May 27, 2015

Americas: Energy: Oil

Top 420 feedback: Investors more bullish on lower supply

Goldman Sachs

Equity Research

Framing short-/long-term oil debate; positioning into OPEC/2Q

Key investor pushback to our lower oil price environment

We highlight several key areas of investor pushback, feedback, and questions following our Top 420 Projects report and lower oil price forecast on May 15. Conversations largely centered on: (1) the 2015 event path for crude oil; and (2) potential supply/demand scenarios that could derail our medium-term and long-term oil forecast.

Oil supply-demand: Street largely assumes challenged OPEC and non-OPEC ex-US production

Investors have turned more bullish on oil prices in recent months, the result of lower US rig count, healthy global demand and US inventories that are now seasonally drawing. The key pushback to our outlook for $60/bbl or lower WTI in coming years is that investors believe our supply forecasts for OPEC and non-OPEC ex-US are too high. While investors largely see shale productivity gains as a risk, most either do not believe they will be as meaningful as we assume or believe that they will be offset by lower production elsewhere in the world. In the report, we address frequently asked questions and our outlook.

Stocks: Investors see majors as defensive, more E&P stocks as challenged if our price deck holds

The key shift in equity views with our Top 420 projects was largely our more negative outlook on select global majors and international diversified oils (downgrade of CVX and MUR to Sell as examples). Investors still view these stocks as more defensive on stronger balance sheets and capital discipline. Investors questioned why we are not more negative on E&Ps at our $60 or below WTI environment. While stocks reflect $65/bbl WTI, those driving productivity gains that increase resource/lower costs (EOG, CXO, CLR, PXD) can perform well even if price expectations fall.

Positioning: 2015/16 event path for oil is paramount

Conversations with equity portfolio managers reveal positioning across the Energy complex is being driven by confidence intervals in the event path for oil prices in 2015/16. As investors gain increased confidence on the potential supply/demand implications in a lower-for-longer oil price scenario, there is likely a re-risking into equities. Rich valuations and uncertainty on macro cross-currents have left even the loudest bulls restrained heading into summer as improving micro fundamentals could have negative implications for the macro.

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Macro pushback: Frequently asked questions show bullish oil bias

Investor discussions in response to our Top 420 Projects report and lower oil price forecast centered on the 2015 event path for crude oil and potential supply/demand scenarios that could derail our medium term and long term oil forecast. While investors largely see shale productivity gains as a risk, most either do not believe they will be as meaningful as we assume or believe that lower production elsewhere will accommodate shale productivity improvement. While our conversations did not suggest investors are overweight energy, there remains a bullish bias on oil prices and willingness to increase positions in E&P and oil services stocks.

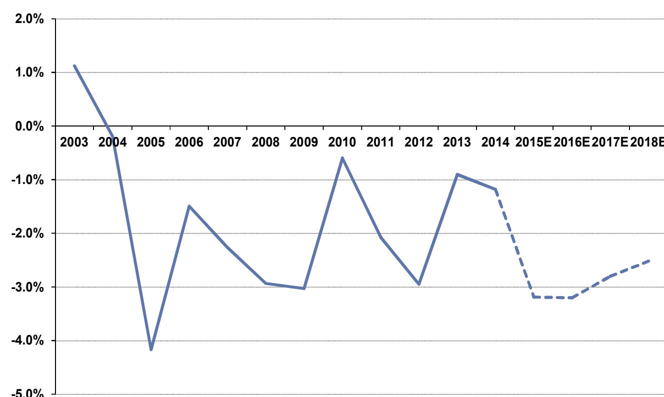
If WTI oil prices stay $60/bbl or below, won't non-OPEC supply roll over?

Investors see non-OPEC supply excluding the US returning to a 2011-12 scenario of declines if our oil price scenario holds. Not surprisingly, we received strong pushback that our outlook for non-OPEC supply is too high. We assume based on our Top 420 projects analysis that non-OPEC supply excluding the United States will fall 0.2 million bpd in 2015 but grow 0.1 million bpd annually in 2016-18. This is at oil price levels that do not assume US shale productivity and is the result of projects that are already in development. Historically, we have seen legacy supply (excluding Top projects) decline by about 2%. Before assuming shale productivity, we would see this legacy decline rate rising to about 3% per year.

What we would emphasize: If we see shale productivity gains, we could see non-OPEC ex-US production fall 0.4-0.5 million bpd per year in 2019-20. This would take the legacy decline rate to about 4% from 3%. So we agree that non-OPEC ex-US would likely roll over to a greater degree if we see sub-$60/bbl WTI oil in future years.

Risk to our call: Small changes in legacy decline rates can have a tangible impact on longer-term supply. We note that a 1% change in the average legacy decline rate can have a 0.4 million bpd impact on supply growth. As such, we view the pushback that our non-OPEC supply forecast is too high as understandable and reasonable even though we are assuming well-above-average legacy declines vs. the last 12 years.

