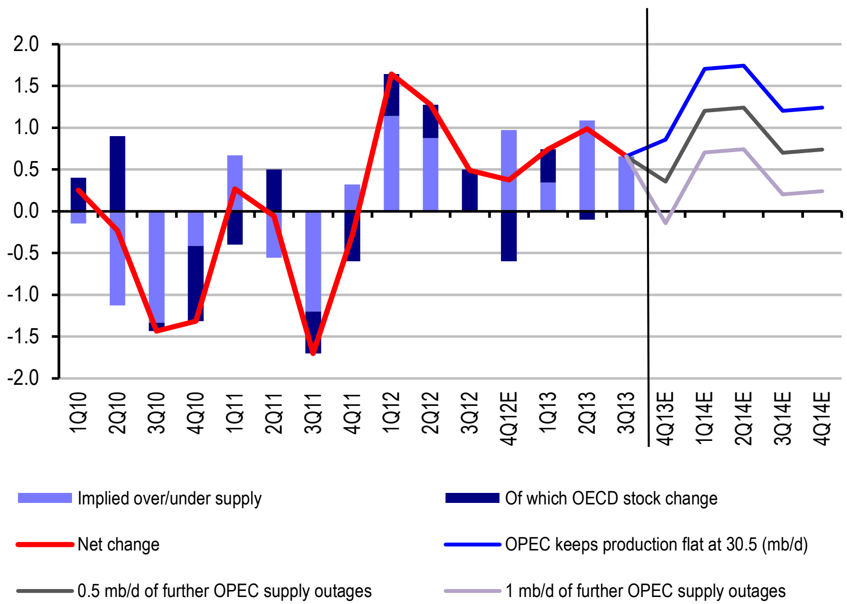
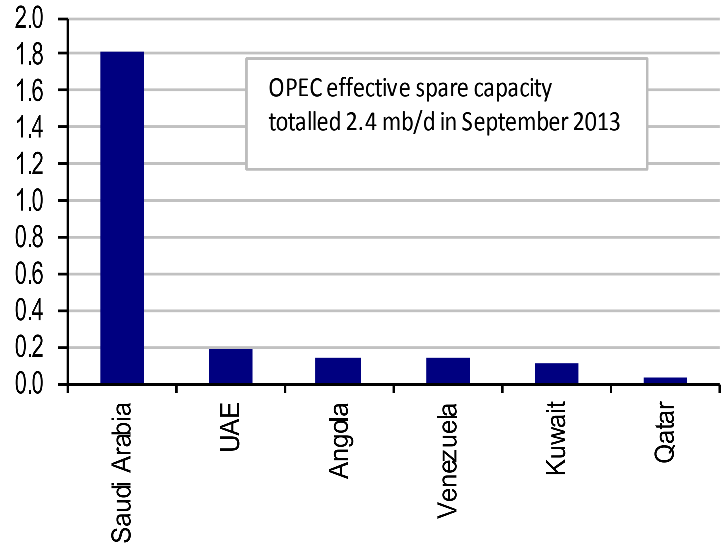
Market balances likely to ease in 4Q13 and into 2014

Market Balance and Stock Change (mb/d)



Source: IEA, UBS

OPEC 'Effective' Spare Capacity (mb/d)

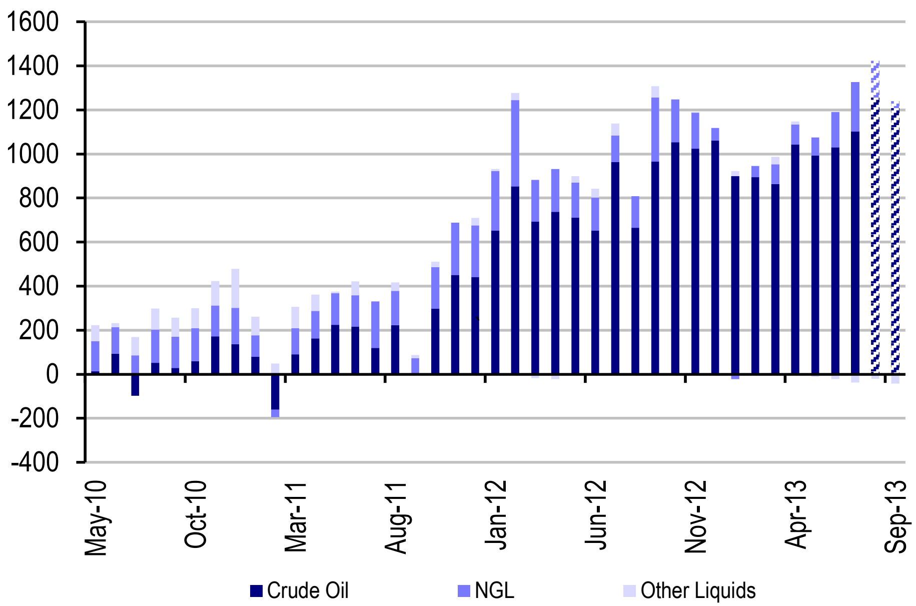


Source: IEA, UBS

- Despite recent outages in Libya, Iraq etc, **recent OPEC crude production (30 mb/d in September) is still marginally above 'call on OPEC'.**
- With **spare production capacity recently reduced to as low as 2.4 mb/d** (in September), any further supply outages could support prices in the short-term.
- But assuming some recovery, **market tightness should ease** into 4Q13 and 2014.

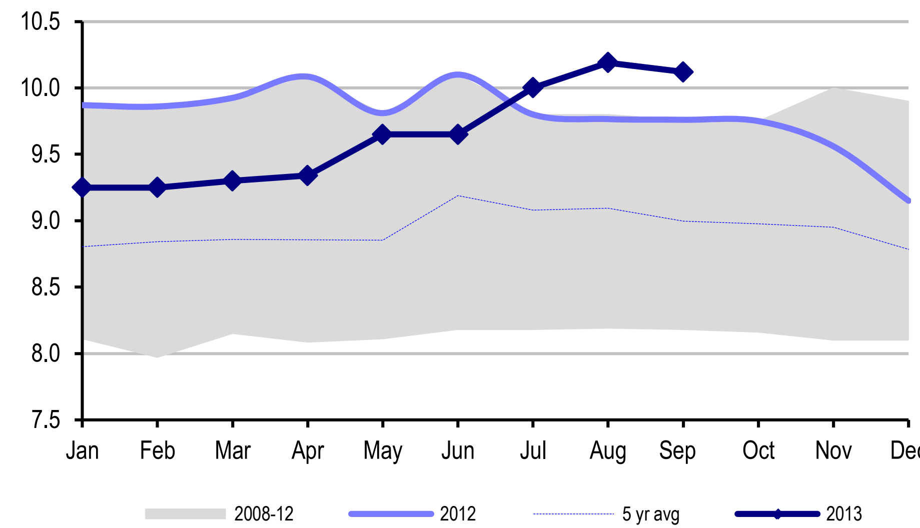
Higher output in US and S Arabia prevents prices rising higher

US Oil Production – y-o-y Change (kb/d)



Source: EIA, UBS (August/September estimates based on weekly data)

Saudi Crude Production (mb/d)



Source: IEA, UBS

- **Without higher US and Saudi Arabian production, prices would have been much higher still in 3Q13.**
- **US year-on-year supply growth has picked up again since April**, confounding doubts of slowdown in shale oil output.
- **Saudi Arabia meanwhile has ramped up output to a new 32-year high >10 mb/d** to balance markets, but also due to strong domestic consumption and new refining capacity.

