The New Oil Order

Lower for longer to keep capital sidelined



Commodities Research

Shale is creating a new more dynamic margin of adjustment

E&Ps can conserve cash as impressively as they can spend it

The search for a new equilibrium continues. Unlike in the past when the rebalancing took place primarily in the 'physical' and 'paper' markets, in the current environment, the 'capital' markets are playing the dominant role. This new source of adjustment is generating not only a high level of disorientation, but also the need to reassess the paradigm.

Faster 'time to build' makes capital the margin of adjustment

Previous paradigms were plagued with one simple problem: capital was slow to move due to the long time lag between capex and production. Capital investments are now a new margin of adjustment – a direct result of the collapsed time lag shale has created between when capital is spent and when production rises, as well as producers' ability, through very high decline rates, to quickly throttle back production when spending slows. With capital driving the adjustment process, the market has more levers to balance the market – credit, equity and cash flow.

The need for sidelined capital may force a U-shaped recovery

The credit, equity and oil price mix today is likely appropriate to achieve the slowdown in supply growth needed to balance the global oil market by 2016. Overall capex in the US E&P sector is down 25% – a further decline from 12% in mid-December – and drilling has dropped more quickly than in previous bear markets. But the short-cycle nature of capital investments in shale requires that such pressure remain in place long enough to also sideline the large amount of low cost capital available today. Because shale can rebound quickly once capital investments return, we now believe WTI needs to trade near \$40/bbl for most of 1H15 to keep capital sidelined.

The one-year ahead one-year swap is a market anchor

Excess storage and tanker capacity suggests the market can run a surplus for a very long time, preventing storage blowouts and a collapse in cash prices. This leaves cash prices as a simple storage arbitrage to the forwards. As producers hedge 9-12 months out, new capital primarily focuses on the 12-24 month strip, making this the new market anchor that enables the capital markets to balance the future physical markets. To keep capital sidelined, this strip needs to remain well below our revised 'new normal' WTI estimate for the marginal cost of production of \$65/bbl.

Jeffrey Currie

(212) 357-6801 jeffrey.currie@gs.com Goldman, Sachs & Co.

Damien Courvalin

(212) 902-3307 damien.courvalin@gs.com Goldman, Sachs & Co.

Anamaria Pieschacon

(917) 343-9076 anamaria.pieschacon@gs.com Goldman, Sachs & Co.

Michael Hinds

(212) 357-7528 michael.hinds@gs.com Goldman, Sachs & Co.

Investors should consider this report as only a single factor in making their investment decision. For Reg AC certification and other important disclosures, see the Disclosure Appendix, or go to www.gs.com/research/hedge.html.

Executive Summary

- The search for a new equilibrium in oil markets continues. Unlike in the past when the rebalancing took place primarily in the 'physical' and 'paper' markets, in the current environment, the 'capital' markets are playing the dominant role.
- 2. Previous periods of adjustment were plagued with one simple problem: capital was slow to move due a long lag between capital expenditures and production. Capital investments are now a new margin of adjustment a direct result of the collapsed time lag shale has created between when capital is spent and when production rises, as well as producers' ability, through very high decline rates, to quickly throttle back production when spending slows.
- 3. The credit, equity and oil price mix today is likely appropriate to achieve the slowdown in supply growth needed to balance the global oil market by 2016. Overall capex in the US E&P sector is already down 25% a further decline from 12% in mid-December. The industry's aggressive capital structure requires it to do so, with high yield defaults potentially beginning if prices were maintained at \$40/bbl for 6 months with no cash conservation. The more credit intensive companies are already in maintenance mode where cash is being reserved for maintaining fields only. We now expect US supply growth to slow to 400,000 b/d yoy by 4Q15.
- 4. However, supply tends to rises more quickly than it falls in response to investment. As a result, the short-cycle nature of capital investments in shale requires that such pressure remain in place long enough to keep capital sidelined while the market rebalances, creating a more U-shaped type of recovery in prices. The large availability of low-cost external capital from either private equity or international majors exacerbates this need for sustained low prices to keep these assets from quickly being redeployed in a lower cost environment. This is the other side of short-cycle production it can and will come back very quickly with access to capital suggesting that even OPEC should not be a second mover (we no longer see any response from core-OPEC).
- 5. To keep all capital sidelined and curtail investment in shale until the market has rebalanced, we believe prices need to stay lower for longer. As short cycle shale producers typically hedge out 9-12 months, E&P capital primarily focuses on the 12 to 24 month strip in making investment decisions. As a result, the market anchor is shifting to this 'one-year-ahead' swap which creates the level of investment to balance future physical markets. We therefore believe it is this forward price that needs to remain below full-cycle costs to curtail investment, not the spot price.
- 6. Due to significant cost deflation and efficiency gains, we are lowering our estimate for marginal costs to \$65/bbl and \$70/bbl for WTI and Brent from \$80/bbl and \$90/bbl, respectively. These are our new 'normal' price forecasts. As a result, we forecast that the one-year-ahead WTI swap needs to remain below this \$65/bbl marginal cost, near \$55/bbl for the next year to sideline capital and keep investment low enough to create a physical rebalancing of the market.
- 7. After a decade of investment, substantial excess storage and tanker capacity suggests the market can run a surplus far longer than it has in the past, likely preventing storage blowouts and a collapse in cash prices. This leaves cash prices as a simple storage arbitrage to the one-year-ahead swap. Although logistical issues to get the surplus oil in the right geographical locations may create volatility in timespreads, ultimately we estimate that there is sufficient capacity to store a 1.0 million b/d surplus for nearly a year. We expect the US to be the last region to fill and the WTI-Brent spread to widen in 2Q15 as discounted US crude prices and strong margins lead US refineries to export the glut to the other side of the Atlantic.

- 8. Once a 2H15 US supply growth slowdown is more certain and given the very high decline rates on US production, renewed Libyan disruptions and an already visible demand response in the US, we expect the market to rebalance with inventories drawing rapidly from 3Q15 onwards. To accommodate the substantial expected first half inventory build and using the storage arbitrage to the one-year ahead swap, we are revising down our 3-, 6- and 12-month price forecasts for Brent to \$42/bbl, \$43/bbl and \$70/bbl, respectively, from \$80/bbl, \$85/bbl and \$90/bbl, and for WTI to \$41/bbl, \$39/bbl and \$65/bbl from \$70/bbl, \$75/bbl and \$80/bbl. The later expected trough in WTI prices is due to excess US storage capacity.
- 9. A new industry will likely be born out of this environment with lower costs driven not only by cost deflation in other commodities, currencies, rig rates and oil services but also by substantial productivity gains created by engineers facing tighter margins. Importantly, while shale is the marginal barrel today, we don't believe it will represent the marginal project tomorrow. Now that shale has risen to be the dominant technology in an industry facing cost deflation, efficiency gains and margin compression, companies are entering a more risky environment. Capital rebalancing includes the need to match high-quality assets with more conservative capital structure and to discard high-cost deepwater, oil sands assets and other alternative technologies to make the industry more efficient. We believe, however, this is unlikely to occur for another year or more.

Exhibit 1: We now see prices staying lower for longer to keep capital sidelined \$/bbl

		WTI			Brent		WTI-Brent				
	New	Old	Forwards	New	Old	Forwards	New	Old	Forwards		
1Q15	46.00	75.00	49.00	47.00	85.00	51.50	-1.00	-10.00	-2.50		
2Q15	40.50	70.00	50.00	42.00	80.00	52.50	-1.50	-10.00	-3.00		
3Q15	44.00	75.00	50.50	48.00	85.00	53.50	-4.00	-10.00	-3.00		
4Q15	58.00	75.00	51.50	64.50	85.00	55.00	-6.50	-10.00	-3.50		
1Q16	65.00	80.00	52.00	70.00	90.00	56.00	-5.00	-10.00	-4.00		
2Q16	65.00	80.00	53.00	70.00	90.00	57.00	-5.00	-10.00	-4.00		
3Q16	65.00	80.00	53.50	70.00	90.00	58.00	-5.00	-10.00	-4.50		
4Q16	65.00	80.00	54.00	70.00	90.00	58.50	-5.00	-10.00	-4.50		
2015	47.15	73.75	50.25	50.40	83.75	53.15	-3.25	-10.00	-3.00		
2016	65.00	80.00	53.15	70.00	90.00	57.40	-5.00	-10.00	-4.25		

Source: CME, ICE, Goldman Sachs Global Investment Research.

Lower for longer to keep capital sidelined

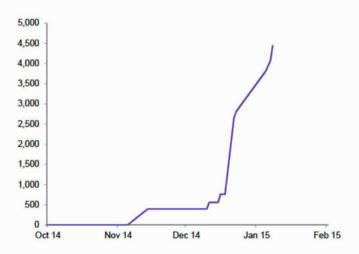
The search for a new equilibrium in the oil market continues. Unlike in the past, when the rebalancing took place primarily in the 'physical' and 'paper' markets, today the 'capital' markets are playing the dominant role. This new source of adjustment is generating not only a high level of disorientation, but also the need for an entirely new paradigm from which to view these markets. It is typically such periods of price stress that bring to the forefront new margins of adjustment that can lie dormant until the system is forced to adjust.

The modern oil market became apparent in 1973 with the rise of OPEC as the swing producer which forced a clearing price on the market. Before then the price of oil was simply a meaningless internal transfer price for integrated oil. In 1986, when surplus non-OPEC oil needed to find a home, the 'commodity trader' replaced OPEC's official price with financial intermediation. This gave birth to liquid futures markets where risk transference and storage arbitrage played an important role in the adjustment process. This lasted until 2004 when the 'commodity investor' turned long-dated oil prices into an equity-like instrument to anticipate surpluses and deficits in an attempt to smooth the adjustment process.

Each subsequent paradigm sped up the adjustment process, making it more dynamic and efficient. However, each adjustment process was plaqued with one simple problem: capital was slow to move due a long time lag between capital expenditures and production – even Saudi Arabia cut supply against committed capital. Capital investments are now a new margin of adjustment - a direct result of the collapsed time lag shale has created between when capital is spent and when production rises, as well as producers' ability, through very high decline rates, to quickly throttle back production when spending slows. US E&P companies are beginning to show an ability to conserve cash that is as impressive as their ability to spend it, creating a rebalancing process through 'short-cycle capital' that can impact physical production rather rapidly, just like in manufacturing. Further, as capital markets now drive the adjustment process, they provide more levers for the market to pull to create rebalancing - credit, equity and cash flow.