Exhibit 1: We assume a modestly lower non-OPEC base decline rate due to lower spending in mature regions
Non-OPEC decline rates excluding major new start-ups (Top 420 projects)



Source: Goldman Sachs Global Investment Research.

Exhibit 2: If shale productivity accelerates, risk is that base declines will exceed highs of last 12 years
Key drivers of 2020 vs. 2015 oil production (mn bpd), current shale productivity vs. 3%-10%/yr improvement at Big 3 plays

	Base	Add'l shale efficiency
2015 production	94	94
Less OPEC	(37)	(37)
Less Big 3 shale	(6)	(6)
Less other US	(7)	(7)
Base production	45	45
Assumed legacy decline	(6)	(8)
Sanctioned Top 420 projects	6	6
2020 non-OPEC supply after declines	45	43
Plus OPEC	38	38
Plus Big 3 shale	10	12
Plus other US	7	7
Total supply	100	100
Annual base decline rate implied	2.8%	3.9%

Source: Goldman Sachs Global Investment Research.

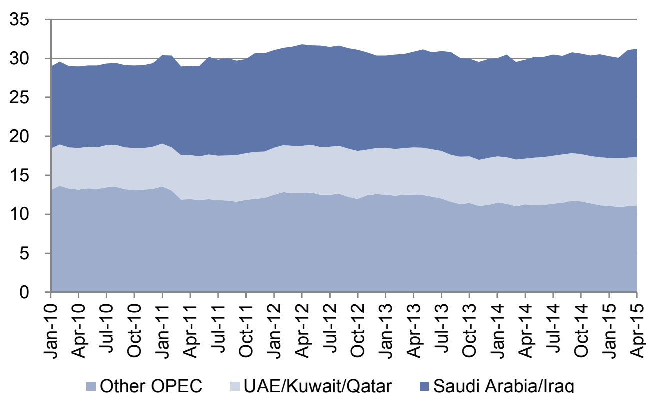
Won't OPEC production roll over as well if oil prices are lower for longer?

Investors see geopolitical risks as elevated and OPEC supply as likely to fall if oil prices do not rise. While we do not believe the Street expects OPEC to cut its supply quotas at its June 5 meeting, investors expressed skepticism that OPEC could keep production around 31 million bpd if Brent oil is $65/bbl or less in coming years. Relative to 2014 average, March/April OPEC production was up 1.1 million bpd, with Iraq and Saudi Arabia up 1.0 million bpd, UAE/Kuwait Qatar 0.2 million bpd and the rest of OPEC -0.1 million bpd.

What we would emphasize: We see Iraq and Saudi Arabia providing the bulk of growth in OPEC's production in the coming years, and overall we are not currently forecasting production well north of 31 million bpd. As such we are implying declines elsewhere. We do not assume that Saudi Arabia production capacity has increased, just that the increase in rig count is both offsetting declines and moving production closer to capacity.

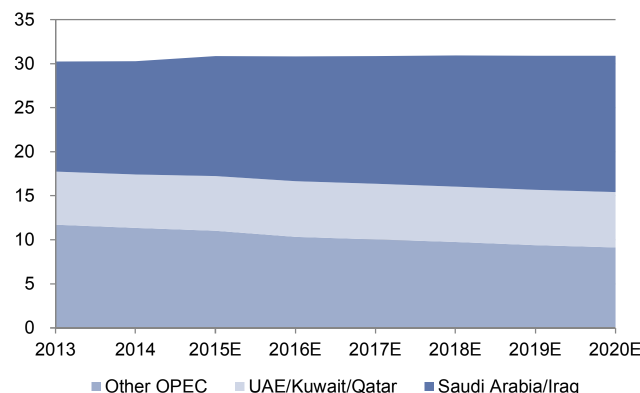
Risk to our call: Geopolitical events and potentially lower spare capacity. It is difficult to forecast geopolitical events, which provide both upside and downside risk to production levels and prices. Upside risk to production (downside risk to prices) likely could come if Iran's production levels rise. Downside risk to production (upside risk to prices) could come if there are disruptions or reduced investment without offsetting efficiencies by other countries within OPEC.

Exhibit 3: A handful of countries responsible for recent OPEC production uptick
Monthly OPEC production, 2010-present, million bpd



Source: IEA, Goldman Sachs Global Investment Research.

Exhibit 4: We assume Iraq and Saudi Arabia will continue to gain market share within OPEC
OPEC annual production, 2013-20E, million bpd



Source: IEA, Goldman Sachs Global Investment Research.

Isn't assuming 3%-10% per year well productivity improvements too aggressive?