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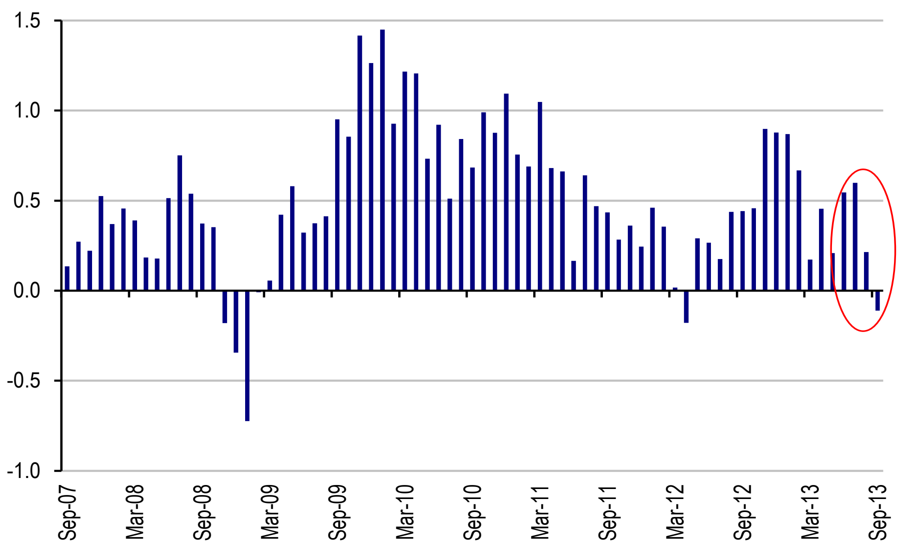
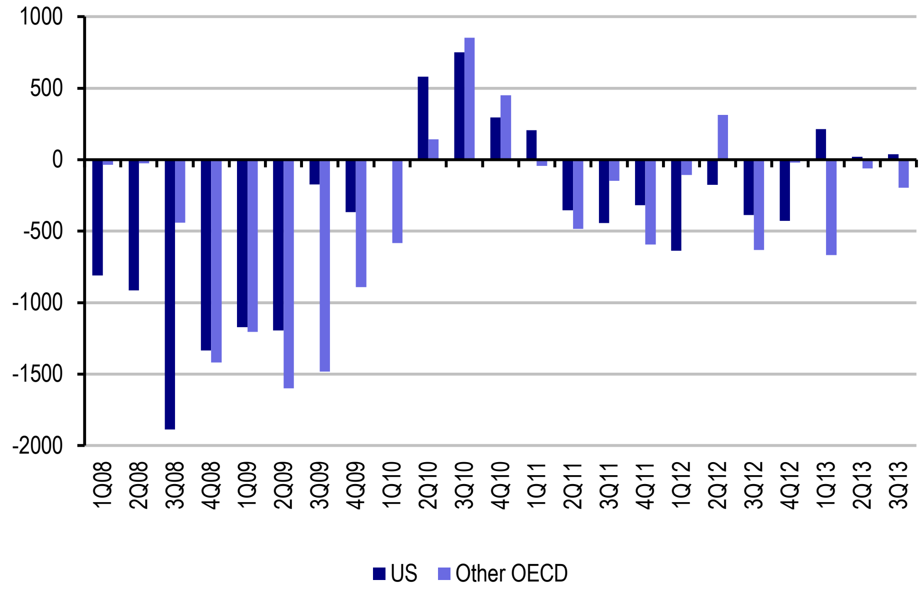
Demand growth sustained by China

China Demand Change – y-o-y Change (kb/d)



Source: Bloomberg, Reuters, Xinhua News Agency, UBS

OECD Oil Demand: y-o-y Change (kb/d)



Source: IEA, UBS

- **China's y-o-y demand growth has shown some weak months**, but remains broadly in line with our estimated yearly growth of 5%.
- **Global demand to grow 1 mb/d in 2013** (to 91.2 mb/d)and 1.2 mb/d in 2014 (to 92.4 mb/d).
- Recent slowdown in non-China emerging economies offset by **some perkiness in OECD demand**.

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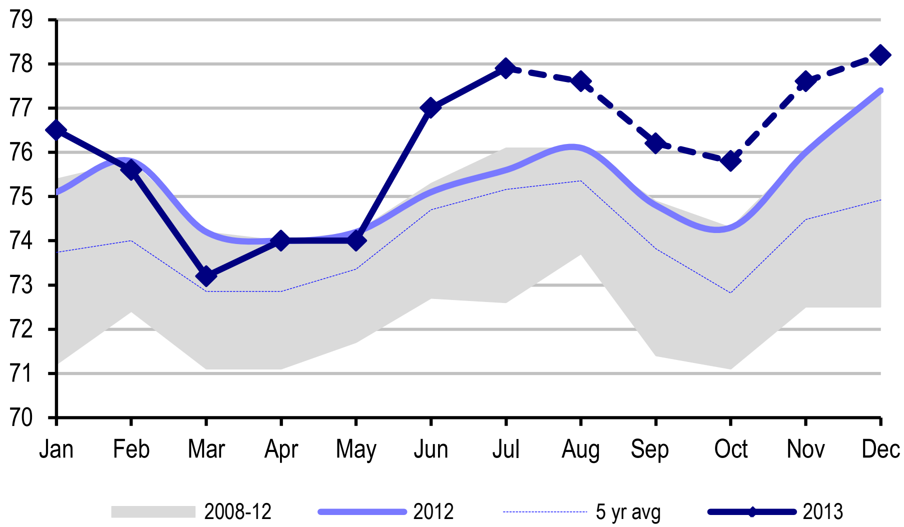
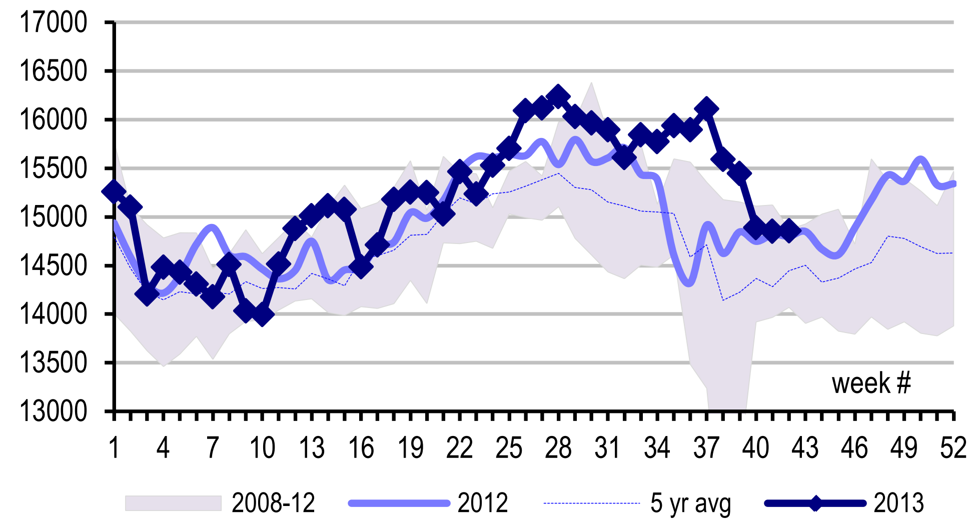
Crude demand from refineries remains strong