Exhibit 2: The speed and volume of US E&P capex reductions so far is unprecedented

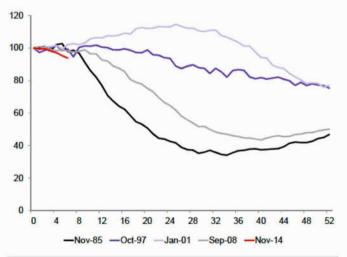
Cumulative cuts in US E&P 2015 capex (million \$)



Source: Company data.

Exhibit 3: The US rig count drop is faster and larger than in any other bear market

Indexed US oil rig count (100 as of peak) vs. weeks from peak



Source: Baker Hughes.

Overall capex in the US E&P sector is already down 25% – a further decline from 12% in mid-December. This is because the industry's aggressive capital structure requires it to reduce capex given potentially high yield defaults if prices stay as low as – or lower than – \$40/bbl for 6 months and cash isn't conserved (the average E&P in our equity and credit coverage is about 1 turn more levered than entering the 2008/09 downturn). In response, the more credit intensive companies are already in maintenance mode, with cash being reserved only for maintaining fields. This has already translated into the fastest decline in drilling due to lower prices than the industry has ever seen.

This also suggests that the market is likely near the appropriate credit, equity and oil price mix to achieve a sufficient slowdown in US production growth to balance the global oil market by 2016. However, the short-cycle capital nature of shale requires that such pressure remain in place in the coming months, likely creating a more U-shaped type of recovery with more downside risks. The significant availability of low-cost external capital from either private equity or international majors exacerbates the need for sustained low prices to avoid these assets from quickly being redeployed in a lower cost environment (the 500bp increase in cost of high yield E&P funding since last summer is equivalent to an additional \$3-5/bbl further decline in oil prices on a 50% debt funded well). This is the other side of short-cycle production – it can and will come back very quickly with access to capital – suggesting that even OPEC should not be a second mover (we no longer see any response from core-OPEC).

To keep all capital sidelined and curtail investment in shale until the market has rebalanced, we believe prices need to stay lower for longer. As short cycle shale production is a 12 month investment proposition, producers typically hedge out 9 to 12 months. As a result, fresh E&P capital primarily focuses on the 12 to 24 month strip in making investment decisions. As a result, the market anchor is shifting to this 'one-year-ahead' swap which creates the level of investment to balance future physical markets. It is therefore this forward price that needs to remain below full-cycle costs to curtail investment, not the spot price. Due to significant evidence of cost deflation and efficiency gains, we are lowering our estimates for the marginal cost of production to \$65/bbl and \$70/bbl for WTI and Brent from \$80/bbl and \$90/bbl, respectively. These are our new 'normal' price forecasts. As a result, we forecast that the one-year-ahead WTI swap needs to remain below the \$65/bbl marginal cost, near \$55/bbl for the next year to sideline capital and keep investment low enough to allow for a physical rebalancing of the market.

After a decade of investment, substantial excess storage and tanker capacity suggests the market can run a surplus far longer than it has in the past, likely preventing storage blowouts and a collapse in cash prices. This leaves cash prices as a simple storage arbitrage to the one-year-ahead swap. Although logistical issues to get the surplus oil in the right geographical locations may create volatility in timespreads, ultimately we estimate that there is sufficient capacity store 1.0 million b/d surplus for nearly a year. We expect the US to be the last region to fill and the WTI-Brent spread to widen in 2Q15 as discounted US crude prices and strong margins lead US refineries to export the glut to the other side of the Atlantic.

Once a 2H15 US supply growth slowdown is more certain and given the very high decline rates on US production, renewed Libyan disruptions and an already visible demand response in the US, we expect the market to rebalance with inventories drawing rapidly from 3Q15 onwards. To accommodate the substantial expected first half inventory build and using the storage arbitrage to the one-year ahead swap, we are revising down our 3-, 6- and 12-month price forecasts for Brent to \$42/bbl, \$43/bbl and \$70/bbl, respectively, from \$80/bbl, \$85/bbl and \$90/bbl, and for WTI to \$41/bbl, \$39/bbl and \$65/bbl from \$70/bbl, \$75/bbl and \$80/bbl. The later expected trough in WTI prices is due to excess US storage capacity.

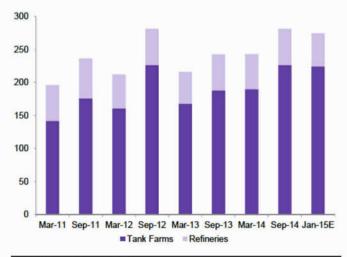
A U-shaped recovery: too much storage capacity, too many tankers and too much capital

With the exception of 1998 when a chain of emerging market crises created a deep and protracted U-shaped bear market recovery, almost all of the other bear markets in the modern oil market can be characterized as V-shaped. We believe this bear market will likely be characterized by more of a U-shaped recovery in which markets take longer to recover and will likely rebound to far lower price levels from where they sold off from. This is because the current industry has far greater storage and tanker capacity and a more aggressive capital structure than it had in the more recent past which diminishes the physical market's role and increases the capital market's role.

What was key to generating those relatively quick and physically driven V-shaped rebounds was a lack of storage capacity, tight freight markets and very conservative capital structures. All that was required was an inventory build large enough to breach on- and offshore storage capacity such that spot prices disconnected from forward prices and fell below cash costs. As supply growth hit a physical constraint by running out of both storage and demand capacity, it was forced to be shut-in. Combined with a demand response the market would quickly rebalance and push prices back to the old equilibrium. Because of the conservative capital structures, the physical stress would create a rebalancing before any significant sustained financial stress had a chance to materialize.

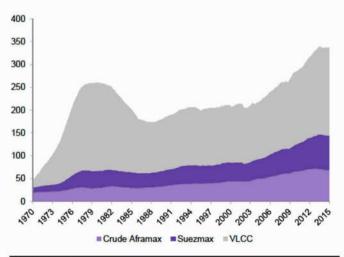
Today, the oil industry has more than adequate storage and freight capacity, which will allow it to run surpluses far longer than in the past, and very aggressive capital structures which suggest that it will run into financial stress far quicker than in the past. Not only has the US expanded storage capacity significantly, but Europe has also shuttered refining capacity that can be used as storage, and the global crude tanker fleet has grown by 100 million dwt since 2008 – while oil at sea has remained stagnant given the dominance of onshore drilling. We believe at least a 1.0 million b/d surplus can be maintained for a year before any significant problems would arise, precluding logistical dislocations as it takes time to get surplus oil and tankers in the right geographical location.

Exhibit 4: Excess US storage capacity is substantial and alone can accommodate a 500,000 b/d surplus for a year US spare capacity: onshore working storage capacity vs. ending stocks (tank farms and refineries, excluding leases and pipelines); millions of barrels



Source: US Department of Energy.

Exhibit 5: The global tanker fleet swelled in the late 2000s just as oil at sea stagnated with US domestic drilling Global crude fleet size (transportation & storage, million DWT)



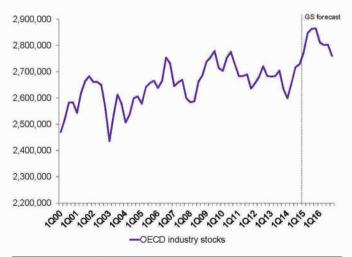
Source: Clarksons.

This suggests that the financial stress induced reductions in capex will create the rebalancing before the surpluses can do it by driving oil prices below cash prices. Specifically, our North American Energy equity research team led by Brian Singer estimates that a 30% decline in 2015 capex point to US Lower 48 oil production declining to 400 thousand barrels per day by 4Q15. Given our foreign supply and global demand expectations, this is sufficient to start drawing global inventories by 3Q15, with OECD inventories peaking above prior records in the face of higher storage capacity.

Because of the large capacity of the market to store oil, the spot price should trade a full carry arbitrage relative to the forwards. While logistical bottlenecks are likely to generate occasional volatility, timespreads are unlikely to blowout significantly as they did in 2008/09 or in 1998/99 absent a demand shock in 2015. In other words, crude oil is likely to trade more like aluminum where unconstrained storage capacity creates a very stable contango market that can be extremely persistent. However, what makes oil very different and the bear markets far shorter are the high decline rates and lower shut down costs that makes shuttering fields more attractive more quickly than in aluminum.

Our expectations are that the oil market could remain in a deep contango for about a year without hitting any significant storage constraints. While history would suggest that a storage blowout would push spot prices below \$35/bbl, we believe that by avoiding breaching storage capacity, the market will hover around \$40/bbl, potentially dipping at times into the high \$30/bbl which we see as the likely lows of this cycle. Importantly, this remains above the price of shut-in and default which would need to be well below operation costs although wide crude differentials to the coasts may create such outcomes for the most expensive Canadian or US wells.

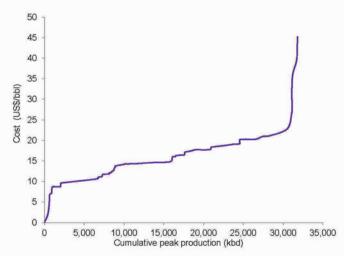
Exhibit 6: The inventory build will likely avoid breaching storage capacity constraints before drawing OECD industry stocks (thousands of barrels)



Source: International Energy Agency, Goldman Sachs Global Investment Research

Exhibit 7: Cash operating costs are still very low for most of the market except EOR and oil sands

Non-OPEC reported cost of production (\$/bbl)



Source: Company data, Wood Mackenzie, Goldman Sachs Global Investment Research.

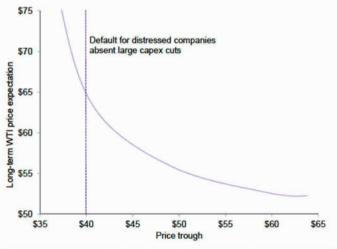
Cost deflation and industry rationalization creates a recovery to a far lower equilibrium

The ability of the market to run surpluses for longer than it could in the past, combined with the high decline rates of shale production suggest that capex and drilling reductions are likely to generate the rebalancing process before other adjustments. To create capital rebalancing, prices need to go low enough for long enough to generate a reduction in capital expenditures (which leads to a physical tightening six to twelve months later), followed by credit stress as prices fall lower until debt service becomes an issue, at which point the financial stress begins to create a price floor around \$40/bbl. Along with such a price floor should come a willingness to restructure; but as is often the case, prices may need to fall even lower to create a real response.

