Energy

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Industry Brief

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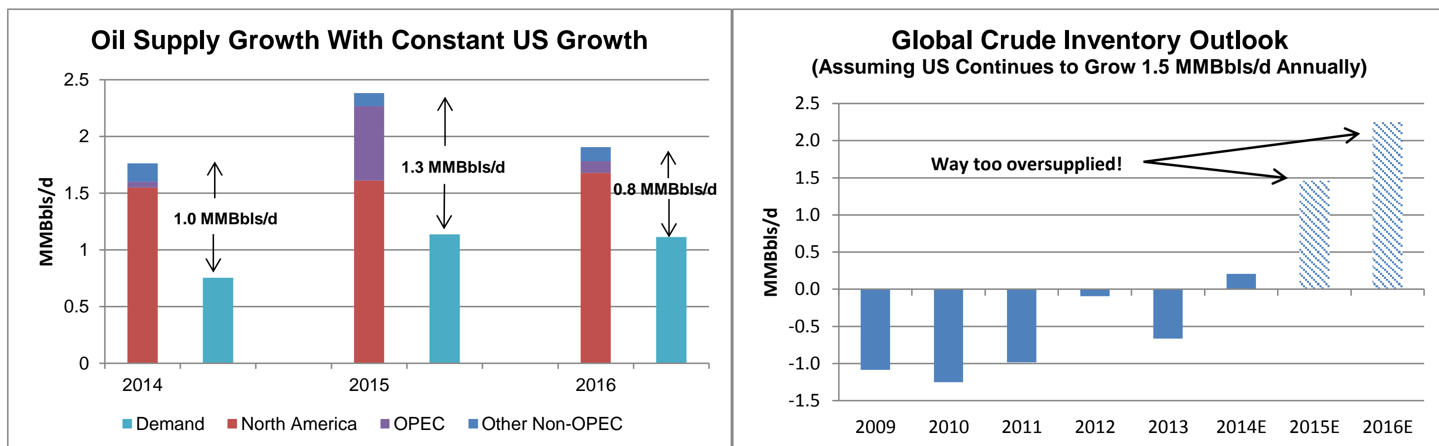
Energy: Stat of the Week

Energy Stat: How Much Does U.S. Oil Supply Have to Slow to Balance the Global Equation?

Following last week's OPEC meeting, the elephant in the room now is "how low do oil prices need to fall to balance the global oil market?" Given the complicated inter-relational nature between oil prices, industry cash flows, geographic spending lags, improving U.S. well productivity, and regional drilling activity, it is not a simple answer. Over the next few weeks, we will try to shed light on this critical industry question by bringing together our global oil model, U.S. production by play model, U.S. E&P capital spending model, and our global rig count model in an iterative process. The first step in this process, however, is to determine how much global oil supply growth must be slowed and what part of the world must slow supply growth the most. The subject of this week's "Stat" is to detail why **we think annual U.S. oil (and NGL) supply growth must slow from roughly 1.5 million BPD to nearly no growth** over the next few years. As shown below (left), North America will be responsible for over 90% of the world's oil supply growth this year. If WTI prices were to stay at $85/Bbl or higher, then U.S. liquids supply growth should continue to grow at roughly 1.5 million BPD for the next several years. Even with a modest improvement in global oil demand, global oil supply would meaningfully outpace demand over the next couple of years (assuming no meaningful change in current OPEC production). As shown in the graph (below right) these annual excesses build upon each other, therefore by 2016 oil inventory builds would be above an untenable 2 million BPD. Put another way, to reduce 2016 global oil inventory builds to roughly breakeven, U.S. oil supply growth must be driven down to nothing by low oil prices.



Source: EIA, Raymond James research.

To fully appreciate the logic behind the numbers above, it is very important to understand several key assumptions that we must make. Our key assumptions for simulation include: 1) global oil demand increases modestly to ~1.1 MMBbls/d annually (vs. less than 1 MMBbls/d annual average since 2007); 2) offshore and other long lead time oil projects remain relatively robust despite falling oil prices; and 3) OPEC maintains production levels about where they are today (excluding OPEC NGL growth). In the following pages, we will examine in more detail the logic and considerations behind these three key oil model assumptions. Clearly the biggest risk to the math presented above will not be either demand or non-U.S. activity, but rather changes in OPEC supply.

Please read domestic and foreign disclosure/risk information beginning on page 9 and Analyst Certification on page 9.

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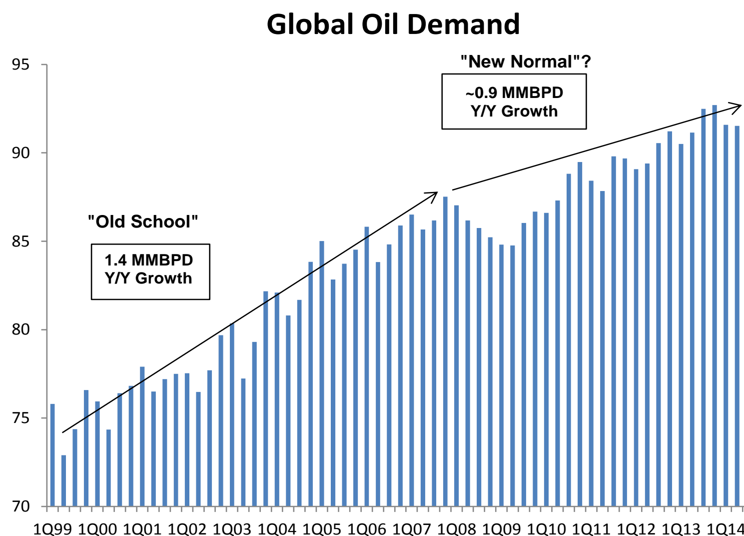
Annual Global Oil Demand Growth Should Increase Modestly to 1.1 MMBbls/d in 2015/16 Amid Lower Oil Prices

For the two decades prior to 2007, global oil demand grew by a relatively robust 1.4 MMBbls/d annual average as China and other emerging economies saw oil demand growth explode on the back of a strong global economic expansion. In fact, for the decade prior to 2007, China represented nearly two-thirds of total global oil demand growth. Following the global financial collapse, oil demand has proceeded on a much more modest pace, averaging less than 0.9 MMBbls/d since 2008. The combination of global de-levering, improving fuel efficiencies, less driving, and China slowing from its breakneck economic growth pace should continue to drive sub-par global oil demand for the foreseeable future. Looking toward the next couple of years, we expect that demand growth will actually modestly outpace the “new normal” run rate, as lower oil prices do spur modest increases in oil consumption. Accordingly, we are currently modeling 1.1 MMBbls/d of global oil demand growth over the next few years (in line with the IEA). For more details, see our stat from October 27, in which we detailed why we expect lower oil prices to lead to a bit of demand uplift, but far from a cure-all.