Global Crude Refinery Throughputs (mb/d)



Source: IEA, UBS

US Refinery Crude Runs (kb/d)



Source: EIA, UBS

- **Global refinery throughputs have been well above year-ago levels.**
- **Healthy margins in the US** have seen crude runs at their highest level since 2005-2007.
- **New refining capacity** starting up in China and Saudi Arabia.

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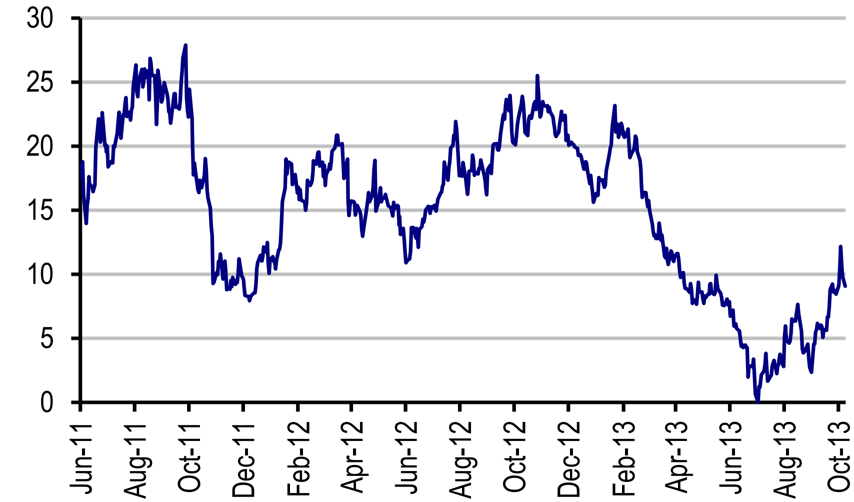
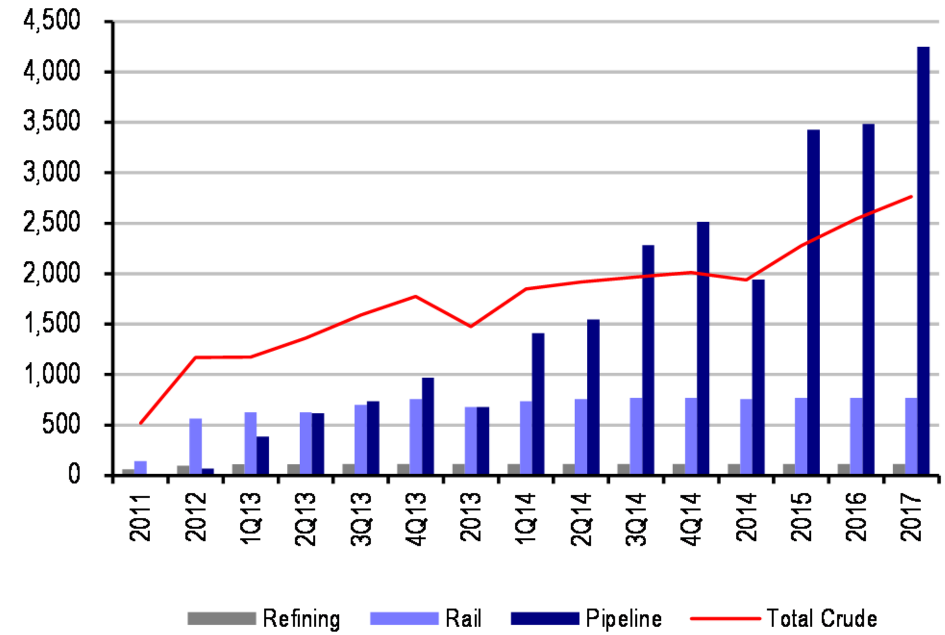
New pipelines, but is Cushing glut really resolved?

ICE Brent vs. NYMEX WTI ($/bbl)



Source: Bloomberg, UBS

PADD II Crude Production vs. Incremental Takeaway Capacity (kb/d) (relative to 2010)



Source: UBS

- **WTI's discount to Brent has averaged $5/bbl recently,** after narrowing significantly in 2Q13.
- We are not convinced Midcontinent infrastructural challenges are fully resolved and expect **WTI's discount to Brent to widen to $10/bbl again in 4Q** before gradually settling at $6 from 2Q14, as new pipeline infrastructure completely debottlenecks the region.
- **Long-term, we see WTI at $86/bbl**.