Investors fear shale productivity could cause resilient US production, but overall do not believe it will believe material enough to impact global oil prices. While investors recognize that shale gas and shale oil have become more efficient in recent years, there is still some skepticism: (a) if these productivity gains are increasing recovery rate at the same pace that they are increasing initial production rates; (b) if we are seeing maturity in industry knowledge reduce the upside from future productivity gains, particularly in areas like the Bakken/Eagle Ford; and (c) if the productivity gains will be enough to materially impact global oil prices. Our shale efficiency case assumes we see well productivity

increase 3%-10% per year through 2020, leading to lower shale breakevens and increased recoverable resource. We assume the upper end of the efficiencies in areas such as the Permian and other up-and-coming plays, while we assume the lower end in areas such as the Bakken that are closer to maturity.

What we would emphasize: We and the Street have consistently marked to market shale improvements historically. Like much of the rest of the Street, we have historically been conservative in our willingness to assume ongoing shale productivity gains and instead have tended to mark efficiencies to market on a bottoms-up and top-down basis. We are now more willing to assume industry efficiency improvements continue, based on: (a) historical trends that showed even areas like the Bakken showed well performance +5% yoy in 2014; (b) greater commentary from producers and oil services companies that there remain ample ways to increase recovery via improving well completions; (c) our assumption that industry is more likely to eke out efficiencies at weaker oil prices than stronger oil prices; and (d) producer commentary that both recovery rate and hydrocarbon in place may be underestimated in key shale plays.

Risk to our call: Industry knowledge for newer plays starts at a higher base than older plays. We view as quite noteworthy 1Q 2015 commentary by producers in legacy areas such as the Haynesville Shale and Pinedale Anticline that newer completion techniques are having a substantive impact on well performance. At the same time, these areas likely did not initially use completion technology that today's Permian Basin or SCOOP wells are using. As such there is risk that in these newer areas there is less opportunity for efficiency gains at the same rate as what was seen or is being seen in legacy areas.

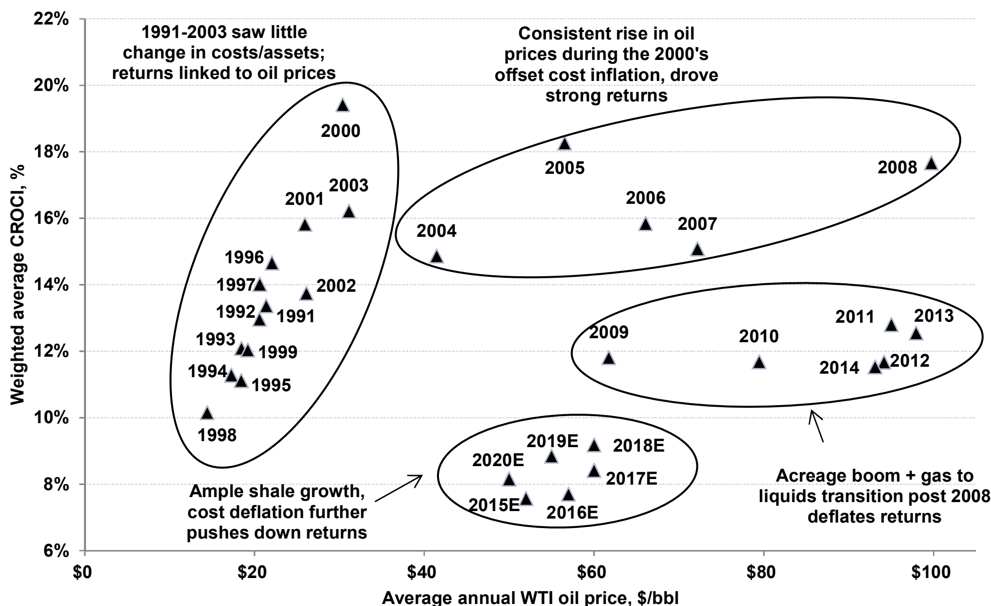
Can producer balance sheets handle lower oil prices? If not, how can the US accelerate supply growth?

Ultimately the ability to get funding, a function of leverage and cost of capital, is going to be critical to how quickly producers can maintain activity without oil prices rising. Investors expressed skepticism that producers will be able to finance the type of US growth we expect in an environment where shale productivity pushes prices lower towards the end of the decade. We agree that one cannot assume shale-productivity driven growth pushing down prices without making sure that the companies delivering the productivity and accelerated growth are in reasonable financial position.