However, unlike physical stress, how low prices need to go is dependent upon the producer's view of the future and the persistence of the current low price environment. The lower and more persistent the producer views the future pricing outlook, the quicker the restructuring. Given the optimistic nature of the oil drilling business, producer views are unlikely to change until the environment becomes extremely hostile with prices low enough such that survival becomes questionable.

We believe a new industry will be born out of this environment with lower costs driven not only by cost deflation in other commodities, currencies, rig rates and oil services but also by substantial productivity gains created by engineers facing tighter margins. Although what exactly this new industry will look like is still extremely uncertain, we do know is that cost deflation has already created a 25% reduction in expenses. Accordingly, to reflect cost deflation in the industry and its sustainability through significant efficiency gains, we are reducing our 2016 and long-term price forecasts to \$65/bbl and \$70/bbl for WTI and Brent from \$80/bbl and \$90/bb,I respectively.

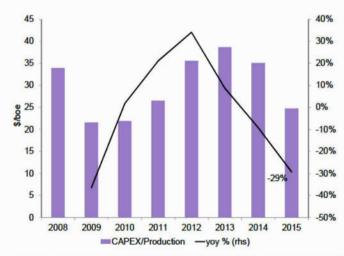
Exhibit 8: The lower the belief in the persistency of the current environment, the lower current prices need to go \$/bbl



Source: Company data, Goldman Sachs Global Investment Research.

Exhibit 9: Large cost reduction potential although shale set to remain lowest cost

US oily shale companies with 2015 guidance - \$/boe



Source: Company data, Goldman Sachs Global Investment Research.

It is important to emphasize that aggressive capital structures were not irrational in our view. Capital structures became aggressive not only because the search for yield put a premium on high yield financing, lowering its cost, but also because it was the appropriate capital for the high growth and very aggressive companies that spawned the Shale Revolution as the industry searched for new sources of oil against a backdrop of high and rising prices. However, now that shale has risen to be the dominant technology in an industry facing cost deflation, efficiency gains and margin compression, companies are entering a far riskier environment, where such aggressive capital structures are likely to be made modestly more conservative with a greater emphasis on cash and equity. So the capital rebalancing also includes the need to match some of the good assets with more conservative capital structure and discard the poor assets and technologies to make the industry more efficient. We believe, however, this is unlikely to occur for another year or more.

Although shale is the marginal physical barrel it is not the marginal future project

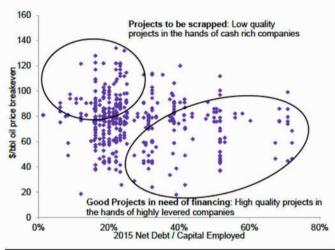
Despite being seemingly obvious, the realization that drilling in the ocean is far more expensive than drilling on land is really the key to the recent sell off, particularly for long-dated prices. Before July 2014, the market was supported on a longer-term basis near \$100/bbl by higher cost deepwater offshore and oil sands projects. As shale production surged in late 2013, it became increasingly clear that the size of the onshore resource base and the prolific nature of these projects made drilling in the sea and mining high cost oil sands a redundant more expensive source of supply. As these project economics became increasingly uneconomic, the market moved from pricing them at the margin to pricing shale at the margin, which created the initial re-pricing of long-dated prices from over \$90/bbl to under \$80/bbl.

This is very important for several reasons. First, when shale was intra-marginal, there were far fewer pressures for the producers to rationalize costs and operations as the higher cost deepwater projects kept the price far above producers' economics and producers avoided any real margin pressures. After nearly a decade of being intra-marginal, this created significant inefficiencies and fat in the system. As shale moved to the margin, all of these inefficiencies were exposed, and what the market is experiencing now is a rationalization of the shale industry as it adjusts to being the marginal project.

Second, on a longer-term basis these assets are relatively high quality despite some assets being held by relatively poor balance sheets and capital structures. Therefore, these higher quality assets are unlikely to be retired even if the owner is retired. Instead they are likely to be purchased by owners of other higher-cost, poor assets such as integrated or national oil companies with conservative capital structures and substantial cash reserves. And in place of these newly acquired assets, the new owners will likely focus on retiring higher cost, weaker assets in ex-US non-OPEC. This would give these more conservative companies a foot in shale, and they will likely operate the assets far more conservatively. In return they could scrap their less attractive deepwater, heavy oil and traditional alternatives and help find a new equilibrium with slower non-OPEC growth.

Exhibit 10: Assets need to be redistributed, so that highquality projects low on the cost curve get the necessary funding, while high-cost projects are dropped

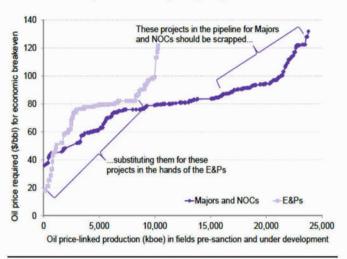
Top 400 Projects breakeven vs. financial leverage of operator



Source: Goldman Sachs Global Investment Research.

Exhibit 11: The majors and NOCs may look to shift down the cost curve through M&A

Cost curve for oil price linked projects (including LNG) under construction or pre-sanction split by majors/NOCs and E&Ps



Source: Goldman Sachs Global Investment Research.

The new short-cycle paradigm anchors the one year ahead one year swap or "one-year-ahead swap"

The fast-cycle nature of shale production, with its very quick response to increases and decreases in capex, suggests that once both oil prices and fundamentals begin to rebalance and recover, there becomes an increased likelihood that new capital will come into the market and kill off any material rise in oil prices through a rapid increase in supply. To prevent this from occurring, the forward prices need to drop to a level that slows investment as fundamentals and prices recover. We believe the correct forward is the one-year-ahead, one-year strip defined by the 12 to 24 month swap. The reason for this is that most short-cycle producers hedge the first 9 to 12 months of production and are more exposed to the prices 12 to 24 months ahead. In addition, given the fast-cycle nature of the production, the ROE's are mostly determined over the course of one year.

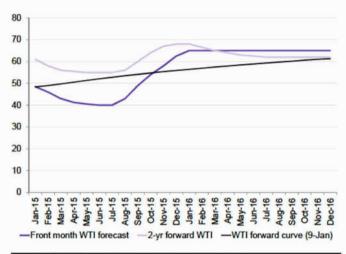
This suggests a shift in the market anchor which has historically either been very near-dated or very long-dated. The OPEC driven market was a cash market, the commodity trader market was a three-month market, and the commodity investor market was very long-dated. The new short-cycle market is more of a middle-dated driven market with the cash price simply a storage arbitrage to the one-year-ahead swap that US E&P producers target in their budgeting decisions. To account for an expected recovery in oil prices later this year, we have also embedded a forecast path for the one-year-ahead swap, which we expect to drop low enough by the summer to create a sustainable recovery by attempting to discourage further short-cycle investments, particularly given the large pools of capital that are currently sidelined, from entering this market.

For 2016, we believe that increased investment and hedging will push back down this deferred incentive price to limit blowing back into surplus in 2017. Importantly, once the current surplus overhang clears, we believe this new short cycle paradigm will create a more persistent backwardation in the oil forward curve given the need for: (1) the industry to hedge in what is likely to be a more risky environment and (2) the middle-dated price to regulate capital flows into the industry. This was ultimately one of the reasons why the deferred WTI oil curve was in a more persistent level of backwardation than the Brent curve post the debottlenecking of the Midcontinent.

As we have long argued, this risk transference through hedging from producers to investors will likely provide a consistent source of returns for commodity investors once fundamentals rebalance. In the meantime and until likely mid-year, our forecast points to a large carry in the WTI and Brent forward curves as well as declining prices. Both of these

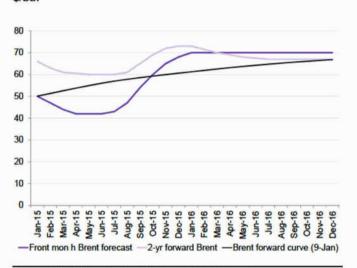
expectations would benefit a short GSCI-type rolling future position on either contract.

Exhibit 12: Lower one-year-ahead swap prices required... \$/bbl



Source: CME, Goldman Sachs Global Investment Research.

Exhibit 13: ...to achieve the necessary rebalancing \$/bbl



Source: ICE, Goldman Sachs Global Investment Research.

Although US onshore shale production is at the root of the current surplus, the crude glut currently resides beyond US shores on the other side of the Atlantic. This is because the post de-bottlenecking, the US Midcontinent has become extremely efficient at converting crude oil to product and exporting the products into the Atlantic basin. As European refineries were squeezed by these abundant product exports, the regional crudes started to back up during the summer months. This was reflected in the fact that Brent shifted into contango back in July long before WTI did.

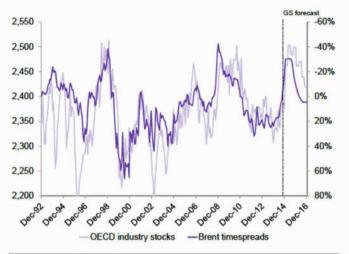
More recently, the combination of the Middle East defending market share in Asia, Libya ramping up briefly but sharply and North America displacing light crude imports from West Africa, has exacerbated the already developing crude overhang in the Atlantic basin. As a result, Brent timespreads today are weaker than WTI timespreads while the LLS-Brent spread is compressing to incentivize more crude to accumulate in the US, through higher imports, as significant low cost onshore storage remains available in the US.

We expect this to continue in the coming months, sustaining a narrow WTI-Brent differential. However, as US domestic crude oil production continues to grow, not only strongly in 1H15 but also medium-term, we expect US storage to fill with the export ban (which we assume remains in place at least in 2015-16) hindering the drain in US inventories once the global crude market starts to clear.

As a result, we expect the WTI-Brent differential to widen from mid-year 2015, reaching its widest level during this coming fall refinery turn-around window. Importantly, the modest expected increase in US refining capacity in 2015 and 2016 will likely leave the US market still net long crude at our expected lower US production growth pace of 450 thousand barrels per day in 2016. For 2016, we forecast a \$5/bbl Brent-WTI spread, evenly split between WTI-LLS and LLS-Brent. This reflects both the required incentive to send crude from the US Midcontinent to the USGC as well as the need for USGC prices to disincentivize imports and incentivize exports to Canada.

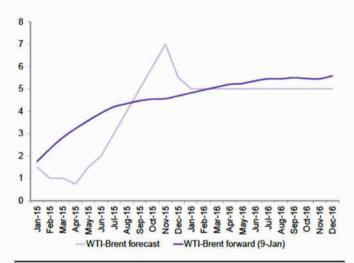
Exhibit 14: Available global storage capacity should prevent a blowout in timespreads

OECD commercial inventories (exc. US NGLs and 'other products', in million bbls); Brent timespread 1m - 5y (%)



Source: IEA, JODI, EIA, ICE, Goldman Sachs Global Investment Research.