Source: EIA, Raymond James research.

Long Lead Time Projects Mean U.S. Onshore Drilling Activity Must Suffer the Most Over the Coming Years

Intuitively, one would think that the least economic oil plays around the world are at the greatest risk during an oil price pull-back. If that were the case, then we could just identify those high cost, low return projects (or regions) and cut activity assumptions in those areas to re-balance the oil equation. Unfortunately, it is not that simple. The reality is that oil projects around the world can be boiled down into two types – long and short lead time projects. On the one hand are long-term projects such as oil sands developments and most offshore production developments. These long lead time projects are planned with a multi-year horizon under a longer term, normalized oil price expectation. Short-term swings in oil prices usually have minimal short-term impact upon this type of activity since most have been commissioned many years earlier and sunk costs dictate that spending should continue despite short-term oil price volatility. For example, development of Total’s CLOV field began back in 2010 and has only just come on stream in mid-2014. Investment and production growth from this project will likely continue to grow over the next few years regardless of near-term oil prices. Likewise, we expect Brazil’s oil production to continue to increase through this period despite Petrobras’ balance sheet and accounting issues.

The resilience of these longer-term plays means shorter-term, cash flow-driven oil projects will be the ones that suffer the most and soonest in a lower oil price world. Put another way, Canadian unconventionals (excluding the oil sands) and **U.S. shale projects are all on the proverbial chopping block to right-size global production**. This is despite the fact that the economics of extracting oil in North America have improved dramatically over the past few years. A decade ago, the U.S. would have been one of the least economic areas in the world, while today the U.S. shale oil plays rank out as some of the best return areas in the world. While we characterize these regions as short-term, cash flow-driven projects, it is important to realize that it will still take several quarters of lower oil prices before spending and activity in these areas really begins to fall. Given the momentum of the past few years, we would expect activity in these regions to only begin a meaningful slowdown in the 2Q15 timeframe. Since nearly two-thirds of our expected Canadian oil production growth comes from oil sands, we expect the U.S. will be responsible for most of the reduced oil supply growth needed to balance the global oil market over the next couple of years. In the coming weeks, we will detail exactly how much U.S. spending and drilling activity must decline in order to rebalance the global oil equation. Spoiler alert: Average U.S. drilling activity will need to decline more than 20% over the next 18 months to fix this problem!

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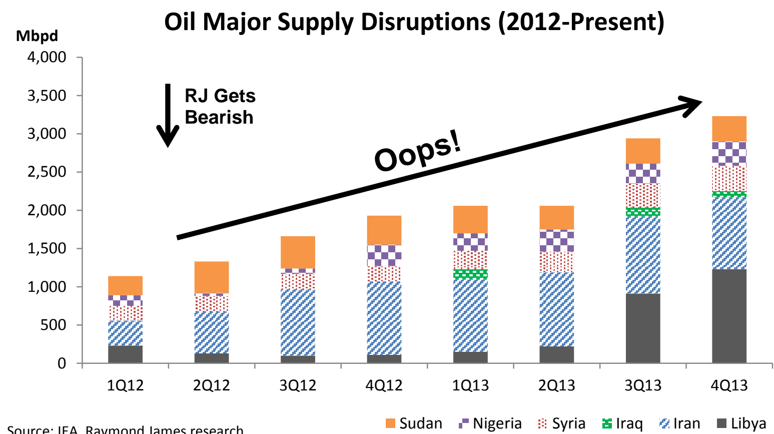
Key Unknowable Assumption: OPEC Production Levels (Excluding NGLs) Will Remain Constant Over the Next Few Years

Even though the math behind our bearish oil call from mid-2012 has been mostly right, our oil price forecast has been mostly wrong because over 2 MMBbls/d of OPEC oil supply has been unexpectedly removed from the market (as shown below). Today, the single biggest problem with forecasting oil prices is predicting the timing and magnitude of oil supply outages in the Middle East/North Africa. Given that this is a region where numerous countries have been and continue to be mired in a quagmire of anarchy, war, terrorism, and general lawlessness, no one will get this part of the oil model totally right. With the significant outages across several countries, Saudi Arabia has held its position as swing supplier, increasing its market share over the past few years. However, with some previously offline production now coming back, Saudi has begun to recognize the threat of emerging competition from North America and they have become unwilling to reduce its own production and act as the swing supplier.

As indicated by OPEC's recent meeting, we do not expect to see any material changes to production out of the organization. As has been the case for the past several years, the biggest short-term question mark in OPEC is Libya. Clarity into Libya's future production, however, remains a meaningful question mark as production in the region could be anywhere between 200 MBbls/d to full capacity of 1.4 MMBbls/d due to the internal instability. Given the situation, we are assuming a middling 750,000 Bbls/d, which declines slowly going forward given the lack of service activity in the region. On the other hand, Angola will be a meaningful contributor to OPEC supply growth as the CLOV field ramps to full production of 160 MBbls/d. We believe that the region could add even further capacity in 2016 with the Kizomba project in Block 15, which can help offset the Libyan declines. Furthermore, OPEC NGL's should continue to see growth especially due to increased Saudi shallow water activity. All in, we expect OPEC after 2015's meaningful increase from the return of Libyan production to be flat to up 100 MBbls/d in 2016.



Source: IEA, Raymond James research

Conclusion: U.S. Oil Production Growth Must Disappear Over the Next 18 Months to Balance Global Oil Equation

As we illustrated in the first chart, if U.S. production maintains its current 2014 run-rate of 1.5 MMBbls/d of growth then the world would have to find a home for over 2 MMBbls/d of inventory builds in 2016 on the heels of 1.5 MMBbls/d of builds in 2015. Clearly, the oil markets are choking on this prospect and sending a price signal to change it! Given current OPEC guidance and the slow reaction time of other long lead time oil projects, that leaves the brunt slowdown falling on the shoulders of U.S. oil producers. Specifically, **we think oil prices, U.S. E&P spending, and rig activity must fall enough to slow U.S. oil supply growth to near nothing from the current growth rate of about 1.5 MMBbls/day per year**.