SECTION 2

Prices to slide even further in the long-term

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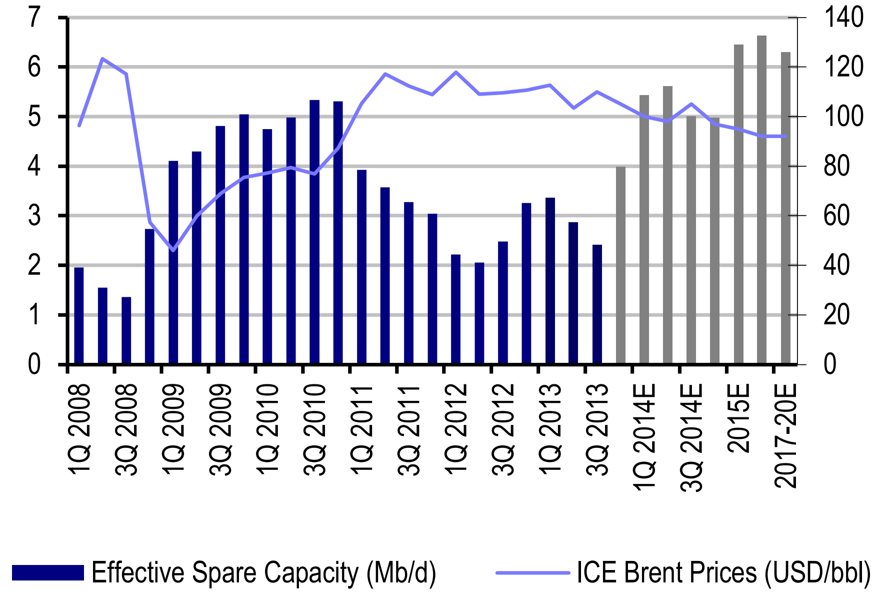
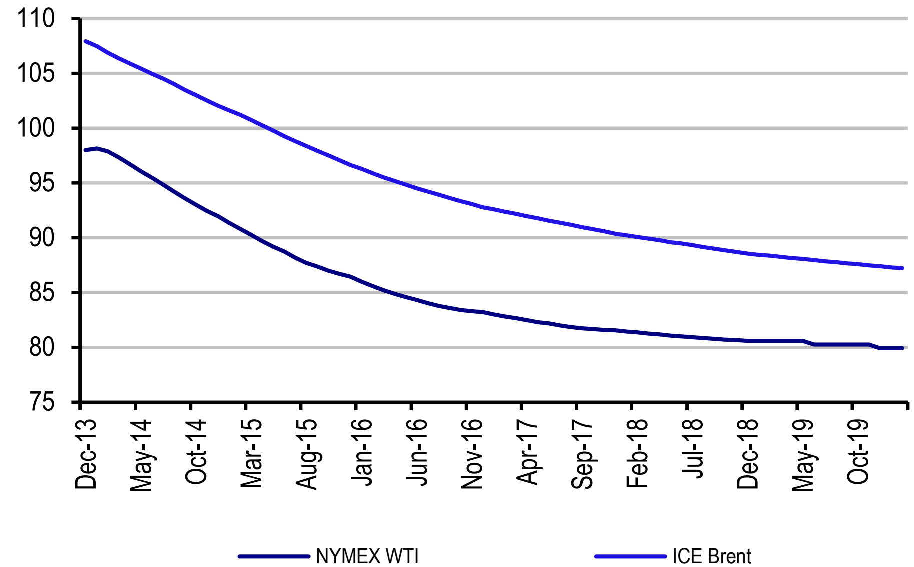
Easing balances keep prices in check

OPEC Effective Spare Capacity vs. ICE Brent Prices



Source: Bloomberg, IEA, UBS

Long-term Crude Futures Curves ($/bbl)



Source: Bloomberg, UBS. Strip of 28 October 2013

- **Big picture** is sluggish emerging economy demand growth for oil, gradual withdrawal of QE, high prices boosting energy efficiency and a strong supply response in non-OPEC, especially in the US.
- **Supply growth will be stronger than demand growth**; in fact non-OPEC supply growth alone will nearly match demand growth, reducing reliance on further OPEC capacity growth.
- Our balances show that **OPEC effective spare capacity will rise to 6%** of total global oil production capacity, up from 4% in 2013 and from tight 3% 2011 and 2012.

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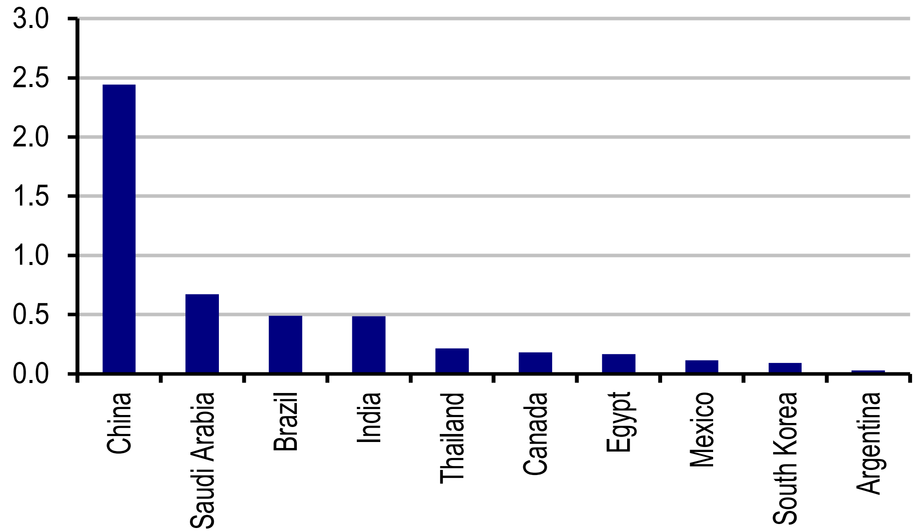
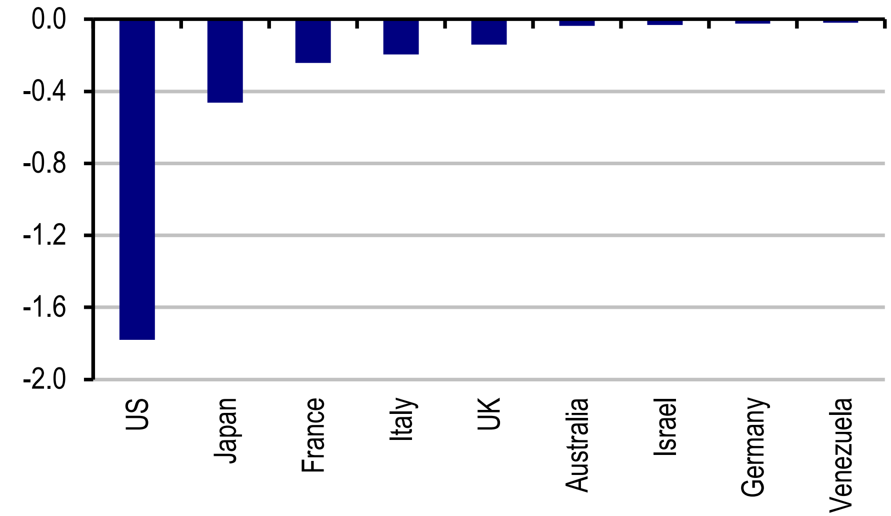
Demand growth from China, Saudi Arabia, Brazil and India

Oil Demand Growth by Country (2012-2020) (mb/d)



Source: IEA, UBS

Oil Demand Decline by Country (2012-2020) (mb/d)



Source: IEA, UBS

- **Oil demand increases in non-OECD more than offset decline in OECD**, including US. Global demand rises by an average 1 mb/d per annum in 2012-2020.
- **China remains the most important driver** by far for oil demand growth in next five years, adding around 0.5 mb/d per annum until 2020.
- **Saudi Arabia, Brazil and India** are other sources of significant demand growth.