Exhibit 15: Available US onshore storage capacity should keep the WTI-Brent differential narrow at first \$/bbl



Source: CME, ICE, Goldman Sachs Global Investment Research.

A fast-cycle large surplus

We update our 2015-16 global crude supply-demand expectations to reflect stronger production growth heading into 2015 but a sharper slowdown in 2H15 (see *The New Oil Order*, October 26, 2014 for our prior expectations). We also maintain our expectation that demand will accelerate on the combination of lower prices and stronger global economic activity.

- Stronger North American crude oil production growth in 4Q14 but a sharper decline in 2H15. We raise our US production level in 1H15 but higher capex cuts translate into a sharper slowdown in production both in the US and Canada. We see downside risk by year-end to our expectation that Canada's production continues to grow 100 kb/d.
- Small reductions to the rest of non-OPEC. We trim production growth expectations
 in Brazil, Azerbaijan, and Kazakhstan from 2H15 with higher decline rates in Mexico
 pushing production even lower. We still expect Russian production to grow slightly as
 Ruble depreciation helps offset lower oil prices (see Russian upstream: Myths and
 realities from our Russian Energy equity analyst, Geydar Mamedov from December 19,
 2014).
- No cut from core OPEC. We now expect that Saudi/core OPEC will not cut production
 to help balance the market vs. our prior expectation that OPEC would help balance the
 oil market in 2H15 once it became apparent that US shale production growth was
 slowing. This is anchored on our expectation that the slowdown in US shale oil
 production in 2H15 will be sufficient to clear the market overhang and the threat of
 capital being quickly redeployed to restart US production growth.
- Lower Libyan production. The recovery proved short-lived with the current conflict escalation limiting the potential for another recovery in the coming months. We tentatively assume production at 300 kb/d in 1Q15 and 450kb/d afterwards.

 Higher Iraqi production. Following the November deal between Baghdad and the KRG, Northern exports picked up in December with potential for further increases after the expansion of the Kurdish pipeline. Further, Southern exports reached recent record highs in December, finally suggesting that expanded capacity was operational. Although we expect monthly exports to remain volatile, we raise our 2015 production growth forecast to 300 kb/d. For now we continue to expect no deal with Iran and flat production.

Still expecting oil demand to recover. While sentiment so far this year has focused on the potential downside risks to the global economic outlook – on European stresses, recent marginally softer US data and fears over EM commodity producers – our economists continue to expect sequentially stronger growth in 2015. While our modeling suggests that lower oil prices should further support the oil demand recovery, with recent US demand numbers supporting that view, we acknowledge the downside growth risks. As a result, our 2015 global oil demand growth forecast of 1.35 million barrels remains 200 thousand barrels short of our projection of oil demand modeled on GDP growth and Brent oil prices. Lower demand growth than we currently expect would require lower prices for longer to further slow US production growth.

Net, we expect that the global market imbalance will be larger in 1H15 than we had previously expected with global inventories growing by nearly 1.1 mb/d on average. After peaking at a higher level, we now expect inventories to draw faster on a sharper slowdown in US shale oil production.

Exhibit 16: Accelerating global growth and lower oil prices should support oil demand

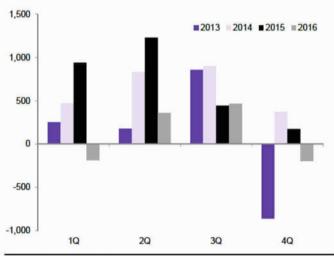
Estimated changes in global oil demand growth (thousand barrels per day, vs. prior 3.5%-\$85/bbl assumption)

		2015 global GDP growth										
		3.00%	3.25%	3.50%	3.75%							
	40	60	140	220	300							
2015 Brent	60	-40	40	120	200							
	85	-160	-80	0	80							
	100	-235	-155	-75	5							

Source: ICE, IEA, Goldman Sachs Global Investment Research.

Exhibit 17: We now expect a sharper rise and subsequent fall in global oil inventories

Quarterly global oil market imbalance (thousand barrels per day)



Source: IEA, JODI, EIA, Goldman Sachs Global Investment Research.

Exhibit 18: Global supply and demand estimates (thousand barrels per day)