It is important to recognize a few key assumptions that must be made to arrive at the conclusion above, including: 1) we expect that global oil demand will grow at 1.1MMBbls/d in the upcoming two years outpacing the "new normal" of less than 0.9 MMBbls/d; 2) long lead time projects (such as Canadian oil sands and deepwater) should have minimal impacts on production reductions needed in the upcoming two years leaving the U.S. land arena responsible for most of the slowdown in supply growth; and 3) OPEC does not cut supply and realizes modest production growth of less than 200 MBbls/d per year mostly from Angola and OPEC NGLs. All this brings us to our conclusion that the United States must cut its production to almost nothing in order to return the global equation to a balanced state. Next week, we will run through the math detailing exactly how far oil prices must fall to drive a sufficient reduction in U.S. E&P cash flows and drilling activity to rectify the oil supply demand equation.

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Mini-Stats: Energy News Highlights from the Week That Was

View from the Raymond James trading desk: Energy lagged the broader markets on a shortened holiday week. Friday was a dramatic selloff in the sector following the OPEC meeting which resulted in no production cut. Now the focus will shift to 2015 capital spending plans that will likely begin surfacing over the next two weeks. Natural gas traded marginally higher on the week even with selling off sharply on Friday. With respect to flows, E&P names were better to buy with a focus in oily names (we did see some swapping between Bakken names). Late in the session Friday, we saw vanilla and overseas money buying large-cap E&P names. Services were mixed – better to buy among diversified names, better for sale in production and workover names. In MLPs, flow was elevated but remained mixed. On Friday, there was a noticeable trend of lightening up in the liquid transport names.

OPEC rejects production cut, oil approaches near-term bottom: Last Thursday's OPEC meeting concluded – as we predicted in last Monday's Stat of the Week – with no production cut, the official production ceiling remaining at an aggregate 30 MMbpd. The result was the steepest one-day drop for Brent and WTI crude in years, over 5% each. The basic picture is that Saudi and the other Gulf States successfully resisted pressure from Venezuela and certain other members for a cut. As such, OPEC effectively abandoned its long-standing role as a swing producer. Needless to say, U.S. energy stocks experienced a brutal across-the-board selloff on Friday, but it is worth repeating what we wrote in Monday's Stat: now that the OPEC "bad news" is confirmed, we think that oil is within weeks or even days of bottoming. With front-month WTI below the $70/Bbl level, we believe that capital spending, drilling activity, and thus production growth will be materially curtailed over the medium term. While there is contango in the futures curve, it is mostly visible in the out-years therefore it would not have much effect on 2015 spending decisions. WTI for December 2015 is ~$70.50/Bbl, up barely 2% from current levels, but then the curve steepens to ~$76 by December 2017. In the meantime, capital budgets will start to be announced within the next two weeks, and suffice it to say, they will have to incorporate the dramatically reduced near-term price environment.

Shuffling large-cap ratings: Last Monday, we upgraded Hess and Occidental, and downgraded Chevron and Exxon. As detailed in last Monday's Stat of the Week, we do not envision a huge near-term oil rally, but even a period of stabilization would support recovery in energy stocks, particularly given the prospect of sector rotation into energy and out of the recently outperforming S&P sectors. With this in mind, last Monday we made four tactical rating changes among large-cap oil-weighted producers to take a somewhat higher-beta, less-defensive stance. Specifically, we upgraded Hess (from Market Perform to Outperform) and Occidental (to Strong Buy from Outperform), while downgrading Chevron (from Strong Buy to Outperform) and Exxon (from Outperform to Market Perform). While by no means the most aggressive oil stocks, Hess and Occidental are highly oil-centric, and they have been relative underperformers amid the energy meltdown since June 30. On the other hand, Chevron and especially Exxon are among the world's most conservative energy investments and, not surprisingly, they have held up quite well amid the selloff. With a less violent commodity backdrop, that outperformance would be less likely to continue, in our view, as investors gravitate toward more offensive-type opportunities.

White House veto threat raises doubts about tax package, with energy implications: The White House said last week that President Obama is likely to veto a broad-based package of tax legislation that is currently being negotiated in the Senate. The veto threat is unrelated to the package's energy provisions, but if the bill were to be vetoed, there would be negative implications for several energy subsectors that have tax credits waiting to be renewed. These include the Production Tax Credit for wind power (which, if renewed, would be phased out over three years); the fuel tax credit for biodiesel; along with tax credits for coal produced in Indian country and energy-efficient buildings. None of these specific provisions are themselves controversial, but because they are part of the broader tax bill, their fate largely depends on what happens with the overall bill.

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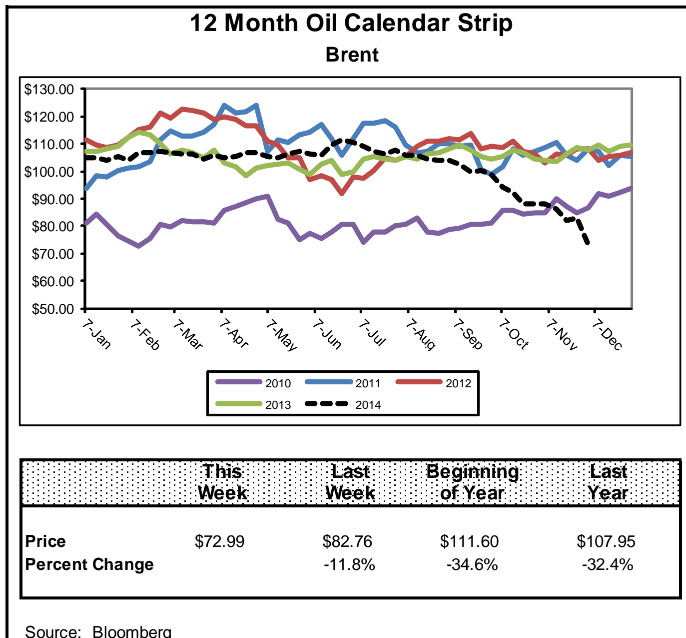
Raymond James Weekly Oilfield Review