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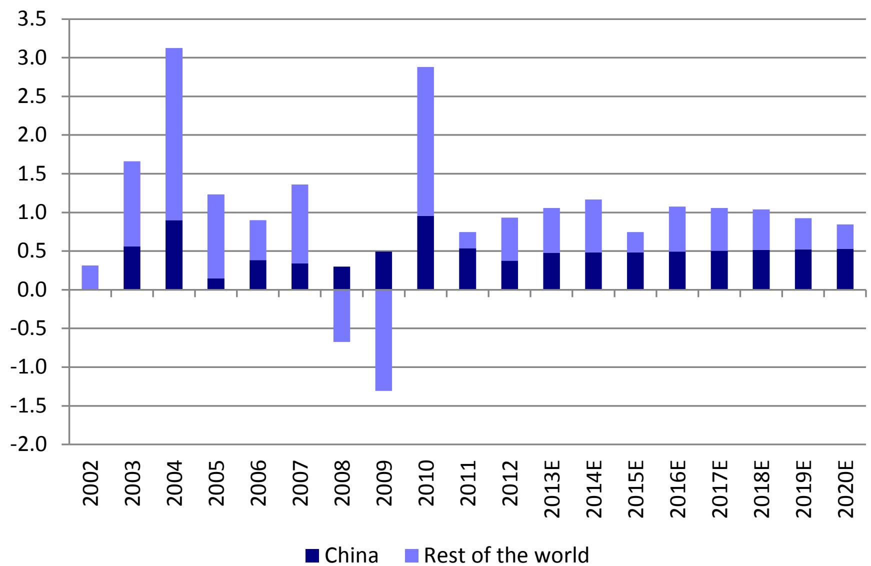
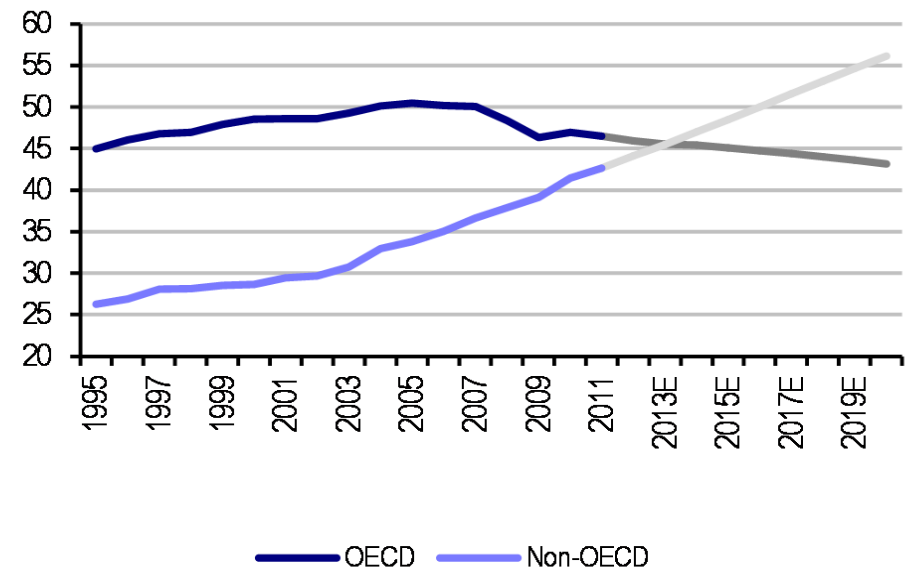
Slower demand growth from emerging economies

China's Contribution to Global Oil Demand Growth (mb/d)



Source: IEA, UBS

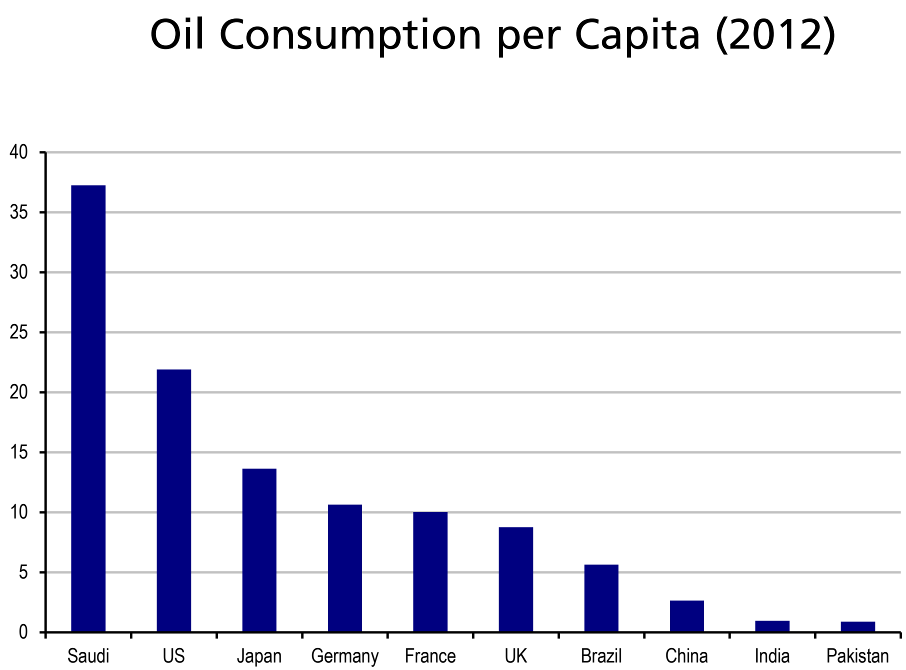
OECD vs. Non-OECD Oil Demand (mb/d)



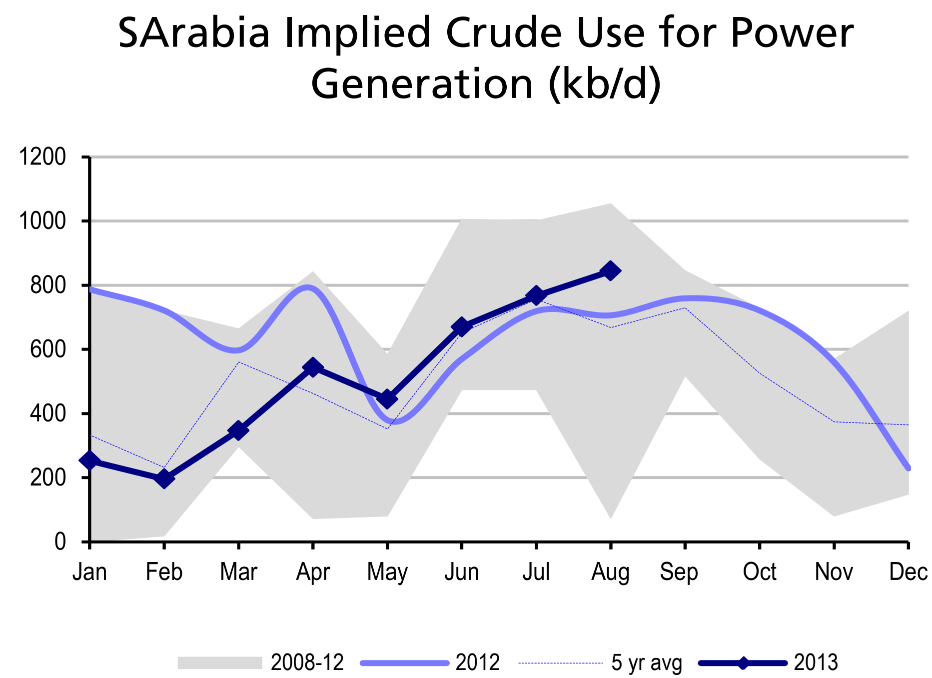
Source: IEA, UBS

- **Global oil demand growth remains driven by emerging economies**, with non-OECD now having overtaken OECD oil demand.
- **China still accounts for around 50%** of demand growth in 2012-20.