What we would emphasize: Capital markets appear likely to remain open, and we see potential for M&A to allow capital to be allocated towards high-quality acreage where producers have higher cost of capital. In our base case models, we assume that leverage is slightly lower in 2016-18 vs. 2015, though rises slightly in 2020. However, we assume minimal equity issuance for covered E&Ps going forward vs. $8 bn in recent years. Investors have pushed back that corporate returns will be too low in our oil price scenario. While we agree that corporate cash return on cash invested has deteriorated significantly and stands to fall more (a key point addressed in our March 6, 2015 Dear CEO report), we believe perceived incremental rates of return, balance sheets and access to capital tend to be the key constraints for producers.

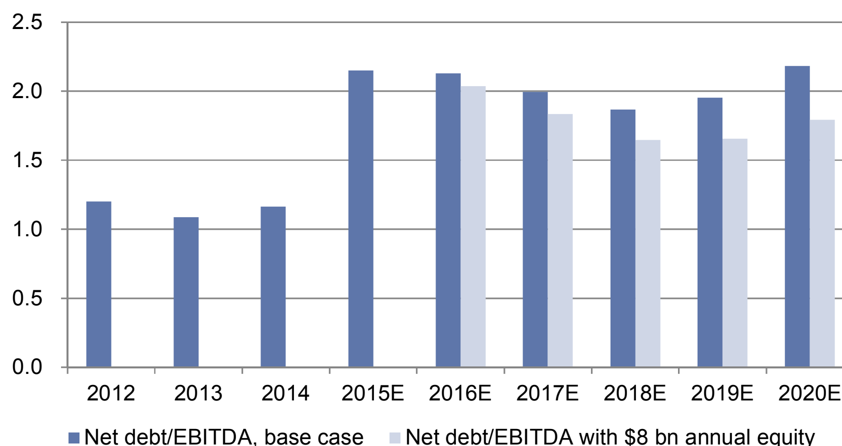
Risk to our call: If there is a greater penalty by equity investors for deteriorating cash return on cash invested or more limited access to capital, the combination of balance sheets and cost of capital would not be favorable as our base case.

Exhibit 5: While E&P cash return on cash invested has deteriorated, producers have largely invested based on incremental returns and available capital
Corporate cash return on cash invested, 1991-2020E



Source: Company data, Goldman Sachs Global Investment Research.

Exhibit 6: While 2015 leverage has risen, we do not assume a material further increase at our price deck, particularly if we were to see equity issuance consistent with recent trends
Net debt/EBITDA, base case and assume $8 bn in annual equity issuance in 2016-20



Source: Company data, Goldman Sachs Global Investment Research.

Why make these changes now when recent oil datapoints have turned more positive, at least short term?

Investors have questioned why to be incrementally bearish in the face of more constructive datapoints on supply-demand. In the two weeks prior to our Top 420 report, investors shifted from being more 6-12 months bullish on front oil prices to being more outright bullish on the entirety of the curve. This largely stemmed from signs US production has flattened, global oil demand is healthy and US inventories are no longer building.

What we would emphasize: Top 420 projects is an annual report looking at longer-term, though our shorter-term forecasts reflect some concern for fall oversupply. We recognize that there are clear signs that the US producer response has been sufficient to significantly restrain growth. Additionally, the sharp decline in prices we expected for 2Q has not materialized. Our Top 420 projects report has historically been done annually to look at the long-term cost structure and supply growth potential of the industry. As detailed in our Commodities Research colleagues' May 22 note, "Commodity Watch: The macro reversal will likely prove temporary," we are concerned that we may see more negative commodity supply/demand/trading datapoints towards end of summer that could result in lower commodity prices in the fall.

Risk to our call: We do not necessarily see the trends that have caused the more bullish sentiment shifting in the immediate term.

Positioning & Sentiment: 2015/16 event path for oil is paramount

Conversations with equity portfolio managers reveal positioning across the Energy complex is being driven by confidence intervals in the event path for oil prices in 2015/16. As investors gain increased confidence on the potential supply/demand implications in a lower-for-longer oil price scenario, there is likely a re-risking into equities. Rich valuations and uncertainty on macro cross-currents have left even the loudest bulls restrained heading into summer as improving micro fundamentals could have negative implications for the macro. In what is generally a quiet period of ahead of 2Q earnings, the June 5 OPEC meeting and ongoing Middle East negotiations are near-term catalysts for oil prices and Energy equities.

- **Event path for oil dictates positioning.** Investors appear to lack true conviction – Hedge Fund PMs are keeping dry powder readily available and Mutual Fund PMs are maintaining similar playbooks – both hesitant to take too heavy a directional tilt as they wait to see how (1) micro datapoints feed into the macro, and/or (2) macro uncertainties (OPEC/Iran/etc.) materialize. This creates a scenario where managers likely re-risk in Fall 2015, post the Summer lull, into a period where crude prices either (a) come under pressure or, (b) continue to grind higher. In either scenario, investors want to see how Energy market cross-currents/macro forces manifest themselves in oil prices. At present, consensus is that it's tough to get an edge, especially when stocks aren't cheap and there is concern that further shale productivity/efficiency gains are likely and can push down breakeven prices – supported by announcements like oil and gas producer XEC raising equity for the purpose of bringing back activity in 2H15.