For Week Ending: 11/28/2014

12 Month Oil Calendar Strip

Brent

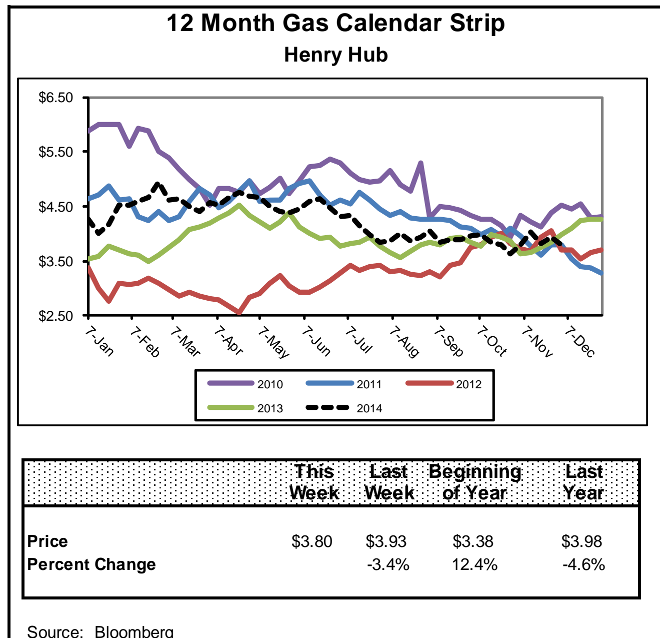


	This Week	Last Week	Beginning of Year	Last Year
Price	$72.99	$82.76	$111.60	$107.95
Percent Change		-11.8%	-34.6%	-32.4%

Source: Bloomberg

12 Month Gas Calendar Strip

Henry Hub



	This Week	Last Week	Beginning of Year	Last Year
Price	$3.80	$3.93	$3.38	$3.98
Percent Change		-3.4%	12.4%	-4.6%

Source: Bloomberg

	28-Nov-14 This Week	21-Nov-14 Last Week	29-Nov-13 Last Year	Change From: Last Week	Change From: Last Year
1. U.S.Rig Activity					
U.S. Oil	1,572	1,574	1,391	-0.1%	13.0%
U.S. Gas	344	355	367	-3.1%	-6.3%
U.S. Miscellaneous	1	0	5		
U.S. Total	**1,917**	**1,929**	**1,763**	**-0.6%**	**8.7%**
U.S. Horizontal	1,371	1,372	1,127	-0.1%	21.7%
U.S. Directional	194	205	222	-5.4%	-12.6%
U.S. Offshore	54	53	57	1.9%	-5.3%
U.S. Offshore Gulf of Mexico					
Fleet Size	118	118	107	0.0%	10.3%
# Contracted	74	74	77	0.0%	-3.9%
Utilization	62.7%	62.7%	72.0%	0.0%	-12.9%
U.S. Weekly Rig Permits *	1,459	1,459	1,423	0.0%	2.5%
2. Canadian Activity					
Rig Count	352	352	384	0.0%	-8.3%
3. Stock Prices (11/28/14)					
OSX	215.7	249.3	276.5	-13.5%	-22.0%
S&P 500	2,067.6	2,063.5	1,805.8	0.2%	14.5%
DJIA	17,828.2	17,810.1	16,086.4	0.1%	10.8%
S&P 1500 E&P Index	367.1	443.8	487.7	-17.3%	-24.7%
Alerian MLP Index	487.1	518.2	456.5	-6.0%	6.7%
4. Inventories					
U.S. Gas Storage (Bcf)	3,432	3,594	3,776	-4.5%	-9.1%
Canadian Gas Storage (Bcf)	583	605	685	-3.5%	-14.8%
Total Petroleum Inventories ('000 bbls)	1,122,371	1,127,047	1,097,588	-0.4%	2.3%
5. Spot Prices (US$)					
Oil (W.T.I. Cushing)	$66.33	$76.51	$92.72	-13.3%	-28.5%
Oil (Brent)	$70.30	$80.36	$109.69	-12.5%	-35.9%
NGL Composite	$29.74	$29.82	$42.39	-0.3%	-29.8%
Gas (Henry Hub)	$4.10	$4.27	$3.95	-3.9%	3.7%
Residual Fuel Oil (New York)	$9.56	$10.77	$15.23	-11.2%	-37.2%
Gas (AECO)	$3.39	$3.45	$3.31	-1.7%	2.4%
UK Gas (ICE)	$9.37	$9.04	$11.60	3.7%	-19.2%

Sources: Baker Hughes, ODS-Petrodata, API, EIA, Oil Week, Bloomberg

** Note: Weekly rig permits reflect a 1 week lag*

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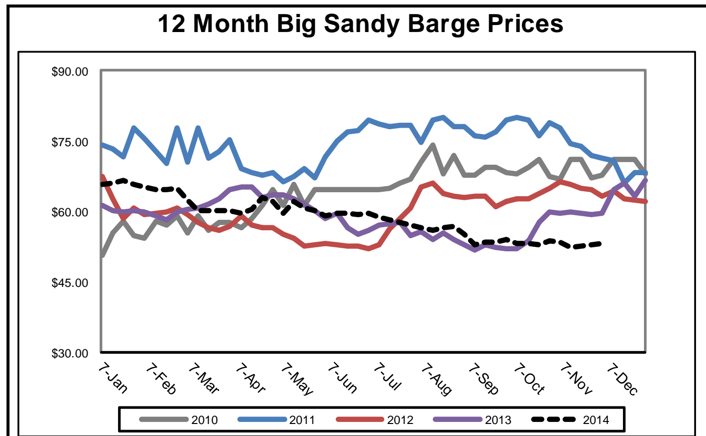
Raymond James Weekly Coal Review

For Week Ending: 11/28/2014

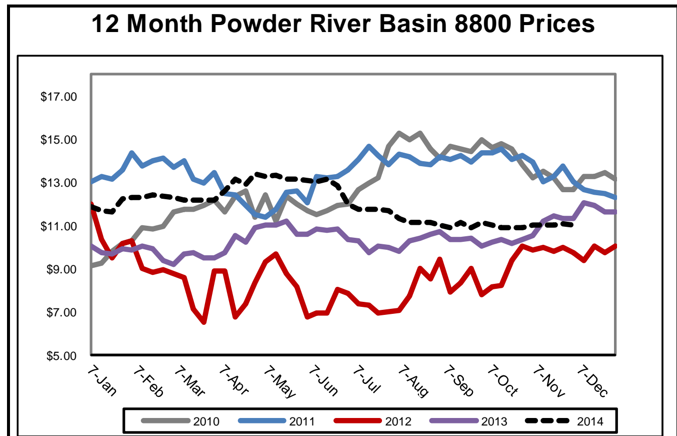
12 Month Big Sandy Barge Prices



	This Week	Last Week	Beginning of Year	Last Year
Price	$53.13	$52.85	$67.50	$59.50
Percent Change		0.5%	-21.3%	-10.7%