Saudi Arabia a new key source of oil *demand*



Source: IEA, UBS

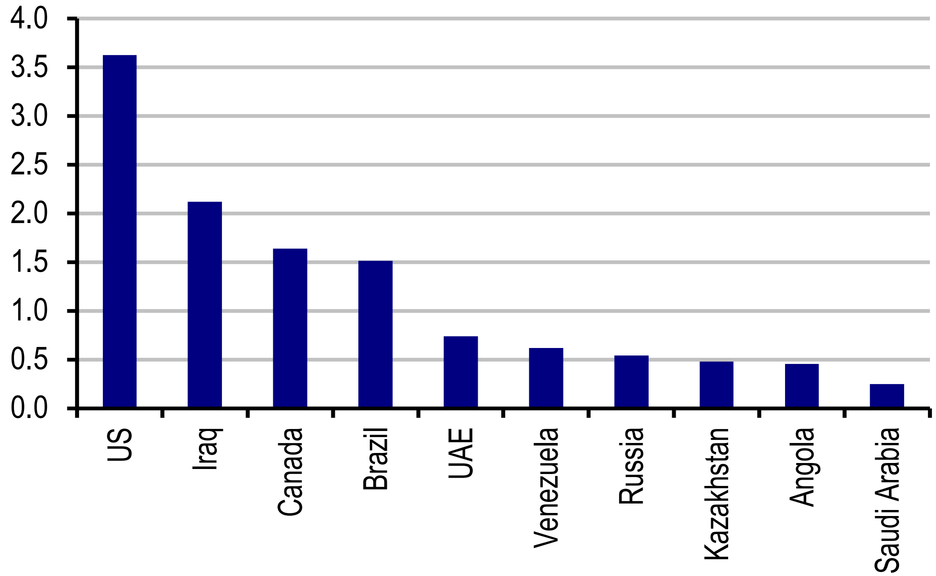


Source: JODI, UBS

- **Saudi Arabia has become the second-largest source of oil demand growth**, due to rapid population growth and some of the world's cheapest retail prices.
- **Lack of alternative power generation and transport infrastructure** is also responsible for incremental oil demand.

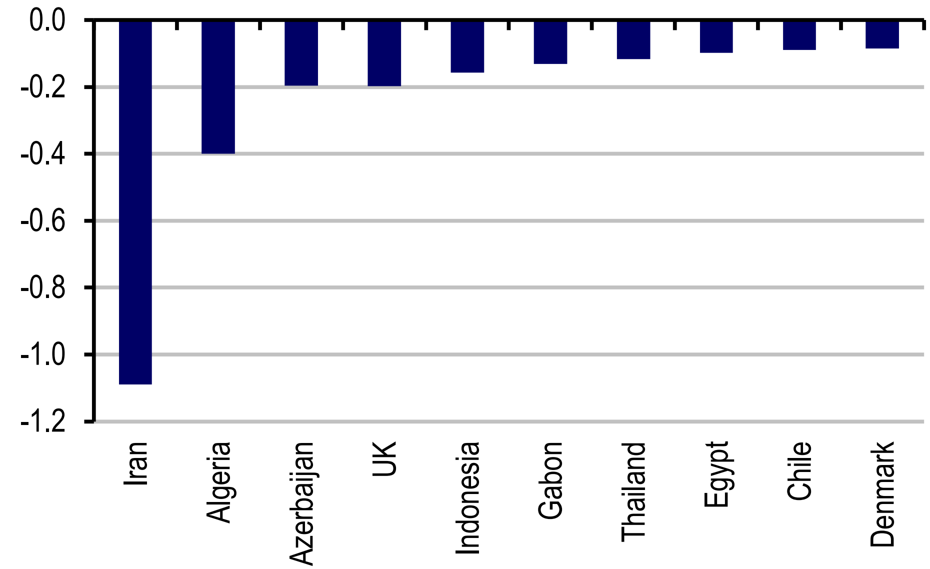
Americas and Iraq drive production growth

Oil Supply Growth by Country (2012-2020) (mb/d



Source: IEA, Wood Mackenzie, UBS
(Production *capacity* for OPEC members)

Oil Supply Growth by Country (2012-2020) (mb/d)



Source: IEA, Wood Mackenzie, UBS estimates
(Production *capacity* for OPEC members)

- **US, buoyed by surging tight oil production**, is expected to be the leading contributor to oil supply growth in next years.
- **Iraq's contribution still remains significant**, even after a downward revision in production capacity to 5.3 mb/d from 6 mb/d in 2020.
- **Iran, marred by the embargo**, heads the list of countries with declining production, followed by Algeria, Azerbaijan and Indonesia.

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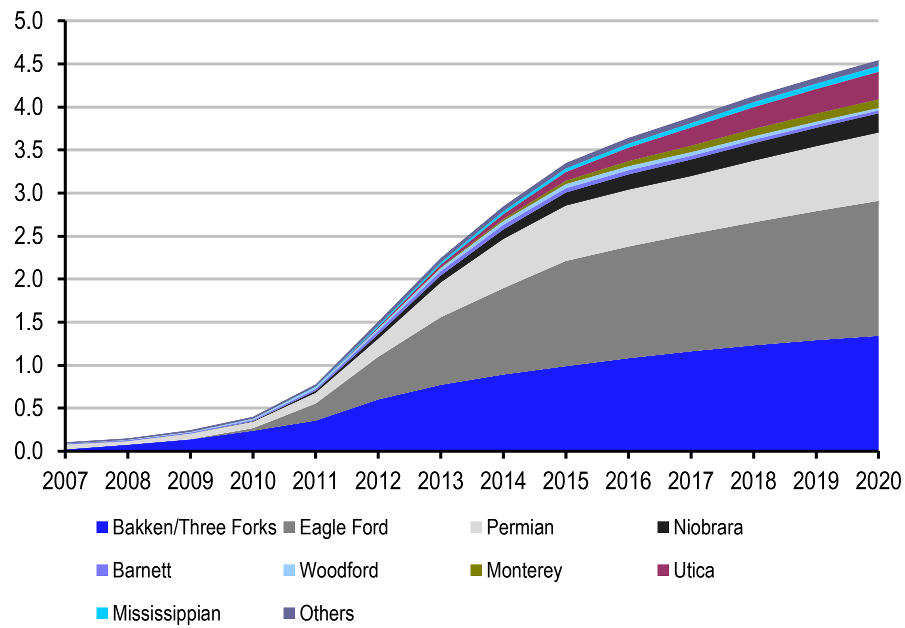
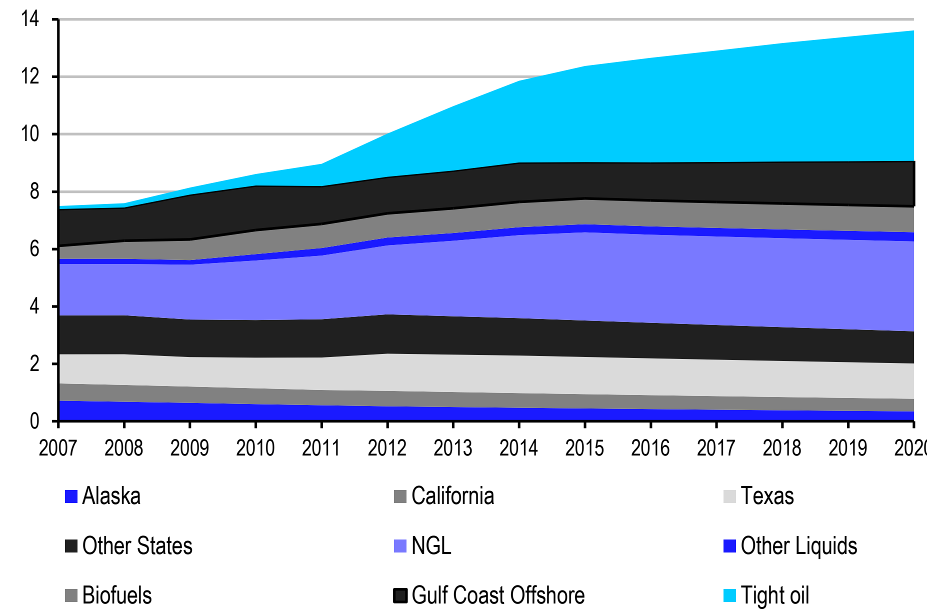
Tight oil production surge continue