  On the near-term event path for oil, many see a lagged start-up of US production creating a more bullish oil price scenario even if lower 48 supply comes back online later this year or in 2016. Investors see our 2016-2018 forecast of non-OPEC ex-US supply growth as having the greatest downside risk, which drives part of investors' medium term bull case.

- **Playbook is unchanged…for now.** Generalist mutual fund PM-level discussions focused on our even more bearish oil price forecast and single stock ideas across the global energy complex, with many asking if they even have to own energy if we are truly in a lower-for-longer oil price environment. The playbook for large cap PMs remains similar – underweight energy at the index level driven primarily by meaningful underweights to index heavy integrated oils (XOM/CVX) and traditionally defensive oil service (SLB) / midstream (KMI) stocks. They plan to use weakness in core E&P holdings to add to the perceived best positioned, low-cost companies – APC, CXO, DVN, EOG, PXD among large caps and FANG, RSPP, XEC among SMID-caps. There is also an increased willingness to look at North American levered oil service companies (HAL, PTEN, HP) that would likely benefit from an inflection in lower 48 activity. That said this is likely a more tactical view given concerns about the potential for US supply to again oversaturate the global oil market.

- **OPEC meeting setup.** The consensus among equity investors is that the June 5 OPEC meeting will be a non-event with no cut likely; however, there is less certainty on what that means for oil prices. Many equity PMs are less willing to stay fully invested into the event as they recall the sting of the sharp downward moves in crude and equities in November 2014. Per our options strategists – John Marshall and Katie Fogertey – the setup ahead of the OPEC meeting appears similar to the setup ahead of the November meeting in terms of investor perceptions and options pricing. Similar to November, investors seem to have ruled out the possibility the OPEC meeting will be a negative catalyst. Limited evidence of hedging in the options market increases the potential the market is caught off-guard. Options prices across the oil complex have declined in recent weeks, signaling increased complacency.

E&P pushback / feedback

Our view on the E&Ps: We have a Neutral coverage view as we believe a shale productivity-driven fall in commodity prices is a blessing for some companies and a curse for others, depending on the exposure to the productivity gains. We believe greater resource at lower cost can offset the impact of lower prices for those with large contiguous resource bases in key onshore resource plays. At the same time, for those less exposed to productivity gains lower prices is a negative. We continue to favor shares of shale scale winners and the productivity-drivers.

We highlight three key areas of investor pushback:

- **Investors wondered how we could have even a Neutral coverage view with a $50-$60 per bbl WTI environment.** Similarly, investors wondered how we could recommend any E&P stocks with this type of price outlook. We believe E&P stocks are currently overvalued if the only impact to stocks from here would be a decline in commodity price expectations to $60/bbl WTI from current $67/bbl WTI. At the same time, however, investors have: (a) historically been willing to give E&P stocks credit for "development mode" cost improvement; and (b) bid up stocks that see their cost structure fall and resource rise. As with Marcellus Shale E&Ps like Cabot Oil & Gas and Range Resources in 2011-12, the key is whether resource expansion + cost structure decline offsets the negatives of lower price expectations. For many E&Ps, we believe this can be the case. This is why we continue to recommend shale scale winners such as EOG, CXO, PXD and why we upgraded CLR to Buy from Neutral (along with NFX, we see continued productivity improvements in the SCOOP/STACK plays).
- **While CL-Buy PDCE may be a "consensus" stock, there is skepticism on execution.** We initiated coverage of PDCE at CL-Buy. With shares having risen by 42% YTD and feedback to our view largely positive, investors appear concerned that PDCE is a 'consensus' stock. At the same time we received pushback on some of the key tenets of our thesis which gives us confidence that shares can outperform with execution. Mainly, there appears to be skepticism on PDCE's ability to deliver 40% oil growth in 4Q15 vs. 1Q15, given the company's lack of growth track record. We, however, view this as achievable driven by an easing of recent midstream constraints and as a record 40-45 gross operated Wattenberg wells are turned online in 2Q. We believe execution can help offset the pushback that PDCE shares have always been "cheap" as occurred with Cabot Oil and Gas in the past.
- **GPOR downgrade.** An important second-derivative from our updated view on US shale oil production is that higher associated gas growth will reduce the "Call on Appalachia" in balancing North American natural gas fundamentals. As growth gets pushed to the right we see the potential for GPOR's multiple premium (+2.1x 2016 E&P average EV/EBITDA) to contract and downgraded the stock to Sell (from Neutral). The main pushback from investors have been our 2016 production forecast (GS: +35% yoy versus the midpoint of management's 2015 guidance range; Street: +43%), catalyst path and isolation of GPOR amongst several high multiple Appalachian stocks. Admittedly, our catalyst path is weak as gassy stocks could see relative outperformance into the late summer/fall; however, given investors heavy overweight positioning we see potential benefits to being "early" to our ratings change.