Source: Bloomberg

12 Month Powder River Basin 8800 Prices



	This Week	Last Week	Beginning of Year	Last Year
Price	$11.00	$11.05	$12.00	$11.30
Percent Change		-	-8.3%	-2.7%

Source: Bloomberg

	28-Nov-14 This Week	21-Nov-14 Last Week	30-Nov-13 Last Year	Change From: Last Week	Change From: Last Year
1. Coal Prices					
Eastern U.S.					
CSX 1%	$53.13	$52.85	$59.50	0.5%	-10.7%
Western U.S.					
Powder River 8800	$11.00	$11.05	$11.30	-0.5%	-2.7%
2. Production	**14-Nov-14**	**7-Nov-14**	**17-Nov-13**		
Eastern U.S.	7,875	8,109	7,865	-2.9%	0.1%
Western U.S.	10,985	10,475	11,912	4.9%	-7.8%
Total	18,860	18,584	19,777	1.5%	-4.6%

Source: Bloomberg

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U.S. Rig Count Breakdown

	11/28/2014	11/21/2014	W/W Δ	YTD Δ	YTD % Δ	Y/Y Δ	Y/Y % Δ
Total Count							
U.S. Rig Count	1917	1929	(12)	155	9%	154	9%
By Basin*							
Permian	555	554	1	99	22%	104	23%
Eagle Ford	249	249	0	0	0%	-4	-2%
Bakken	189	187	2	-2	-1%	11	6%
Marcellus	77	78	(1)	-12	-13%	-6	-7%
Mississippi Lime	73	73	0	-3	-4%	12	20%
Cana Woodford	62	58	4	27	77%	22	55%
Granite Wash	52	53	(1)	-4	-7%	-6	-10%
DJ Basin	52	50	2	17	49%	8	18%
Utica	44	45	(1)	14	47%	9	26%
Haynesville	39	39	0	0	0%	1	3%
Powder River Basin	33	33	0	7	27%	1	3%
San Joaquin Basin	28	29	(1)	12	75%	7	33%
Uinta	21	21	0	-6	-22%	-2	-9%
Pinedale	20	21	(1)	0	0%	-1	-5%
Barnett	20	20	0	-15	-43%	-5	-20%
Piceance Basin	13	13	0	2	18%	-2	-13%
Fayetteville	5	7	(2)	-8	-62%	-4	-44%
Arkoma Woodford	5	6	(1)	1	25%	-1	-17%
Other	380	393	(13)	26	7%	10	3%
Drill For							
Oil	1572	1574	(2)	254	19%	181	13%
Dry Gas	120	125	(5)	(26)	-18%	(14)	-10%
Wet Gas	225	231	(6)	(69)	-23%	(9)	-4%
Thermal	1	0	1	(4)	-80%	(4)	-80%
Trajectory							
Horizontal Oil	1115	1108	7	323	41%	246	28%
Horizontal Gas	255	264	(9)	(65)	-20%	(2)	-1%
Horizontal	1371	1372	(1)	259	23%	244	22%
% Horizontal	72%	71%	0%	8%		8%	

*Includes all trajectories

Source: Baker Hughes, Inc., Raymond James research.

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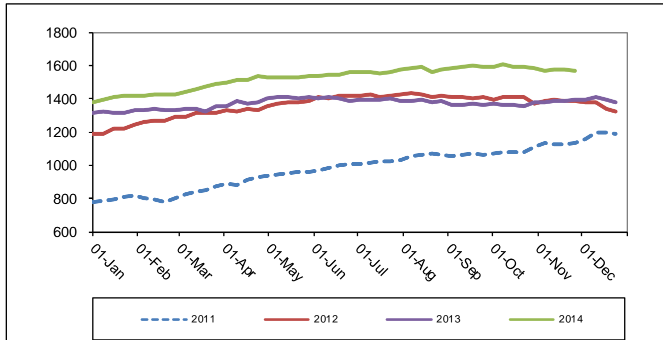
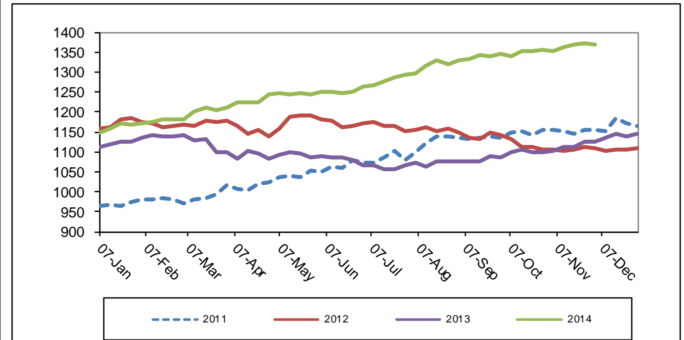
Oil Rig Count



	This Week	Last Week	Beginning of Year	Last Year
Rig Count	1572	1574	1378	1391
Percent Change		-0.1%	14.1%	13.0%

Source: Baker Hughes

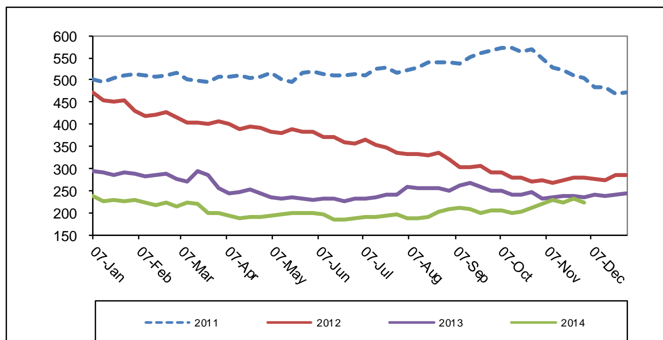
Horizontal Rig Count



	This Week	Last Week	Beginning of Year	Last Year
Rig Count	1371	1372	1148	1127
Percent Change		-0.1%	19.4%	21.7%

Source: Baker Hughes

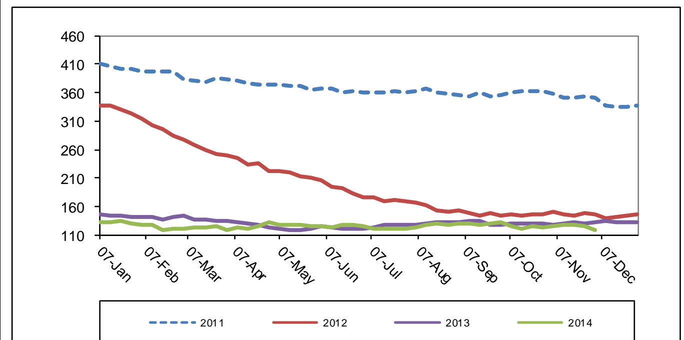
Wet Gas Rig Count



	This Week	Last Week	Beginning of Year	Last Year
Rig Count	225	231	239	234
Percent Change		-2.6%	-6.2%	-3.9%