Non-OPEC Supply	1Q2013	2Q2013	3Q2013	4Q2013	1Q2014	2Q2014	3Q2014	4Q2014	1Q2015	2Q2015	3Q2015	4Q2015	2013	2014	2015	2016	yoy 13	yoy 14	yoy 15	yoy 16
US Lower 48	5,493	5,754	6,063	6,260	6,412	6,818	7,252	7,382	7,397	7,528	7,752	7,782	5,892	6,966	7,615	8,115	989	1,073	649	450
USNGL	2,388	2,432	2,601	2,673	2,654	2,897	2,921	2,978	2,944	3,102	3,071	3,113	2,523	2,862	3,057	3,182	165	339	195	125
US GoM	1,299	1,219	1,246	1,254	1,313	1,413	1,276	1,304	1,453	1,473	1,466	1,454	1,255	1,327	1,462	1,587	-11	72	135	125
Alaska US ethanol	597 809	557 874	514 856	586 928	582 909	566 941	462 931	581 950	532 940	516 930	462 901	521 920	563 867	547 933	507 923	482 913	-12 6	-16 66	-40 -10	-25 -10
Total US	10,586	10,835	11,279	11,700	11,870	12,634	12,842	13,195	13,265	13,548	13,652	13,790	11,100	12,635	13,564	14,279	1,137	1,535	929	715
Canada	4.051	3,750	3.991	4.102	4.231	4,076	4,146	4,265	4,356	4,216	4.251	4.295	3.974	4.180	4.280	4.380	234	206	100	100
Mexico	2,912	2,875	2,880	2,897	2,869	2,845	2,764	2,663	2,735	2,710	2,667	2,610	2,891	2,785	2,680	2,555	-31	-106	-105	-125
Total North America	17,549	17,461	18,151	18,699	18,970	19,556	19,752	20,123	20,356	20,474	20,570	20,695	17,965	19,600	20,524	21,214	1,340	1,635	923	690
Argentina	624	627	633	633	628	616	622	622	603	607	619	632	629	622	615	630	-32	-7	-7	15
Brazil	2,070	2,104	2,121	2,183	2,176	2,283	2,394	2,464	2,466	2,534	2,630	2,708	2,120	2,329	2,585	2,760	-42	210	255	175
Colombia	1,012	1,002	1,019	1,005	1,001	968	998	1,005	1,005	1,003	1,010	1,015	1,009	993	1,008	1,013	62	-16	15	5
Other Latam	425	421	411	406	413	415	419	423	417	420	421	423	416	418	420	415	5	2	3	-5
Non-OPEC LatAm	4,132	4,154	4,185	4,227	4,219	4,282	4,434	4,514	4,491	4,565	4,681	4,778	4,174	4,362	4,629	4,819	-7	188	267	190
Norway	1,838	1,877	1,797	1,877	1,954	1,790	1,847	1,881	1,864	1,735	1,772	1,881	1,847	1,868	1,813	1,783	-68	20	-55	-30
UK Other France	941	921	796	911	980 709	905	708	903	905	860	788	863	892 747	874	854	824	-63	-18	-20	-30
Other Europe Total Europe	768 3,548	734 3,531	755 3,349	732 3,520	3,643	701 3,396	721 3,276	716 3,500	687 3,456	669 3,264	676 3,236	657 3,400	3,487	712 3,454	672 3,339	642 3,249	13 -117	-35 -33	-40 -115	-30 -90
															100000	Description				
Azerbaijan	894	911	874	860	895	883	881	826	855	883	891	876	885	871	876	851	5	-14	5	-25
Kazakhstan Russia	1,746	1,664	1,676	1,765 10,986	1,710 10,985	1,643	1,679	1,721 10,965	1,687	1,638	1,642	1,706 10,920	1,713	1,688 10,928	1,669	1,699	48 159	-24 52	-20 11	30 25
Other FSU	391	390	410	435	417	388	414	421	402	401	419	416	407	410	410	410	15	3	0	0
Total FSU	13,854	13,794	13,828	14,045	14,007	13,838	13,811	13,933	13,917	13,882	13,855	13,918	13,880	13,897	13,893	13,923	227	17	-4	30
China	4,202	4,235	4,047	4,223	4,235	4,231	4,168	4,114	4,185	4,201	4,208	4,194	4,177	4,187	4,197	4,207	2	10	10	10
India	880	878	872	881	878	874	856	866	858	854	853	856	878	868	855	850	-8	-9	-13	-5
Indonesia	880	884	867	863	843	843	832	812	808	803	795	799	873	833	801	791	-41	-41	-31	-10
Malaysia	684	638	620	631	659	661	630	656	663	679	690	696	643	651	682	702	-30	8	30	20
Rest of Asia-Pacific	1,595	1,619	1,562	1,528	1,570	1,548	1,561	1,590	1,610	1,628	1,641	1,650	1,576	1,567	1,632	1,672	-135	-9	65	40
Non-OPEC Asia	8,240	8,253	7,968	8,126	8,184	8,156	8,047	8,038	8,122	8,164	8,187	8,195	8,147	8,106	8,167	8,222	-212	-41	61	55
Non-OPEC Middle East	1,401	1,307	1,353	1,349	1,352	1,321	1,307	1,297	1,289	1,278	1,278	1,259	1,353	1,319	1,276	1,246	-117	-33	-43	-30
Non-OPEC Africa	2,203	2,269	2,293	2,421 2,175	2,357	2,308	2,298	2,302	2,322	2,327	2,318	2,317	2,296	2,316	2,321	2,331	57 43	20 36	30	10
Processing gains Other Biofuels	673	1,156	1,510	1,232	786	1,390	1,606	1,349	936	1,375	1,719	1,379	1,143	1,283	1,352	1,312	152	140	70	-40
Total non-OPEC supply	53,779	54,081	54,839	55,795	55,727	56,435	56,775	57,271	57,129	57,547	58,117	58,187	54,623	56,552	57,745	58,560	1,367	1,928	1,193	815
Non-OPEC ex. US Lower 48 & NGL	45,899	45,895	46,175	46,862	46,661	46,721	46,602	46,910	46,788	46,917	47,294	47,291	46,208	46,724	47,073	47,263	213	516	349	190
OPEC Supply	1.761903100		PERSONAL PROPERTY.	Market Committee	in Region		STREET, ST	Testa (tes	Account of the	N. S. C. C.	SECTION	4Q2015	2013	2014	2015	2016	yoy 13 y	All the Late		yoy 16
Algeria Angola/Cabinda	1,153	1,153	1,147	1,140	1,066	1,143	1,147	1,130	1,115	1,100	1,085	1,070	1,148	1,121	1,093	1,073	-17 -66	-27 -59	-29 88	-20 0
Ecuador	500	513	520	533	550	553	555	545	540	540	540	540	517	551	540	540	16	34	-11	0
Iran	2,699	2,677	2,637	2,713	2,819	2,840	2,778	2,760	2,750	2,750	2,750	2,750	2,682	2,799	2,750	2,850	-324	118	-49	100
Iraq	3,029	3,162	3,042	3,085	3,287	3,329	3,213	3,467	3,587	3,629	3,513	3,767	3,080	3,324	3,624	3,799	128	244	300	175
Kuwait	2,793	2,837	2,817	2,790	2,786	2,797	2,838	2,675	2,700	2,772	2,772	2,700	2,809	2,774	2,736	2,736	74	-35	-38	0
Libya	1,379	1,307	620	301	367	227	574	657	350	450	450	450	902	456 1,908	425	450				
Nigeria Qatar	2,000	1,937	1,966	1,909	1,933	1,913	1,887	1,900	1,840	1,830	1,820	1,810	1,953				-485	-446	-31	25
	740	725		725	720	708	715	685	720	708		685	729		1,825	1,750	-146	-45	-83	-75
Saudi Arabia	740 9,233	725 9,538	725 10,103	725 9,772	720 9,721	708 9,715	715 9,804	685 9,535	720 9,450	708 9,700	715 9,700	685 9,450	729 9,661	707	707	1,750 707	-146 -11	-45 -22	-83 0	
Saudi Arabia UAE	740 9,233 2,746	725 9,538 2,773	10,103 2,797	725 9,772 2,732	720 9,721 2,734	708 9,715 2,742	715 9,804 2,805	9,535 2,723	720 9,450 2,703	708 9,700 2,766	9,700 2,766	9,450 2,703	729 9,661 2,762			1,750	-146	-45	-83	-75 0
	9,233	9,538	10,103	9,772	9,721	9,715	9,804	9,535	9,450	9,700	9,700	9,450	9,661	707 9,694	707 9,575	1,750 707 9,575	-146 -11 -124	-45 -22 32	-83 0 -119	-75 0 0
UAE	9,233 2,746	9,538 2,773	10,103 2,797	9,772 2,732	9,721 2,734	9,715 2,742	9,804 2,805	9,535 2,723	9,450 2,703	9,700 2,766	9,700 2,766	9,450 2,703	9,661 2,762 2,496	707 9,694 2,751 2,464	707 9,575 2,735 2,400	1,750 707 9,575 2,735	-146 -11 -124 109	-45 -22 32 -11	-83 0 -119 -17	-75 0 0 0
UAE Venezuela	9,233 2,746 2,445	9,538 2,773 2,547	10,103 2,797 2,524	9,772 2,732 2,470	9,721 2,734 2,448	9,715 2,742 2,480	9,804 2,805 2,480	9,535 2,723 2,450	9,450 2,703 2,430	9,700 2,766 2,410	9,700 2,766 2,390	9,450 2,703 2,370	9,661 2,762 2,496	707 9,694 2,751 2,464	707 9,575 2,735 2,400	1,750 707 9,575 2,735 2,350	-146 -11 -124 109 -2	-45 -22 32 -11 -32	-83 0 -119 -17 -64	-75 0 0 0 -50
UAE Venezuela Total OPEC Crude	9,233 2,746 2,445 30,476	9,538 2,773 2,547 30,929	10,103 2,797 2,524 30,613	9,772 2,732 2,470 29,811	9,721 2,734 2,448 30,004	9,715 2,742 2,480 30,078	9,804 2,805 2,480 30,512	9,535 2,723 2,450 30,246	9,450 2,703 2,430 29,924	9,700 2,766 2,410 30,405	9,700 2,766 2,390 30,252	9,450 2,703 2,370 30,044	9,661 2,762 2,496 30,457 6,262	707 9,694 2,751 2,464 30,210 6,416	707 9,575 2,735 2,400 30,156 6,601	1,750 707 9,575 2,735 2,350 30,311	-146 -11 -124 109 -2 -847	-45 -22 32 -11 -32 -247	-83 0 -119 -17 -64 -54	-75 0 0 0 -50 155
UAE Venezuela Total OPEC Crude Total OPEC NGL	9,233 2,746 2,445 30,476 6,211	9,538 2,773 2,547 30,929 6,260	10,103 2,797 2,524 30,613 6,302	9,772 2,732 2,470 29,811 6,276 36,087	9,721 2,734 2,448 30,004 6,329	9,715 2,742 2,480 30,078 6,359	9,804 2,805 2,480 30,512 6,478 36,990	9,535 2,723 2,450 30,246 6,498 36,744	9,450 2,703 2,430 29,924 6,560	9,700 2,766 2,410 30,405 6,608 37,013	9,700 2,766 2,390 30,252 6,614	9,450 2,703 2,370 30,044 6,625 36,669	9,661 2,762 2,496 30,457 6,262	707 9,694 2,751 2,464 30,210 6,416 36,626	707 9,575 2,735 2,400 30,156 6,601	1,750 707 9,575 2,735 2,350 30,311 6,751	-146 -11 -124 109 -2 -847 53	-45 -22 32 -11 -32 -247 154 -93	-83 0 -119 -17 -64 -54 185	-75 0 0 0 -50 155
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply	9,233 2,746 2,445 30,476 6,211 36,687	9,538 2,773 2,547 30,929 6,260	10,103 2,797 2,524 30,613 6,302	9,772 2,732 2,470 29,811 6,276	9,721 2,734 2,448 30,004 6,329	9,715 2,742 2,480 30,078 6,359	9,804 2,805 2,480 30,512 6,478	9,535 2,723 2,450 30,246 6,498	9,450 2,703 2,430 29,924 6,560	9,700 2,766 2,410 30,405 6,608	9,700 2,766 2,390 30,252 6,614	9,450 2,703 2,370 30,044 6,625	9,661 2,762 2,496 30,457 6,262	707 9,694 2,751 2,464 30,210 6,416	707 9,575 2,735 2,400 30,156 6,601	1,750 707 9,575 2,735 2,350 30,311 6,751	-146 -11 -124 109 -2 -847 53	-45 -22 32 -11 -32 -247 154 -93	-83 0 -119 -17 -64 -54 185	-75 0 0 0 -50 155
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply	9,233 2,746 2,445 30,476 6,211 36,687	9,538 2,773 2,547 30,929 6,260 37,189	10,103 2,797 2,524 30,613 6,302 36,915	9,772 2,732 2,470 29,811 6,276 36,087	9,721 2,734 2,448 30,004 6,329 36,333	9,715 2,742 2,480 30,078 6,359 36,437	9,804 2,805 2,480 30,512 6,478 36,990	9,535 2,723 2,450 30,246 6,498 36,744	9,450 2,703 2,430 29,924 6,560 36,484	9,700 2,766 2,410 30,405 6,608 37,013	9,700 2,766 2,390 30,252 6,614 36,865	9,450 2,703 2,370 30,044 6,625 36,669	9,661 2,762 2,496 30,457 6,262 36,719	707 9,694 2,751 2,464 30,210 6,416 36,626	707 9,575 2,735 2,400 30,156 6,601 36,758	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063	-146 -11 -124 109 -2 -847 53	-45 -22 32 -11 -32 -247 154 -93	-83 0 -119 -17 -64 -54 185	-75 0 0 -50 155 150 305
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand	9,233 2,746 2,445 30,476 6,211 36,687	9,538 2,773 2,547 30,929 6,260 37,189	10,103 2,797 2,524 30,613 6,302 36,915	9,772 2,732 2,470 29,811 6,276 36,087	9,721 2,734 2,448 30,004 6,329 36,333	9,715 2,742 2,480 30,078 6,359 36,437	9,804 2,805 2,480 30,512 6,478 36,990	9,535 2,723 2,450 30,246 6,498 36,744	9,450 2,703 2,430 29,924 6,560 36,484	9,700 2,766 2,410 30,405 6,608 37,013	9,700 2,766 2,390 30,252 6,614 36,865	9,450 2,703 2,370 30,044 6,625 36,669	9,661 2,762 2,496 30,457 6,262 36,719	707 9,694 2,751 2,464 30,210 6,416 36,626	707 9,575 2,735 2,400 30,156 6,601 36,758	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063	-146 -11 -124 109 -2 -847 53 -794	-45 -22 32 -11 -32 -247 154 -93	-83 0 -119 -17 -64 -54 185 132	-75 0 0 -50 155 150 305
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico	9,233 2,746 2,445 30,476 6,211 36,687 102013 18,963 2,454 2,048	9,538 2,773 2,547 30,929 6,260 37,189 2Q2013 19,009 2,417 2,083	10,103 2,797 2,524 30,613 6,302 36,915 3,22013 19,506 2,440 2,030	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,954	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440 2,033	9,450 2,703 2,430 29,924 6,560 36,484 1Q2015 19,350 2,400 1,997	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989	9,700 2,766 2,390 30,252 6,614 36,865 3Q2015 19,825 2,425 2,005	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029	-146 -11 -124 109 -2 -847 53 -794 yoy 13	-45 -22 32 -11 -32 -247 154 -93 yoy 14 -90 -20 -65	-83 0 -119 -17 -64 -54 185 132 yoy 15	-75 0 0 -50 155 150 305 yoy 16 225 0 25
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada	9,233 2,746 2,445 30,476 6,211 36,687 1Q2013 18,963 2,454	9,538 2,773 2,547 30,929 6,260 37,189 2Q2013 19,009 2,417	10,103 2,797 2,524 30,613 6,302 36,915 3Q2013 19,506 2,440 2,030 23,976	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440	9,450 2,703 2,430 29,924 6,560 36,484 1Q2015 19,350 2,400	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375	9,700 2,766 2,390 30,252 6,614 36,865 3Q2015 19,825 2,425	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405	-146 -11 -124 109 -2 -847 53 -794 yoy 13	-45 -22 32 -11 -32 -247 154 -93 yoy 14	-83 0 -119 -17 -64 -54 185 132 yoy 15	-75 0 0 -50 155 150 305 yoy 16 225 0
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico	9,233 2,746 2,445 30,476 6,211 36,687 102013 18,963 2,454 2,048	9,538 2,773 2,547 30,929 6,260 37,189 2Q2013 19,009 2,417 2,083	10,103 2,797 2,524 30,613 6,302 36,915 3,22013 19,506 2,440 2,030	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,954	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440 2,033	9,450 2,703 2,430 29,924 6,560 36,484 1Q2015 19,350 2,400 1,997	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989	9,700 2,766 2,390 30,252 6,614 36,865 3Q2015 19,825 2,425 2,005	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029	-146 -11 -124 109 -2 -847 53 -794 yoy 13	-45 -22 32 -11 -32 -247 154 -93 yoy 14 -90 -20 -65	-83 0 -119 -17 -64 -54 185 132 yoy 15	-75 0 0 -50 155 150 305 yoy 16 225 0 25
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America	9,233 2,746 2,445 30,476 6,211 36,687 19,2013 18,963 2,454 2,048 23,465	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509	10,103 2,797 2,524 30,613 6,302 36,915 3Q2013 19,506 2,440 2,030 23,976	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,954 23,532	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440 2,033 24,273	9,450 2,703 2,430 29,924 6,560 36,484 1Q2015 19,350 2,400 1,997 23,747	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764	9,700 2,766 2,390 30,252 6,614 36,865 30,2015 19,825 2,425 2,005 24,255	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 24,211 7,403	-146 -11 -124 109 -2 -847 53 -794 yoy 13	-45 -22 32 -11 -32 -247 154 -93 yoy 14 -90 -20 -65	-83 0 -119 -17 -64 -54 185 132 yoy 15	-75 0 0 -50 155 150 305 yoy 16 225 0 25 250