Super majors & refiners pushback / feedback

Our view on the Majors. Our negative revisions to the oil price forecast were particularly concerning for the majors under our coverage with limited shale exposure and major dividend commitments. We lowered price targets for CVX (Sell), XOM (Buy) and COP (Neutral) – and downgraded CVX to Sell. Globally, our colleagues in Europe and Latin America, lowered BP, Statoil and Petrobras from Neutral to Sell, as well.

- **We highlight three sources of investor pushback:**
  - Majors provide a source of defense if the commodity price declines given low leverage levels and the downstream exposure
  - Our commodity price forecast is too low long-term as non-OPEC supply outside of the US will disappoint in 2018-2020, with the absence of new major capital projects
  - Majors have the flexibility to reduce costs and capital more than many investors give them credit for

Our view on Refiners. We view our downward revisions to the oil price forecast as positive for refiners under coverage. Expectations for lower oil prices should drive (1) higher levels of demand for refined products, (2) improved capture rates and (3) could support a rotation of capital back into the more defensive refining sector. We continue to rate VLO (CL), MPC and PSX as top Buys.

- **We highlight three sources of investor pushback to these views:**
  - If US oil production growth remains strong, as we expect, our $5/bbl Brent-WTI spread 2016 forecast may be too low
  - Some believe global oil demand could disappoint versus our three year average forecast of 1.2 mn bpd of growth given the impact of energy efficiency and slowing EM GDP growth. Global refining capacity additions could weigh on product margins/crack spreads
  - After sharp outperformance, even our Buy-rated favorites (VLO, PSX, MPC) may look fairly valued. Many investors would prefer to step in on a pullback

The most debated stocks.

- **CVX (Sell).** Many pushed back on our downgrade to Sell – as investors like the LNG production growth and see CVX as better positioned if Brent prices recover.
- **XOM (Buy).** XOM remains a major underweight for energy investors – as skeptics question the achievability of production growth targets and are concerned about EV/DACF valuation levels.
- **VLO (CL Buy).** Some investors are still skeptical about the VLO management turnaround story and are concerned about the tightness of Gulf Coast crude spreads.
- **PSX (Buy).** In a lower for longer oil price, some believe the chemical and NGL businesses will face major headwinds – and therefore are on the sidelines.
- **COP (Neutral).** Some believe COP's dividend is unsustainable at our long-term oil price forecast – and therefore would prefer to own other international diversified oils.

Oil service pushback / feedback

Our view on Oil Services: The biggest area of pushback was centered around the long-term commodity price forecast and the assumptions behind the forecast, rather than on our single stock rating changes. Our Buy ratings on land drillers HP/PTEN/NBR, best-in-class pressure pumpers CJES (CL)/RES, and frac sand MLP EMES are based on our view of a 2016 recovery in US land activity and portfolio high-grading by E&Ps. Our Energy team's long term thesis of 3-10% annual productivity improvement in US Shales through the end of the decade, if true, will be incrementally positive for our Buy-rated stocks CJES/RES/EMES as it implies greater demand for efficient and more focused fracture stimulation, and greater proppant intensity per well. However, higher well productivity may stem demand for high-spec rigs over a long-term and hence our Buy rating on land drillers, HP, NBR and PTEN is more tactical and less based on structural long-term trends. Elsewhere in offshore, we have a negative view on the drillers (with Sell ratings on RIG/DO) given our Energy team's view that a number of the offshore projects will be uneconomical at the forecasted lower oil prices. Our other Sell ratings are a function of companies with commoditized offerings and stretched balance sheets (BAS) or products facing a secular demand decline (CRR).

We highlight sources of investor pushback to these views:

- Though there is widespread agreement on an impending recovery in US land activity in 2016 in order to re-kindle production growth after a sharp reduction in rig count, some investors believe the stocks have run up too much. However, by our estimates, land drillers and select SMID services companies are trading near-normalized multiples on 2017 estimates when the full impact of the recovery accrues.
- Investors also questioned the assumption of a 3-10% annual productivity improvement in US shales. We believe that best-in-class drilling equipment, longer laterals, changes to completion design involving more focused fracture stimulation and higher proppant intensity could drive these productivity improvements longer-term. We expect E&Ps to increasingly shift towards the use of 1500HP AC rigs which have the capability to drill longer laterals more efficiently, work with best-in-class pressure pumpers that have well established supply chains and proppant suppliers with access to low cost reserves and ability to supply the proppant closer to the well site.