US Tight Oil Production by Play (mb/d)



Source: Wood Mackenzie, Baker Hughes, EIA, IEA, UBS

US Oil Production by Source (kb/d)



Source: Wood Mackenzie, Baker Hughes, EIA, IEA, UBS

- **US tight oil output continues to surge** with Bakken, Eagle Ford and the Permian as the key contributors.
- We recently **revised up our near-term production outlook**, following recent strength, but kept long-term outlook unchanged; overall tight oil production reaches 4.5 mb/d by 2020.
- Thus, **US total liquids production** (including fuel ethanol) grows from 10 mb/d to 13.7 mb/d, or by 0.46 mb/d per annum on average until 2020, making the US the world's largest producer.

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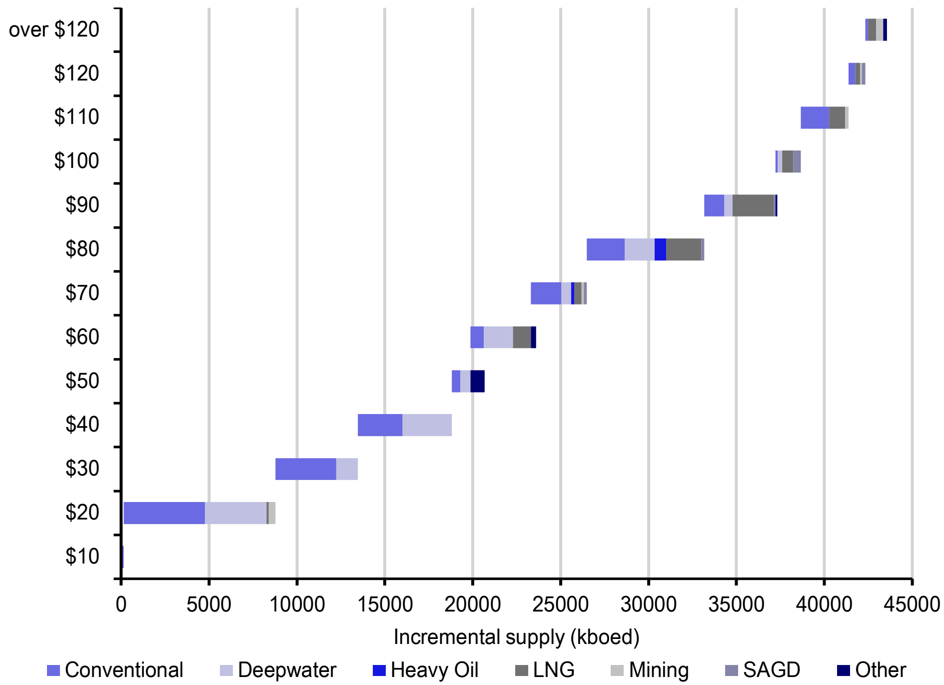
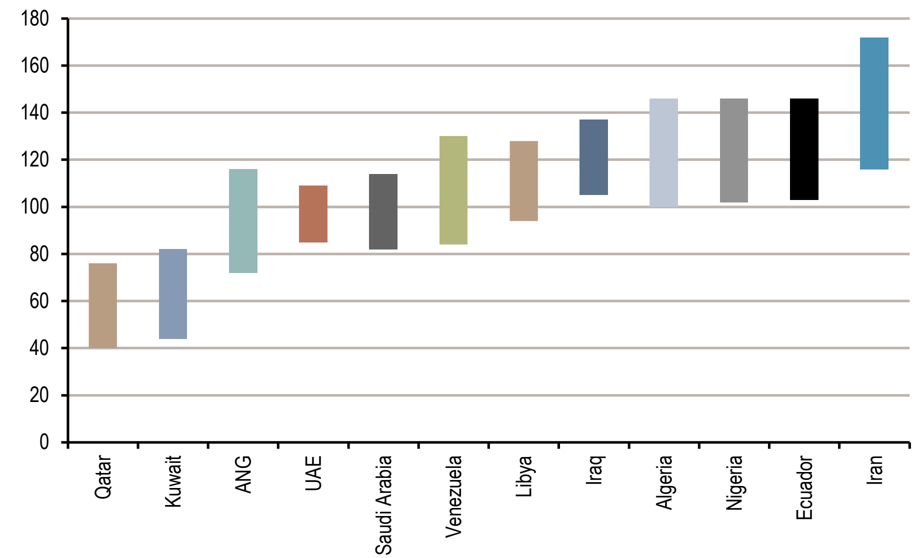
Support for $92 ‘floor’ from cost curve & OPEC budget needs

Supply Cost Curve



Source: Wood Mackenzie, UBS

Budget Breakeven Oil Price for OPEC States ($/bbl)



Source: APICORP, UBS

- **Marginal cost still at $80-90/bbl**, based on our cost curve/upstream project database.
- We believe **key OPEC countries will act to balance the market** in the short-term, as budget breakeven prices have risen sharply and will remain high.
- Long-term though, there is **risk of a price/market share fight within OPEC**, if it fails to accommodate Iraq’s ambitious production capacity growth plans.