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe	9,233 2,746 2,445 30,476 6,211 36,687 102013 18,963 2,454 2,048 23,465 6,699 13,202 616	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649	10,103 2,797 2,524 30,613 6,302 36,915 302013 19,506 2,440 2,030 23,976 7,097 13,989 658	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676	9,721 2,734 2,448 30,004 6,329 36,333 102014 19,153 2,426 1,954 23,532 6,905 13,022 648	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402 655	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871 7,241 13,903 674	9,535 2,723 2,450 30,246 6,498 36,744 19,800 2,440 2,033 24,273 7,243 13,558 683	9,450 2,703 2,430 29,924 6,560 36,484 102015 19,350 2,400 1,997 23,747 7,058 13,200 655	9,700 2,766 2,410 30,405 6,608 37,013 202015 19,400 2,375 1,989 23,764 7,262 13,480 665	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,005 24,255 7,352 13,660 670	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077 7,339 13,480 675	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 665	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 23,961 7,263 13,455 666	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,029 24,211 7,403 13,455 676	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3	-45 -22 32 -11 -32 -247 154 -93 yoy 14 -90 -20 -65 5 157 -175 15	-83 0 -119 -17 -64 -54 185 132 yoy 15 198 -10 25 213 134 -16 1	-75 0 0 -50 155 150 305 yoy 16 225 250 150 0 10
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe	9,233 2,746 2,445 30,476 6,211 36,687 10,2013 18,963 2,454 2,048 23,465 6,699 13,202	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826	10,103 2,797 2,524 30,613 6,302 36,915 3Q2013 19,506 2,440 2,030 23,976 7,097	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,954 23,532 6,905 13,022	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871 7,241 13,903	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440 2,033 24,273 7,243 13,558	9,450 2,703 2,430 29,924 6,560 36,484 102015 19,350 2,400 1,997 23,747 7,058 13,200	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764 7,262	9,700 2,766 2,390 30,252 6,614 36,865 302015 19,825 2,425 2,005 24,255 7,352 13,660	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077 7,339 13,480	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 665	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 23,961 7,253 13,455	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,029 24,211 7,403 13,455 676	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199	-45 -22 32 -11 -32 -247 154 -93 yoy 14 90 -20 -65 5 157 -175	-83 0 -119 -17 -64 -54 185 132 yoy 15 198 -10 25 213 134 -16	-75 0 0 -50 155 150 305 yoy 16 225 0 25 250 150
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe	9,233 2,746 2,445 30,476 6,211 36,687 102013 18,963 2,454 2,048 23,465 6,699 13,202 6,699 13,202 13,818 5,050	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077	10,103 2,797 2,524 30,613 6,302 36,915 3Q2013 19,506 2,440 2,030 23,976 7,097 13,989 658 14,647 4,283	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,954 23,532 6,905 13,022 6,446 13,670 5,016	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402 6,405 14,057 3,875	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956 23,871 7,241 13,903 6,476 14,576 3,876	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440	9,450 2,703 2,430 29,924 6,560 36,484 1Q2015 19,350 2,400 1,997 23,747 7,058 13,200 6,555 13,855 4,700	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850	9,700 2,766 2,390 30,252 6,614 36,865 302015 19,825 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077 7,339 13,480 6,4155 4,321	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 665 14,136 4,301	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 23,961 7,253 13,455 666 14,121 4,198	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,029 24,211 7,403 13,455 676	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3	-45 -22 32 -11 -32 -247 154 -93 yoy 14 90 -20 -65 5 157 -175 -159 -231	-83 0 -119 -17 -64 -54 185 132 yoy 15 : 198 -10 25 213 134 -16 1 -15 -104	-75 0 0 -50 155 150 305 225 250 150 0 0 10 10 -65
UAE Venezuela Total OPEC Crude Total OPEC Supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OCOL Burope Total Europe Total Europe	9,233 2,746 2,445 30,476 6,211 36,687 10,2013 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 3,559	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523	10,103 2,797 2,524 30,613 6,302 36,915 3Q2013 19,506 2,440 2,030 23,976 7,097 13,989 658 14,647	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 3,654	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,875	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,876	9,536 2,723 2,450 30,246 6,498 36,744 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440 4,367	9,450 2,703 2,430 29,924 6,560 36,484 1Q2015 19,350 2,400 1,997 23,747 7,058 13,200 655 13,850 4,700 3,677	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850 3,625	9,700 2,766 2,390 30,252 6,614 36,865 3Q2015 19,825 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920 3,626	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 74,077 7,339 13,480 675 14,155 4,321 3,755	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 665 14,136	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 23,961 7,253 13,455 666 14,121	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 24,211 7,403 13,455 676 14,131	-146 -11 -124 -109 -2 -847 -53 -794 yoy 13 -444 -83 -41 -486 -199 -155 -3 -151 -163 -13	-45 -22 32 -11 -32 -247 154 -93 yoy 14 90 -20 -65 5 157 -175 15 -159 -231 35	-83 0 -119 -17 -64 -54 185 132 yoy 15 198 -10 25 213 134 -16 1 -15 -104 77	-75 0 0 0 -50 155 150 305 225 250 0 0 100 -65 80
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China	9,233 2,746 2,445 30,476 6,211 36,687 10,2013 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,000 3,559 9,872	9,538 2,773 2,547 30,929 6,260 37,189 2Q2013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088	10,103 2,797 2,524 30,613 6,302 36,915 302013 19,506 2,440 2,030 23,976 7,097 13,989 658 14,647 4,283 3,500 10,157	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 14,242 4,719 3,654 10,279	9,721 2,734 2,448 30,004 6,329 36,333 102014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132	9,715 2,742 2,480 30,078 6,359 36,437 202014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,875 1,950 10,279	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,558 10,389	9,535 2,723 2,450 30,246 6,498 36,744 19,800 2,403 2,033 24,273 7,243 13,558 683 14,240 4,440 3,676	9,450 2,703 2,430 29,924 6,560 36,484 102015 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10390	9,700 2,766 2,410 30,405 6,608 37,013 202015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850 3,625 10615	9,700 2,766 2,390 30,252 6,614 36,865 3Q2015 19,825 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920 3,626 10715	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 7,339 13,480 675 14,155 4,321 3,755 10865	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532 3,559 10,099	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 665 14,136 4,301 3,594 10,346	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 23,961 7,253 13,455 666 14,121 4,198 3,671 10,646	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 24,211 7,403 13,455 676 14,131 4,133 3,751 10,946	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3 -151 -163 13 285	-45 -22 32 -11 -32 -247 154 -93 yoy 14 90 -20 -65 5 157 -175 -159 -231 355 247	-83 0 -119 -17 -64 -54 185 132 yoy 15 198 -10 25 213 134 -16 1 -15 -104 77	-75 0 0 0 -50 155 150 305 225 250 150 0 10 10 65 80 300
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Other non-OECD Asia	9,233 2,746 2,445 30,476 6,211 36,687 10,2013 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 3,559 9,872 11,948	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088 11,890	10,103 2,797 2,524 30,613 6,302 36,915 19,506 2,440 2,030 23,976 7,097 13,989 658 14,647 4,283 3,500 10,157	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 3,654 10,279	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,875 3,650 10,279	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,876 3,876 3,558 10,389 11,880	9,536 2,723 2,450 30,246 6,498 36,744 19,800 2,404 2,033 24,273 7,243 13,558 683 14,240 4,440 3,676 10,585 12,281	9,450 2,703 2,430 29,924 6,560 36,484 1Q2015 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10,390 12,521	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,3764 7,262 13,480 665 14,145 3,850 3,625 10615	9,700 2,768 2,390 30,252 6,614 36,865 19,825 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920 3,626 10715 12,430	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077 7,339 13,480 675 14,155 4,321 3,755 10865 12,820	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532 3,559 10,099 11,869	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 665 14,136 4,301 3,594 10,346 10,346 10,346 10,346 10,346 10,346	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 23,961 7,253 13,455 6,601 4,198 3,671 10,646 10,559 10,55	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 24,211 7,403 13,455 676 14,131 4,133 3,751 10,946 12,995	-146 -111 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3 -151 -163 13 285 259	-45 -22 -32 -11 -32 -247 154 -93 yoy 14 90 -20 -65 -5 157 -175 159 -231 35 247 273	-83 0 -119 -17 -64 -54 185 132 yoy 15 198 -10 25 213 134 -16 1 1-15 -104 77 300 458	-75 0 0 0 -50 155 150 305 225 250 0 10 10 -65 80 300 300 400
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Chier non-OECD Asia Total Asia	9,233 2,746 2,445 30,476 6,211 36,687 10,2013 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 9,872 11,948 30,429	9,538 2,773 2,547 30,929 6,260 37,189 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088 11,890 29,578	10,103 2,797 2,524 30,613 6,302 36,915 19,506 2,440 2,030 7,097 13,989 658 14,647 4,283 3,500 10,157 11,575 29,516	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 3,654 10,279 12,046 30,698	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,955 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213 30,953	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,550 10,279 12,176 29,879	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,876 10,389 11,880 29,703	9,535 2,723 2,450 30,246 6,498 36,744 402014 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440 4,3,676 10,585 12,281 30,981	9,450 2,703 2,430 29,924 6,560 36,484 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10390 12,521 31,288	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850 3,625 10615 12,610 30,700	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920 3,626 10,715 12,430 30,691	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 74,077 7,339 13,480 675 14,155 4,321 3,755 10,865 12,820 31,760	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 6,961 13,646 650 14,295 10,099 11,865 30,055	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 6,656 4,301 3,594 10,346 12,137 30,379	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 20,004 23,961 7,253 13,455 666 14,121 4,198 3,671 10,646 10,595 31,110	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 24,211 7,403 13,455 676 14,131 4,133 3,751 10,946 12,995 31,825	-146 -111 -124 109 -2 -847 53 -794 444 83 -41 486 199 -155 3 -151 -163 13 285 259 394	45 -22 -111 -32 -247 -154 -93 -20 -55 -5 -157 -175 -231 -35 -273 -324	-83 0 0 -119 -17 -64 185 132 198 -10 25 213 134 -16 1 15 -104 458 731	-75 0 0 0 0 -50 0 155 150 305 255 250 0 10 10 -65 80 300 400 715
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Other non-OECD Asia Total Asia FSU	9,233 2,746 2,445 30,476 6,211 36,687 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 9,872 11,948 9,872 11,949	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088 11,890 29,578 4,645	10,103 2,797 2,524 30,613 6,302 36,915 19,506 2,440 2,030 23,976 7,097 13,989 658 14,647 4,283 3,500 10,157 11,575 29,516 4,925	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 13,654 10,279 12,046 30,698 4,933	9,721 2,734 2,448 30,004 6,329 36,333 102014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213 30,953 4,605	9,715 2,742 2,480 30,078 6,359 36,437 202014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,875 10,279 12,176 29,879 4,807	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,876 10,389 11,880 29,703 5,045	9,535 2,723 2,450 30,246 6,498 36,744 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440 4,585 10,585 10,585 12,281 30,981 4,915	9,450 2,703 2,430 29,924 6,560 36,484 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10390 12,521 31,288 4,564	9,700 2,766 2,410 30,405 6,608 37,013 202015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850 10,615 12,610 30,700 4,764	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920 10,715 12,430 30,691 4,914	9,450 2,703 2,370 30,044 6,625 36,669 402015 19,630 2,420 2,027 24,077 7,339 13,480 675 14,155 4,321 3,755 10,865 12,820 4,929	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532 3,559 10,099 11,865 30,055 4,741	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 6,436 4,301 3,594 10,136 4,301 3,594 10,136 4,301 3,594 10,136 4,301 4,430 4,430 10,146 11,146 11,1	707 9,575 2,735 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,904 23,961 7,253 13,456 666 14,121 4,198 3,671 10,646 12,595 31,110 4,793	1,750 707 707 707 7,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 4,211 7,403 13,455 676 14,131 3,751 10,946 31,295 31,825 4,818	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3 -151 -163 13 285 259 394	45 -22 -247 154 -93 yoy14 -93 157 155 -175 15 -231 35 247 102	-83 0 0 -119 -17 -64 185 132 yoy 15 198 -10 25 -104 17 70 300 458 731 -50	-75 0 0 0 -50 155 150 305 225 250 150 0 100 -65 80 300 715 25