The most debated stocks:

- **HP (Buy).** Some investors have debated HP's premium margins may never recover to historical highs as the fleet has aged and is no longer unique. We believe investors do not fully recognize that HP controls nearly 50% of the idle capacity of the 1500HP AC rig market which we think will be the first to tighten based on the theme of portfolio high-gradation by E&Ps.
- **EMES (Buy).** There remains some degree of concern around where margins for sand suppliers could bottom and if or not they could recover from those levels given they have historically earned higher returns on investment compared to the rest of the oil services industry. We don't assume a material improvement in margins for EMES from the bottom around $19-20/ton which we think is conservative. As volumes improve next year, EMES's margins could see improvement as fixed costs are spread over a higher volume base even in the absence of any price recovery. The second area of debate is specific to EMES and relates to whether or not the distribution cut expected for 2Q15 is fully priced-in. We see risk/reward as skewed to the upside.

Midstream pushback / feedback

Our view on the Pipelines/MLPs: We have an Attractive coverage view based on our resilient fundamental view and an attractive "yield plus growth" value proposition aided by a benign interest rate backdrop. In our view, US supply and demand trends remain favorable despite lower prices. Coupled with our outlook for a continued demand response for natural gas and NGLs, and robust Marcellus/Utica natural gas supply, we expect the midstream demand environment to remain favorable. We increasingly focus on midstream companies levered to volume growth with low risk cash flows profiles supported by fee-based contracts.

We highlight three sources of investor pushback to these views:

- Some investors believe even if midstream fundamentals remain strong, expectations for rising interest rates are likely to be a headwind on valuations. Higher interest rates would also increase cost of capital, compressing project returns.
- Over the near term, a weakening outlook for commodity prices is likely to weigh negatively on midstream stock valuations, particularly those that have project backlogs levered to liquids growth.
- Midstream project returns will decline in a lower commodity price environment as shippers look for tariff/price concessions similar to those experienced in oil services.

The most debated stocks:

- **LNG (Neutral).** Many pushed back on our downgrade to Neutral – as investors: (1) believe our lower marketing margin assumption (based on a $55/bbl Brent price) is too punitive and (2) there is still meaningful valuation upside based on already contracted capacity at its LNG export trains in development.
- **PAGP (CL-Buy).** In a lower for longer crude price environment, some investors expect lower S&L profitability relative to historical trends and see more limited opportunity for organic project backlog growth and thus remain sidelined.
- **NGLS/TRGP (Sell/Neutral).** We did not receive major pushback to our ratings changes but investors were generally skeptical of our commodity price view. However, we fielded inquiries on our volume assumptions which to some appears high for our oil price view. We expect base volume growth and the execution of growth projects as US oil production continues to grow throughout our forecast period.
- **LINE/LNCO (Sell).** Beyond pushback on our commodity price view, bulls on the stock point to a lack of downside catalysts, since Linn has a solid medium-term runway of hedges and liquidity position which should allow it to maintain its distribution and therefore support valuation.
- **HEP (Buy).** While we believe investors are increasingly warming up to HEP due to its attractive low risk yield, many remain doubtful that non-traditional parent dropdowns can meaningfully increase HEP's future distribution growth.