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SECTION 3

Risks to the forecast

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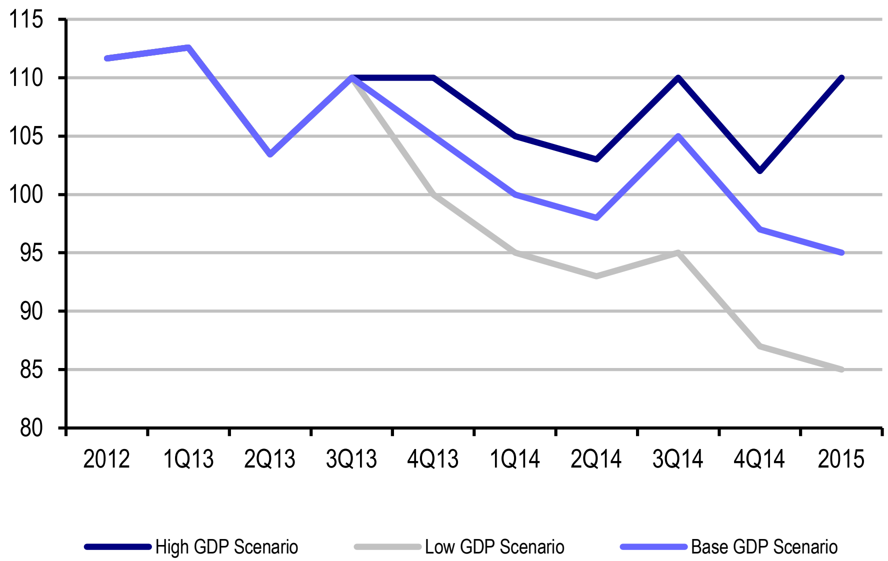
Risks to our forecast

- **Macro risks**: New shocks to global economy, especially if fed through to emerging markets, pose risk to our assumed annual oil demand growth ~1%.
- **Supply risks**: Still considerable risk to Iranian and other MENA oil supply. In early September, nearly 3 mb/d of production globally remains shut-in *including* curtailed Iranian output. Add to this perennial problems in mature producing areas and is clear that supply risks will continue to matter.
- **Technology**: Cheap natural gas penetrating the US transport sector could be a real game changer, if combined with continued growth in output of shale oil and gas. In our base case estimate, 1 mb/d of US demand could be displaced by natural gas by 2020.
- **End of the super-cycle**: Long-term prices could come under pressure if demand weaker and supply surprises to the upside. If US tight oil was so plentiful that it essentially supplied the marginal barrel, the $92/bbl 'floor' to prices we envisage could be lowered.

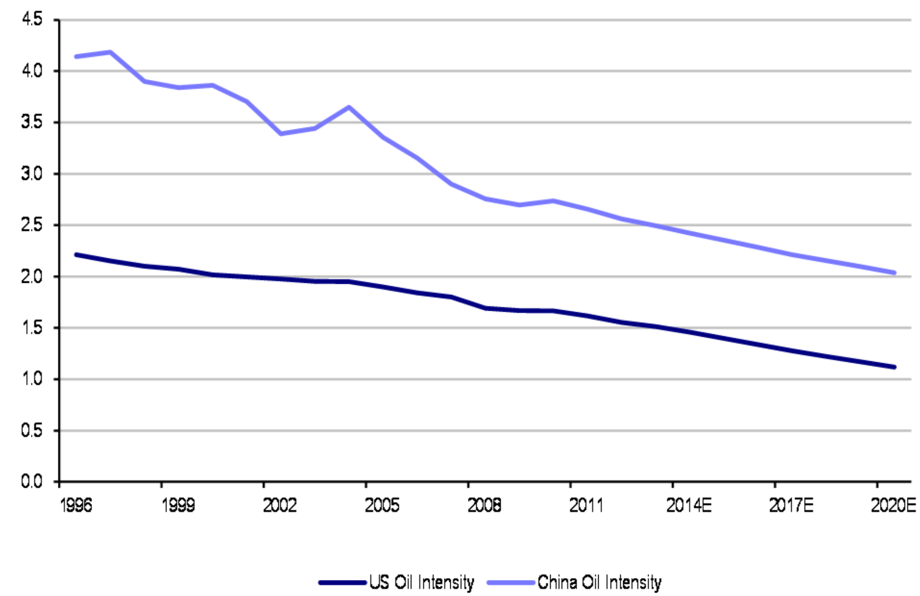
Macro risks to the outlook

Brent Price Forecasts by GDP Scenario ($/bbl)



Source: Bloomberg, UBS

US and China Oil Intensity



Source: EIA, UBS

- **Macro worries skewed to the downside**: a re-run GDP sensitivity exercise suggests that in a higher-growth case, Brent could average $110/bbl by 2015, or a full $15 higher than in our base case (and thus flat with 3Q13).
- **In a lower-GDP scenario**, Brent prices could fall to around $85/bbl by 2015, or $10/bbl lower than our base case assumption of $95.
- **High oil prices continue to encourage efforts to become more energy efficient**, in both developed and emerging economies.

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Summary

- **Crude prices to dip in 4Q13 (avg: Brent $105; WTI $95/bbl)**, for 3 reasons:
  - Recent extreme supply tightness is easing – Libyan and Sudanese production recovering; rising Iraqi, US, Kazakhstan output
  - Geopolitical risk premium has receded, after conciliatory tone from new Iranian president
  - Slower demand growth in emerging countries offset by less pronounced decline in developed economies
- **2014 will see further price slide, with Brent averaging $100/bbl**, on strong non-OPEC supply growth of +1.6 mb/d offsetting incremental demand of +1.2 mb/d
- **Brent-WTI spread: to widen again but not as wide**; after recent narrowing we expect $10 in 4Q13, settling into long-term $6 from 2Q2014
- **We maintain our post-2015 crude forecast for Brent ($92/bbl) and WTI ($86/bbl)**, for 4 reasons:
  - sluggish economic growth in emerging economies
  - gradual withdrawal of quantitative easing
  - high oil prices boosting energy efficiency efforts
  - strong supply response in non-OPEC, especially the US
- **Risks:** In the short-term, risks are to the upside, resulting from supply-side issues and geopolitics. Longer-term, we think slower economic growth, efficiency and technology gains and substitution all pose downside risks to demand and prices.

Q&A

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UBS 12-Month Rating	Rating Category	Coverage[1]	IB Services[2]
Buy	**Buy**	44%	32%
Neutral	**Hold/Neutral**	46%	32%
Sell	**Sell**	10%	19%
UBS Short-Term Rating	**Rating Category**	**Coverage[3]**	**IB Services[4]**
Buy	**Buy**	less than 1%	less than 1%
Sell	**Sell**	less than 1%	less than 1%

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.
3:Percentage of companies under coverage globally within the Short-Term rating category.
4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS. Rating allocations are as of 30 September 2013.

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UBS 12-Month Rating	Definition
Buy	FSR is > 6% above the MRA.
Neutral	FSR is between -6% and 6% of the MRA.
Sell	FSR is > 6% below the MRA.
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Buy	Buy: Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.
Sell	Sell: Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.

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