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Chier non-OECD Asia Total Asia	9,233 2,746 2,445 30,476 6,211 36,687 10,2013 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 9,872 11,948 30,429	9,538 2,773 2,547 30,929 6,260 37,189 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088 11,890 29,578	10,103 2,797 2,524 30,613 6,302 36,915 19,506 2,440 2,030 7,097 13,989 658 14,647 4,283 3,500 10,157 11,575 29,516	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 3,654 10,279 12,046 30,698	9,721 2,734 2,448 30,004 6,329 36,333 1Q2014 19,153 2,426 1,955 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213 30,953	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,550 10,279 12,176 29,879	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,876 10,389 11,880 29,703	9,535 2,723 2,450 30,246 6,498 36,744 402014 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440 4,3,676 10,585 12,281 30,981	9,450 2,703 2,430 29,924 6,560 36,484 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10390 12,521 31,288	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850 3,625 10615 12,610 30,700	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920 3,626 10,715 12,430 30,691	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 74,077 7,339 13,480 675 14,155 4,321 3,755 10,865 12,820 31,760	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 6,961 13,646 650 14,295 10,099 11,865 30,055	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 6,656 4,301 3,594 10,346 12,137 30,379	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 20,004 23,961 7,253 13,455 666 14,121 4,198 3,671 10,646 10,595 31,110	1,750 707 9,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 24,211 7,403 13,455 676 14,131 4,133 3,751 10,946 12,995 31,825	-146 -111 -124 109 -2 -847 53 -794 444 83 -41 486 199 -155 3 -151 -163 13 285 259 394	45 -22 -111 -32 -247 -154 -93 -20 -55 -5 -157 -175 -231 -35 -273 -324	-83 0 0 -119 -17 -64 185 132 198 -10 25 213 134 -16 1 15 -104 458 731	-75 0 0 0 -50 0 -50 155 150 305 225 250 0 10 10 -65 80 300 400 715
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Other non-OECD Asia Total Asia FSU	9,233 2,746 2,445 30,476 6,211 36,687 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 9,872 11,948 9,872 11,949	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,573 10,088 11,890 29,578 4,645	10,103 2,797 2,524 30,613 6,302 36,915 19,506 2,440 2,030 23,976 7,097 13,989 658 14,647 4,283 3,500 10,157 11,575 29,516 4,925	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 13,654 10,279 12,046 30,698 4,933	9,721 2,734 2,448 30,004 6,329 36,333 102014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213 30,953 4,605	9,715 2,742 2,480 30,078 6,359 36,437 202014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,875 10,279 12,176 29,879 4,807	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,876 10,389 11,880 29,703 5,045	9,535 2,723 2,450 30,246 6,498 36,744 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440 4,585 10,585 10,585 12,281 30,981 4,915	9,450 2,703 2,430 29,924 6,560 36,484 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10390 12,521 31,288 4,564	9,700 2,766 2,410 30,405 6,608 37,013 202015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850 10,615 12,610 30,700 4,764	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,425 2,005 24,255 7,352 13,660 670 14,330 3,920 10,715 12,430 30,691 4,914	9,450 2,703 2,370 30,044 6,625 36,669 402015 19,630 2,420 2,027 24,077 7,339 13,480 675 14,155 4,321 3,755 10,865 12,820 4,929	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532 3,559 10,099 11,865 30,055 4,741	707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 23,747 7,118 13,471 6,436 4,301 3,594 10,136 4,301 3,594 10,136 4,301 3,594 10,136 4,301 4,430 4,430 10,146 11,146 11,1	707 9,575 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 23,961 7,253 13,455 666 14,121 4,198 3,671 10,646 3,111 0,473 3,471	1,750 707 707 707 7,575 2,735 2,350 30,311 6,751 37,063 2016 19,776 2,405 2,029 4,211 7,403 13,455 676 14,131 3,751 10,946 31,295 31,825 4,818	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3 -151 -163 13 285 259 394	45 -22 -247 154 -93 yoy14 -93 157 155 -175 15 -231 35 247 102	-83 0 0 -119 -17 -64 185 132 yoy 15 198 -10 25 -104 17 70 300 458 731 -50	-75 0 0 0 -50 155 150 305 225 250 150 0 100 -65 80 300 715 25
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Other non-OECD Asia Total Asia FSU Total Middle East Total Africa OECD demand	9,233 2,746 2,445 30,476 6,211 36,687 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 3,559 9,872 11,948 30,429 4,460 7,792 3,893 45,860	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088 11,890 29,578 4,645 8,174 3,884 45,525	10,103 2,797 2,524 30,613 6,302 36,915 3Q2013 19,506 2,440 2,030 23,976 658 14,647 11,575 29,516 4,925 8,618 3,726 46,327	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 12,046 30,698 4,933 7,974 3,820 46,514	9,721 2,734 2,448 30,004 6,329 36,333 102014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213 30,953 4,605 8,044 3,929 45,729	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 1,975 23,313 7,085 13,402 655 14,057 3,875 3,550 10,279 12,176 29,879 4,807 8,424 3,947 44,694	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,558 10,389 11,880 29,703 5,045 8,803 3,842 45,773	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440 3,676 10,585 12,281 30,981 4,915 8,014 3,981 4,915 8,014	9,450 2,703 2,430 29,924 6,560 36,484 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10,390 12,521 31,288 4,564 8,088 4,084 45,905	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 12,610 30,700 4,764 8,502 4,108 45,286	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,005 24,255 24,255 13,660 670 14,330 3,920 3,626 10715 12,430 30,691 4,914 8,964 4,039 46,049	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077 7,339 13,480 675 14,155 10,865 12,820 31,760 4,928 8,330 4,192 46,198	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532 3,559 10,099 11,865 30,055 4,741 8,140 3,831 46,057	707 707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 13,471 665 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 4,3	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 10,253 13,455 666 14,421 4,198 3,671 10,646 12,595 31,110 4,793 4,793 4,793 4,794 4,794 4,794 4,796 4,793 4,794	1.750 707 9.575 2.735 30,311 6.751 37,063 2016 19,776 2,405 2,405 2,405 2,405 2,405 4,413 3,751 13,455 676 14,133 3,751 4,813 4,813 4,814 4,814 4,814 4,814 4,814 4,814	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3 -151 -163 13 285 259 394 131 111 54	-45 -22 -23 -11 -32 -247 -154 -93 -20 -20 -20 -20 -25 -55 -57 -175 -175 -159 -231 -324 -102 -182 -380 -380	-83 0 -119 -17 -64 -54 185 132 yoy 15 198 6-10 -25 213 134 -16 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15	-75 0 0 0 0 -50 -50 155 150 305 155 0 225 250 150 0 100 -65 80 0 400 715 25 175 280
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Other non-OECD Asia Total Asia FSU Total Middle East Total Africa OECD demand non-OECD demand	9,233 2,746 2,445 30,476 6,211 36,687 18,963 2,454 20,48 23,465 6,699 13,202 616 13,818 5,050 3,559 9,872 11,948 30,429 4,460 7,792 3,893 45,860 44,696	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088 11,890 29,578 4,645 8,174 4,674 3,884 45,525 45,692	10,103 2,797 2,524 30,613 6,302 36,915 302013 19,506 2,440 2,030 23,976 658 14,647 4,283 3,500 10,157 29,516 4,925 8,618 3,726 46,327 46,177	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 3,654 10,279 12,046 30,698 4,933 7,974 46,267	9,721 2,734 2,448 30,004 6,329 36,333 102014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213 30,953 4,605 8,044 3,929 45,729 45,909	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 2,347 1,975 23,313 7,085 13,402 655 14,057 3,875 3,550 10,279 12,176 29,879 4,807 8,424 46,819	9,804 2,805 2,480 30,512 6,478 36,990 302014 19,467 2,447 1,956 23,871 17,241 13,903 674 14,576 3,876 3,876 3,876 3,876 3,876 3,558 10,389 11,880 29,703 5,045 4,0	9,535 2,723 2,450 30,246 6,498 36,744 19,800 2,440 2,033 24,273 13,558 683 14,240 3,676 10,585 12,281 30,981 4,913	9,450 2,703 2,430 29,924 6,560 36,484 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10390 12,521 31,288 4,664 8,688 4,084 45,905 46,779	9,700 2,766 2,410 30,405 6,608 37,013 202015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 3,850 3,625 10,615 10,615 10,615 10,615 4,764 4,764 4,764 4,764 4,764 4,764 4,764 4,765	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,005 24,255 2,005 24,255 13,660 670 14,330 3,920 3,626 10,715 12,430 30,691 4,914 8,964 4,039 46,049 48,496	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077 7,339 13,480 675 14,155 12,820 31,760 4,929 8,330 4,192 46,198 48,584	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532 3,559 10,099 11,865 30,055 4,741 8,140 46,057 46,057 46,057	707 707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 1,980 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 4,401 4,	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 13,455 6,601 14,103 13,455 10,466 12,595 31,110 4,793 31,711 4,198 4,793 4,793 4,793 4,793 4,793 4,795	1.750 707 9,575 2,735 2,735 30,311 6,751 37,063 2016 19,776 2,029 24,211 7,213 13,455 676 44,131 41,133 3,751 10,946 42,985 31,825 4,818 4,818 4,818 4,819 49,175	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 -486 199 -155 -163 -13 -151 -163 -13 -151 -163 -13 -151 -163 -17 -17 -17 -18	-45 -22 -23 -11 -32 -247 -154 -93 -90 -65 -5 -157 -175 -159 -231 -35 -247 -273 -324 -380 1,086	-83 0 -119 -17 -64 -54 185 132 you 15 198 -10 25 213 31 -16 1 15 -104 77 300 358 731 -50 150 181 183 1,161	755 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
UAE Venezuela Total OPEC Crude Total OPEC NGL Total OPEC supply Global Demand USA Canada Mexico North America LatAm ex. Mexico OECD Europe Non-OECD Europe Total Europe Japan OECD Asia-Pacific ex. Japan China Other non-OECD Asia Total Asia FSU Total Middle East Total Africa OECD demand	9,233 2,746 2,445 30,476 6,211 36,687 18,963 2,454 2,048 23,465 6,699 13,202 616 13,818 5,050 3,559 9,872 11,948 30,429 4,460 7,792 3,893 45,860	9,538 2,773 2,547 30,929 6,260 37,189 202013 19,009 2,417 2,083 23,509 6,952 13,826 649 14,475 4,077 3,523 10,088 11,890 29,578 4,645 8,174 3,884 45,525	10,103 2,797 2,524 30,613 6,302 36,915 3Q2013 19,506 2,440 2,030 23,976 658 14,647 11,575 29,516 4,925 8,618 3,726 46,327	9,772 2,732 2,470 29,811 6,276 36,087 4Q2013 19,574 2,427 2,017 24,018 7,096 13,566 676 14,242 4,719 12,046 30,698 4,933 7,974 3,820 46,514	9,721 2,734 2,448 30,004 6,329 36,333 102014 19,153 2,426 1,954 23,532 6,905 13,022 648 13,670 5,016 3,591 10,132 12,213 30,953 4,605 8,044 3,929 45,729	9,715 2,742 2,480 30,078 6,359 36,437 2Q2014 18,991 1,975 23,313 7,085 13,402 655 14,057 3,875 3,550 10,279 12,176 29,879 4,807 8,424 3,947 44,694	9,804 2,805 2,480 30,512 6,478 36,990 3Q2014 19,467 2,447 1,956 23,871 7,241 13,903 674 14,576 3,558 10,389 11,880 29,703 5,045 8,803 3,842 45,773	9,535 2,723 2,450 30,246 6,498 36,744 4Q2014 19,800 2,440 2,033 24,273 7,243 13,558 683 14,240 4,440 3,676 10,585 12,281 30,981 4,915 8,014 3,981 4,915 8,014	9,450 2,703 2,430 29,924 6,560 36,484 19,350 2,400 1,997 23,747 7,058 13,200 655 13,855 4,700 3,677 10,390 12,521 31,288 4,564 8,088 4,084 45,905	9,700 2,766 2,410 30,405 6,608 37,013 2Q2015 19,400 2,375 1,989 23,764 7,262 13,480 665 14,145 12,610 30,700 4,764 8,502 4,108 45,286	9,700 2,766 2,390 30,252 6,614 36,865 19,825 2,425 2,005 24,255 24,255 13,660 670 14,330 3,920 3,626 10715 12,430 30,691 4,914 8,964 4,039 46,049	9,450 2,703 2,370 30,044 6,625 36,669 4Q2015 19,630 2,420 2,027 24,077 7,339 13,480 675 14,155 10,865 12,820 31,760 4,928 8,330 4,192 46,198	9,661 2,762 2,496 30,457 6,262 36,719 2013 19,263 2,435 2,044 23,742 6,961 13,646 650 14,295 4,532 3,559 10,099 11,865 30,055 4,741 8,140 46,057 46,057 46,057	707 707 9,694 2,751 2,464 30,210 6,416 36,626 2014 19,353 2,415 1,980 1,980 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 3,594 4,301 4,401 4,	707 9,575 2,735 2,400 30,156 6,601 36,758 2015 19,551 2,405 2,004 10,253 13,455 666 14,421 4,198 3,671 10,646 12,595 31,110 4,793 4,793 4,793 4,794 4,794 4,794 4,796 4,793 4,794	1.750 707 9,575 2,735 2,735 30,311 6,751 37,063 2016 19,776 2,029 24,211 7,213 13,455 676 44,131 41,133 3,751 10,946 42,985 31,825 4,818 4,818 4,818 4,819 49,175	-146 -11 -124 109 -2 -847 53 -794 yoy 13 444 83 -41 486 199 -155 3 -151 -163 13 285 259 394 131 111 54	-45 -22 -23 -11 -32 -247 -154 -93 -20 -20 -20 -20 -25 -55 -57 -175 -175 -159 -231 -324 -102 -182 -380 -380	-83 0 -119 -17 -64 -54 185 132 yoy 15 198 6-10 -25 213 134 -16 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15	-75 0 0 0 0 -50 0 155 155 250 0 0 25 255 250 0 10 10 -65 80 80 300 400 715 25 175 280