Source: Baker Hughes

Dry Gas Rig Count



	This Week	Last Week	Beginning of Year	Last Year
Rig Count	120	125	133	133
Percent Change		-4.0%	-10.0%	-10.4%

Source: Baker Hughes

Company Citations

Company Name	Ticker	Exchange	Currency	Closing Price	RJ Rating	RJ Entity
Chevron Corp.	CVX	NYSE	$	108.87	2	RJ & Associates
Exxon Mobil Corp.	XOM	NYSE	$	90.54	3	RJ & Associates
Hess Corp.	HES	NYSE	$	72.93	2	RJ & Associates
Occidental Petroleum Corp.	OXY	NYSE	$	79.77	1	RJ & Associates

Notes: Prices are as of the most recent close on the indicated exchange and may not be in US$. See Disclosure section for rating definitions. Stocks that do not trade on a U.S. national exchange may not be registered for sale in all U.S. states. NC=not covered.

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Strong Buy (SB1) Expected to appreciate, produce a total return of at least 15%, and outperform the S&P 500 over the next six to 12 months. For higher yielding and more conservative equities, such as REITs and certain MLPs, a total return of at least 15% is expected to be realized over the next 12 months.
Outperform (MO2) Expected to appreciate and outperform the S&P 500 over the next 12-18 months. For higher yielding and more conservative equities, such as REITs and certain MLPs, an Outperform rating is used for securities where we are comfortable with the relative safety of the dividend and expect a total return modestly exceeding the dividend yield over the next 12-18 months.
Market Perform (MP3) Expected to perform generally in line with the S&P 500 over the next 12 months.
Underperform (MU4) Expected to underperform the S&P 500 or its sector over the next six to 12 months and should be sold.

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Outperform (MO2) The stock is expected to appreciate and outperform the S&P/TSX Composite Index over the next twelve months.
Market Perform (MP3) The stock is expected to perform generally in line with the S&P/TSX Composite Index over the next twelve months and is potentially a source of funds for more highly rated securities.
Underperform (MU4) The stock is expected to underperform the S&P/TSX Composite Index or its sector over the next six to twelve months and should be sold.

Raymond James Latin American rating definitions

Strong Buy (SB1) Expected to appreciate and produce a total return of at least 25.0% over the next twelve months.
Outperform (MO2) Expected to appreciate and produce a total return of between 15.0% and 25.0% over the next twelve months.
Market Perform (MP3) Expected to perform in line with the underlying country index.
Underperform (MU4) Expected to underperform the underlying country index.
Suspended (S) The rating and price target have been suspended temporarily. This action may be due to market events that made coverage impracticable, or to comply with applicable regulations or firm policies in certain circumstances, including when Raymond James may be providing investment banking services to the company. The previous rating and price target are no longer in effect for this security and should not be relied upon.

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Strong Buy (1) Expected to appreciate, produce a total return of at least 15%, and outperform the Stoxx 600 over the next 6 to 12 months.
Outperform (2) Expected to appreciate and outperform the Stoxx 600 over the next 12 months.
Market Perform (3) Expected to perform generally in line with the Stoxx 600 over the next 12 months.
Underperform (4) Expected to underperform the Stoxx 600 or its sector over the next 6 to 12 months.
Suspended (S) The rating and target price have been suspended temporarily. This action may be due to market events that made coverage impracticable, or to comply with applicable regulations or firm policies in certain circumstances, including when Raymond James may be providing investment banking services to the company. The previous rating and target price are no longer in effect for this security and should not be relied upon.

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	Coverage Universe Rating Distribution				Investment Banking Distribution			
	RJA	RJL	RJ LatAm	RJEE	RJA	RJL	RJ LatAm	RJEE
Strong Buy and Outperform (Buy)	55%	65%	50%	45%	24%	34%	0%	0%
Market Perform (Hold)	41%	33%	50%	43%	8%	26%	0%	0%
Underperform (Sell)	4%	2%	0%	13%	0%	0%	0%	0%

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Total Return (TR) Lower risk equities possessing dividend yields above that of the S&P 500 and greater stability of principal.

Growth (G) Low to average risk equities with sound financials, more consistent earnings growth, at least a small dividend, and the potential for long-term price appreciation.

Aggressive Growth (AG) Medium or higher risk equities of companies in fast growing and competitive industries, with less predictable earnings and acceptable, but possibly more leveraged balance sheets.

High Risk (HR) Companies with less predictable earnings (or losses), rapidly changing market dynamics, financial and competitive issues, higher price volatility (beta), and risk of principal.

Venture Risk (VR) Companies with a short or unprofitable operating history, limited or less predictable revenues, very high risk associated with success, and a substantial risk of principal.