Exhibit 7: Summary of valuation methodology and key risks

Key companies referenced in this report; price targets have 12-month timeframes

	Ticker	Rating	Stock price	Target price	Target return	Valuation Methodology	Key Risks
Basic Energy Services, Inc	BAS	Sell	$8.80	$5	(43%)	EV/EBITDA	Commodity prices, higher than expected E&P capital spending
C&J Energy Services, Inc	CJES	Buy	$15.81	$19	20%	EV/EBITDA	Comm. prices, debt load, NBR's ownership of 53% shares, lower than expected synergies
Continental Resources, Inc.	CLR	Buy	$46.63	$60	29%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
Cabot Oil & Gas Corporation	COG	Buy	$35.10	$43	23%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
ConocoPhillips	COP	Neutral	$65.11	$64	3%	EV/EBITDA & Yield	Commodity prices, production costs and capital spending levels
Carbo Ceramics Inc.	CRR	Sell	$39.68	$10	(74%)	NAV	Commodity prices, penetration for its product Kryptosphere, market share retention
Chevron	CVX	Sell	$104.89	$99	(2%)	P/E, EV/EBITDA & Yield	Commodity prices, LNG construction risk and M&A
Concho Resources	CXO	Buy	$121.49	$157	29%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
Diamond Offshore Drilling	DO	Sell	$32.53	$18	(43%)	EV/EBITDA	Commodity prices, higher than expected utilization and dayrates for rigs
Emerge Energy Services	EMES	Buy	$40.05	$41.0	9%	Yield	Commodity prices, weaker than expected margins, change to completion design
EOG Resources	EOG	Buy	$90.26	$108	20%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
Gulfport Energy Corp.	GPOR	Sell	$46.53	$34	(27%)	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
Holly Energy Partners	HEP	Buy	$34.32	$38	17%	Yield based	Dropdown timing and valuation, size of dropdowns at parent, interest rates.
Helmerich & Payne Inc.	HP	Buy	$75.27	$85	17%	EV/EBITDA	Commodity prices, E&P capital spending, dayrates and utilization for rigs
Linn Energy	LINE	Sell	$11.51	$10	(2%)	Yield based	Upside risk of higher M&A accretion, higher commodity prices, higher volumes
LinnCo	LNCO	Sell	$11.21	$10	0%	Yield based	Upside risk of higher M&A accretion, higher commodity prices, higher volumes
Cheniere Energy, Inc.	LNG	Neutral	$75.18	$81	8%	SOTP	Marketing profitability, project completion delays and regulatory delays.
Marathon Petroleum	MPC	Buy	$103.08	$120	18%	SOTP	Refining margins, operational issues, and policy around the crude oil export ban
Nabors Industries Ltd.	NBR	Buy	$15.71	$18.0	16%	EV/EBITDA	Commodity prices, E&P capital spending, dayrates and utilization for rigs
Newfield Exploration	NFX	Buy	$38.04	$46	21%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
Targa Resources Partners, LP	NGLS	Sell	$45.24	$42	0%	Yield based	Commodity prices, reduced drilling activity and delays or cost overruns on growth
Plains GP Holdings, LP	PAGP	Buy	$28.82	$33	18%	Yield based	S&L margins, project/M&A accretion, changes to project backlog.
PDC Energy	PDCE	Buy	$58.68	$77	31%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
Phillips 66	PSX	Buy	$80.97	$93	17%	SOTP	Refining/chemical margins, operational issues, slower than expected project growth at PSXP
Patterson-UTI Energy Inc.	PTEN	Buy	$21.40	$25.0	19%	EV/EBITDA	Commodity prices, E&P capital spending, dayrates and utilization for rigs
Pioneer Natural Resources	PXD	Buy	$154.87	$194	25%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
RPC Inc.	RES	Buy	$14.76	$17	17%	EV/EBITDA; M&A	Commodity prices, lower than expected E&P capital spending
Transocean Ltd.	RIG	Sell	$20.15	$7	(59%)	EV/EBITDA	Commodity prices, higher than expected utilization and dayrates for rigs
Range Resources	RRC	Neutral	$58.64	$60	3%	DCF/M&A-based	Commodity price volatility, production, costs and government pronouncements
Targa Resources Corp.	TRGP	Neutral	$98.50	$117	22%	SOTP/M&A	Higher/lower than expected volumes or equity issuances at NGLS, commodity prices
Valero Energy	VLO	Buy	$60.99	$74	24%	SOTP	Refining margins, crude spreads, operational issues, corn-oil spread
Exxon Mobil	XOM	Buy	$86.52	$96	14%	P/E, EV/EBITDA & Yield	Commodity prices, production costs and capital spending levels

Source: Goldman Sachs Global Investment Research

Rating and pricing information: Basic Energy Services Inc. (S/N, $8.80), BP Plc (S/C, $42.50), Carbo Ceramics Inc. (S/N, $39.68), Cheniere Energy Inc. (N/A, $75.18), Chevron Corp. (S/N, $104.89), Concho Resources Inc. (B/N, $121.49), ConocoPhillips (N/N, $65.11), Continental Resources Inc. (B/N, $46.63), Diamond Offshore Drilling (S/N, $32.53), Emerge Energy Services LP (B/N, $40.05), EOG Resources Inc. (B/N, $90.26), Exxon Mobil Corp. (B/N, $86.52), Gulfport Energy Corporation (S/N, $46.53), Helmerich & Payne Inc. (B/N, $75.27), Holly Energy Partners (B/A, $34.32), Linn Energy LLC (S/A, $11.51), LinnCo LLC (S/A, $11.21), Marathon Petroleum Corp. (B/N, $103.08), Nabors Industries Ltd. (B/N, $15.71), Patterson-UTI Energy Inc. (B/N, $21.40), PDC Energy Inc. (B/N, $58.68), Petroleo Brasileiro SA (S/C, $9.15), Phillips 66 (B/N, $80.97), Pioneer Natural Resources Co. (B/N, $154.87), Plains GP Holdings (B/A, $28.82), Statoil (ADR) (NC, $19.62), Targa Resources Corp. (N/A, $98.50), Targa Resources Partners LP (S/A, $45.24), Transocean Ltd. (S/N, $20.15) and Valero Energy Corp. (B/N, $60.99)

Disclosure Appendix

Reg AC

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