Source: IEA, EIA, JODI, NBS, Goldman Sachs Global Investment Research.

Other disclosures

Clarkson Research Services Limited (CRSL) have not reviewed the context of any of the statistics or information contained in the commentaries and all statistics and information were obtained by Goldman Sachs & Co. from standard CRSL published sources. Furthermore, CRSL have not carried out any form of due diligence exercise on the information, as would be the case with finance raising documentation such as Initial Public Offerings (IPOs) or Bond Placements. Therefore reliance on the statistics and information contained within the commentaries will be for the risk of the party relying on the information and CRSL does not accept any liability whatsoever for relying on the statistics or information. Insofar as the statistical and graphical market information comes from CRSL, CRSL points out that such information is drawn from the CRSL database and other sources. CRSL has advised that: (i) some information in CRSL's database is derived from estimates or subjective judgments; and (ii) the information in the database of other maritime data collection agencies may differ from the information in CRSL's database; and (iii) whilst CRSL has taken reasonable care in the compilation of that statistical and graphical information and believes it to be accurate and correct, data compilation is subject to limited audit and validation procedures and may accordingly contain errors; and (iv) CRSL, its agents, officers and employees do not accept liability for any loss suffered in consequence of reliance on such information or in any other manner; and (v) the provision of such information does not obviate any need to make appropriate further enquiries; and (vi) the provision of such information is not an endorsement of any commercial policies and/or any conclusions by CRSL; and (vii) shipping is a variable and cyclical business and any forecasting concerning it cannot be very accurate.

Disclosure Appendix

Reg AC

We, Jeffrey Currie, Damien Courvalin, Anamaria Pieschacon and Michael Hinds, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

Disclosures

Global product; distributing entities

The Global Investment Research Division of Goldman Sachs produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce equity research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; in Canada by either Goldman Sachs Canada Inc. or Goldman, Sachs & Co.; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman, Sachs & Co. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom and European Union.

European Union: Goldman Sachs International authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, has approved this research in connection with its distribution in the European Union and United Kingdom; Goldman Sachs AG and Goldman Sachs International Zweigniederlassung Frankfurt, regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht, may also distribute research in Germany.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by our Global Investment Research Division. Goldman, Sachs & Co., the United States broker dealer, is a member of SIPC (http://www.sipc.org).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and our proprietary trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, our proprietary trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

The analysts named in this report may have from time to time discussed with our clients, including Goldman Sachs salespersons and traders, or may discuss in this report, trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analyst's published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analyst's fundamental equity rating for such stocks, which rating reflects a stock's return potential relative to its coverage group as described herein.

We and our affiliates, officers, directors, and employees, excluding equity and credit analysts, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options disclosure documents which are available from Goldman Sachs sales representatives or at http://www.theocc.com/about/publications/character-risks.jsp. Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data available on a particular security, please contact your sales representative or go to http://360.gs.com.

Disclosure information is also available at http://www.gs.com/research/hedge.html or from Research Compliance, 200 West Street, New York, NY 10282.

© 2015 Goldman Sachs.

No part of this material may be (i) copied, photocopied or duplicated in any form by any means or (ii) redistributed without the prior written consent of The Goldman Sachs Group, Inc.