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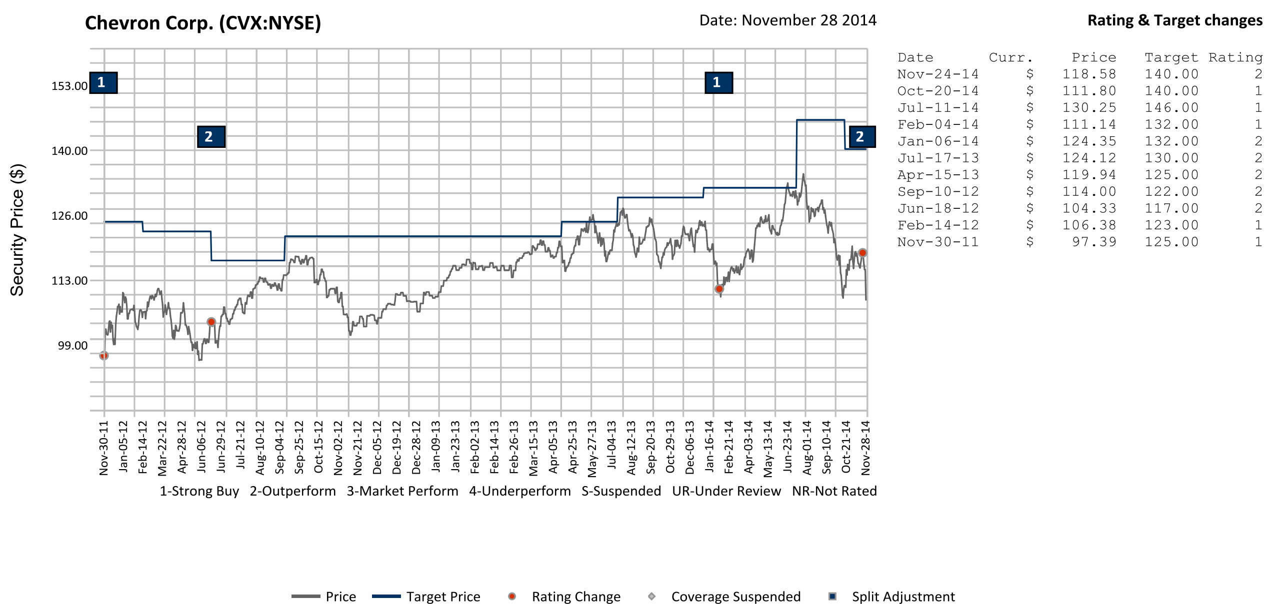
Company Name	Disclosure
Chevron Corp.	Raymond James & Associates makes a market in shares of CVX.
	Raymond James & Associates received non-investment banking securities-related compensation from CVX within the past 12 months.
Exxon Mobil Corp.	Raymond James & Associates makes a market in shares of XOM.
Hess Corp.	Raymond James & Associates makes a market in shares of HES.
Occidental Petroleum Corp.	Raymond James & Associates makes a market in shares of OXY.

Stock Charts, Target Prices, and Valuation Methodologies

Valuation Methodology: The Raymond James methodology for assigning ratings and target prices includes a number of qualitative and quantitative factors including an assessment of industry size, structure, business trends and overall attractiveness; management effectiveness; competition; visibility; financial condition, and expected total return, among other factors. These factors are subject to change depending on overall economic conditions or industry- or company-specific occurrences. Only stocks rated Strong Buy (SB1) or Outperform (MO2) have target prices and thus valuation methodologies.

Target Prices: The information below indicates target price and rating changes for the subject companies included in this research.



Date	Curr.	Price	Target	Rating
Nov-24-14	$	118.58	140.00	2
Oct-20-14	$	111.80	140.00	1
Jul-11-14	$	130.25	146.00	1
Feb-04-14	$	111.14	132.00	1
Jan-06-14	$	124.35	132.00	2
Jul-17-13	$	124.12	130.00	2
Apr-15-13	$	119.94	125.00	2
Sep-10-12	$	114.00	122.00	2
Jun-18-12	$	104.33	117.00	2
Feb-14-12	$	106.38	123.00	1
Nov-30-11	$	97.39	125.00	1

Valuation Methodology: Our valuation methodology for Chevron is centered on a target multiple of share price to projected forward-year EPS. The methodology also takes into account a target multiple of enterprise value to projected forward-year EBITDA and our estimate of the company's current proved reserve net asset value (NAV).

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Hess Corp. (HES:NYSE) Date: November 28 2014

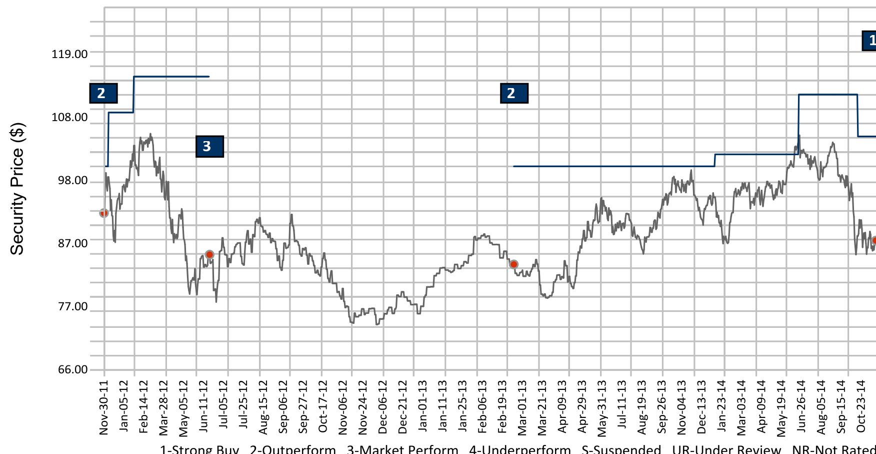
Rating & Target changes

Date	Curr.	Price	Target	Rating
Nov-24-14	$	85.21	100.00	2
Apr-23-12	$	55.07	NM	3
Feb-14-12	$	62.26	69.00	2
Jan-25-12	$	58.97	70.00	2
Jan-03-12	$	56.80	74.00	2
Nov-30-11	$	57.39	74.00	1

Price Target Price Rating Change Coverage Suspended Split Adjustment

Valuation Methodology: Our valuation methodology for Hess is centered on a target multiple of enterprise value to projected forward year EBITDA and also takes into consideration our estimate of the company's current proved reserve net asset value (NAV).

Occidental Petroleum Corp. (OXY:NYSE) Date: November 28 2014



Rating & Target changes

Date	Curr.	Price	Target	Rating
Nov-24-14	$	87.60	105.00	1
Oct-20-14	$	88.36	105.00	2
Jun-23-14	$	104.00	112.00	2
Jan-10-14	$	94.84	102.00	2
Feb-25-13	$	83.61	100.00	2
Jun-18-12	$	85.24	NM	3
Jan-25-12	$	103.46	115.00	2
Dec-06-11	$	98.22	109.00	2
Nov-30-11	$	92.19	100.00	2

Price Target Price Rating Change Coverage Suspended Split Adjustment

Valuation Methodology: Our valuation methodology for Occidental is centered on a target multiple of enterprise value to projected forward year EBITDA and also takes into consideration our estimate of the company's current proved reserve net asset value (NAV).

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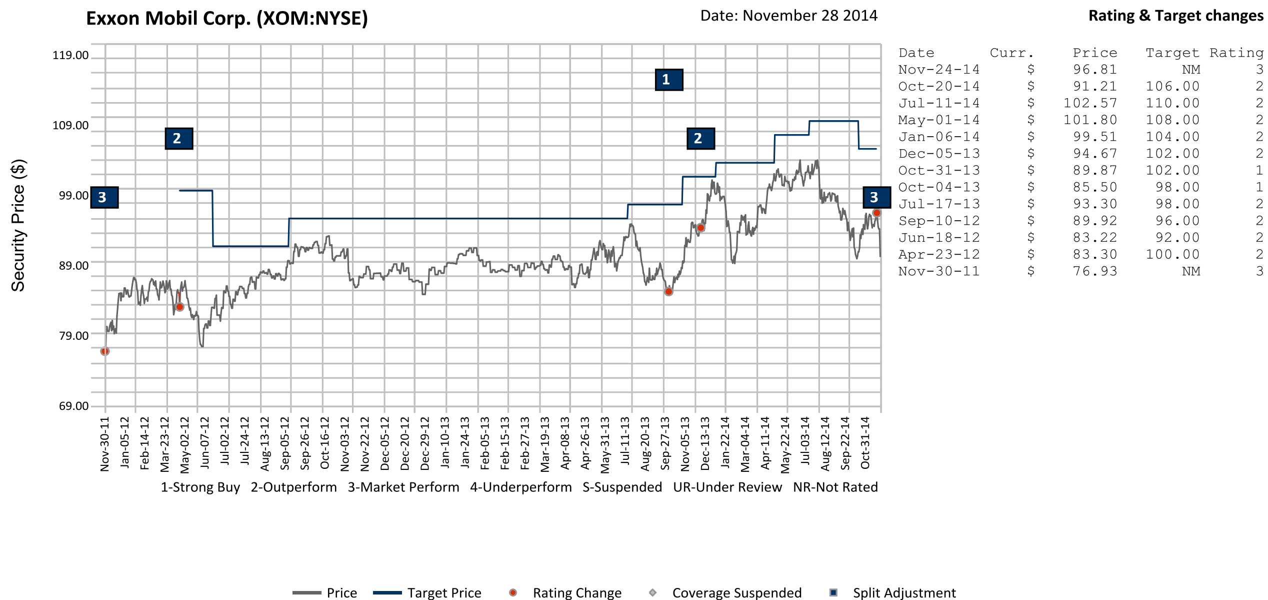

Rating & Target changes

Date	Curr.	Price	Target	Rating
Nov-24-14	$	96.81	NM	3
Oct-20-14	$	91.21	106.00	2
Jul-11-14	$	102.57	110.00	2
May-01-14	$	101.80	108.00	2
Jan-06-14	$	99.51	104.00	2
Dec-05-13	$	94.67	102.00	2
Oct-31-13	$	89.87	102.00	1
Oct-04-13	$	85.50	98.00	1
Jul-17-13	$	93.30	98.00	2
Sep-10-12	$	89.92	96.00	2
Jun-18-12	$	83.22	92.00	2
Apr-23-12	$	83.30	100.00	2
Nov-30-11	$	76.93	NM	3

Valuation Methodology: Our valuation methodology for Exxon Mobil is centered on a target multiple of share price to projected forward-year EPS. The methodology also takes into account a target multiple of enterprise value to projected forward-year EBITDA and our estimate of the company's current proved reserve net asset value (NAV).

Risk Factors

General Risk Factors: Following are some general risk factors that pertain to the projected target prices included on Raymond James research: (1) Industry fundamentals with respect to customer demand or product / service pricing could change and adversely impact expected revenues and earnings; (2) Issues relating to major competitors or market shares or new product expectations could change investor attitudes toward the sector or this stock; (3) Unforeseen developments with respect to the management, financial condition or accounting policies or practices could alter the prospective valuation; or (4) External factors that affect the U.S. economy, interest rates, the U.S. dollar or major segments of the economy could alter investor confidence and investment prospects. International investments involve additional risks such as currency fluctuations, differing financial accounting standards, and possible political and economic instability.

Specific Investment Risks Related to the Industry or Issuer

Company-Specific Risks for Chevron Corp.

OPEC Quota Risk
Chevron has upstream operations in several countries that are members of OPEC, including Nigeria, Angola, the Neutral Zone between Saudi Arabia and Kuwait, and Venezuela. Because oil production in OPEC countries is subject to OPEC's output quotas, there is a risk that quota reductions could result in lower production from the company's properties.

Chemicals Segment Risk
Chevron's chemicals segment is exposed to risks that are inherent in this industry. These risks include sensitivity to adverse changes in market prices of chemicals that the company produces, which are not always offset by lower feedstock costs. In addition, there are environmental and liability risks arising out of the operation of chemical plants.

Ecuador Lawsuit Risk
Chevron is a defendant in a civil lawsuit in Ecuador, brought in 2003 over alleged environmental damage caused by an oil production consortium of which Texaco (since acquired by Chevron) was a minority member. Chevron will continue to defend itself in this case, but the ultimate resolution cannot be predicted.

Company-Specific Risks for Exxon Mobil Corp.

OPEC Quota Risk
Exxon Mobil has upstream operations in several countries that are members of OPEC, including Nigeria, Angola, Libya, and Qatar. Because oil production in OPEC countries is subject to OPEC's output quotas, there is a risk that quota reductions could result in lower production from the company's properties.

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Chemicals Segment Risk
Exxon Mobil's chemicals segment is exposed to risks that are inherent in this industry. These risks include sensitivity to adverse changes in market prices of chemicals that the company produces, which are not always offset by lower feedstock costs. In addition, there are environmental and liability risks arising out of the operation of chemical plants.

Company-Specific Risks for Hess Corp.

OPEC Quota Risk
Hess has upstream operations in Libya, which is a member of OPEC. Because oil production in OPEC countries is subject to OPEC's output quotas, there is a risk that quota reductions could result in lower production from the company's properties.

Short Reserve Life
Hess's reserve life is shorter than average relative to its peers, in part due to the company's high proportion of offshore production. Production from offshore fields generally declines more rapidly than in many onshore regions. As a result, reserve replacement needs are greater and require the company to spend more capital to replace production.

Company-Specific Risks for Occidental Petroleum Corp.

OPEC Quota Risk
Occidental has upstream operations in several countries that are members of OPEC, including Libya and Qatar. Because oil production in OPEC countries is subject to OPEC's output quotas, there is a risk that quota reductions could result in lower production from the company's properties.

Chemicals Segment Risk
Occidental's chemicals segment is exposed to risks that are inherent in this industry. These risks include sensitivity to adverse changes in market prices of chemicals that the company produces, which are not always offset by lower feedstock costs. In addition, there are environmental and liability risks arising out of the operation of chemical plants.

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