13 September 2012 | 145 pages

Global Oil Vision

Think long-term, not short-term, to find the best value

- **Double vision** — this report expands on a global study we published in January. We have doubled our coverage to 29 oil and gas companies around the world, in an attempt to look at the wider group under a consistent framework of portfolio re-investment, downstream positioning, financial strength and valuation through to 2020. The full coverage is now (Bloomberg mnemonics): APC, BG, BP, CAIR, CVX, COP, EC, ENI, XOM, GALP, HES, IMO, INPEX, LUK, OXY, OGX, OMV, PBR, PTR, RDS, RIL, REP, ROS, STO, SINOPE, STL, TOT, TLW, WPL.

- **Behavioral changes** — central to our work is a detailed study of the industry development cost-curve over this decade where we model nearly 300 development and pre-development core E&P opportunities across the group. Interesting to us are recent signs of a little more caution around the edges of portfolios. The recent cancellation/deferral of some of the highest-cost projects (e.g. Shtokman, Fort Hills) looks to reflect a growing realization for the industry that history (and the world economy) does not support a steepening cost-curve.

- **Growth remains undervalued** — albeit demanding patience around long-term delivery through the decade, we think the growth characteristics of **APC, BG, INPEX, PBR and STO** look substantially undervalued by the market. In general terms the portfolios that underpin this growth look economically robust, a credential that goes a long way to offsetting specific concerns around execution delivery, financing and country risk (e.g. Brazil). Assuming good delivery, we see annualized for these names, in aggregate, of around 9% p.a. through end-decade. In an equity market starved of growth opportunities, returns for the group might be even greater.

- **In vogue defensives need to offer more** — for the remainder of the coverage we see somewhat lower returns. While 'defensive' income characteristics of many of the large-cap names have clearly been in vogue, we note relatively high breakevens of their respective development portfolios suggest that cuts to (already anaemic) growth-capital may be needed to preserve those 'defensive' characteristics. In general terms we would argue that future returns just look to support current payouts, therefore on the current capital structure we think share price appreciation implies a lower dividend yield. **ENI** and **CVX** look the most interesting outside of the 'growth names' highlighted above, offering in our view good combinations of defensible income and economically robust growth.

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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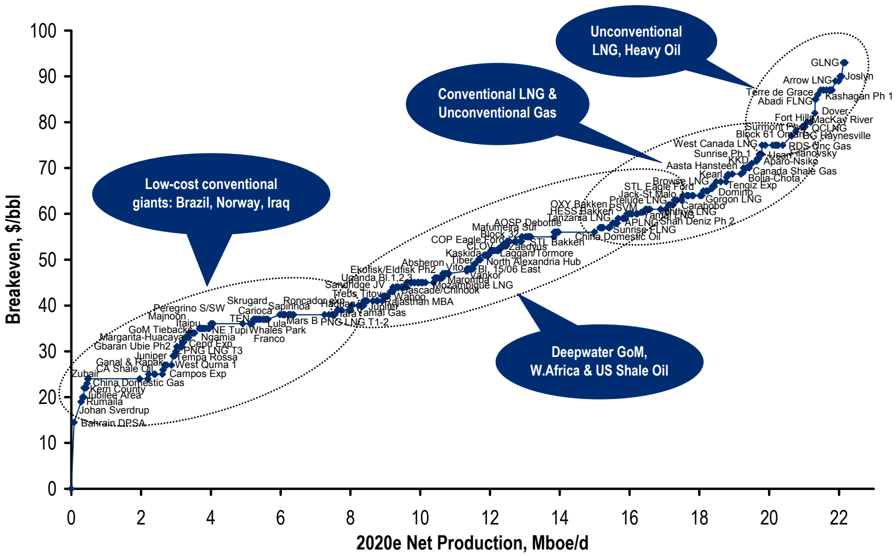
Investment summary

This study is an extension of our 13 January 2012 "Global Oil Vision - Global Integrated Oils to 2020: Defensive beta, Beta-defensive" report. We have added the input of eight other Citi analysts around the world to enable us to include 15 more companies in the analysis. We now have 29 global oil industry players viewed through consistent lenses of portfolio re-investment, downstream positioning, financial strength and valuation through to 2020. The companies we have chosen to include range from big (XOM) to small (OGX, CAIL, STO) and cover every key oil and gas geography (APC, CAIL, INPEX, ROS, PBR, TLW). The result is a useful spectrum around how we think the industry can invest over this decade as it seeks to provide affordable energy to fuel the global economy.

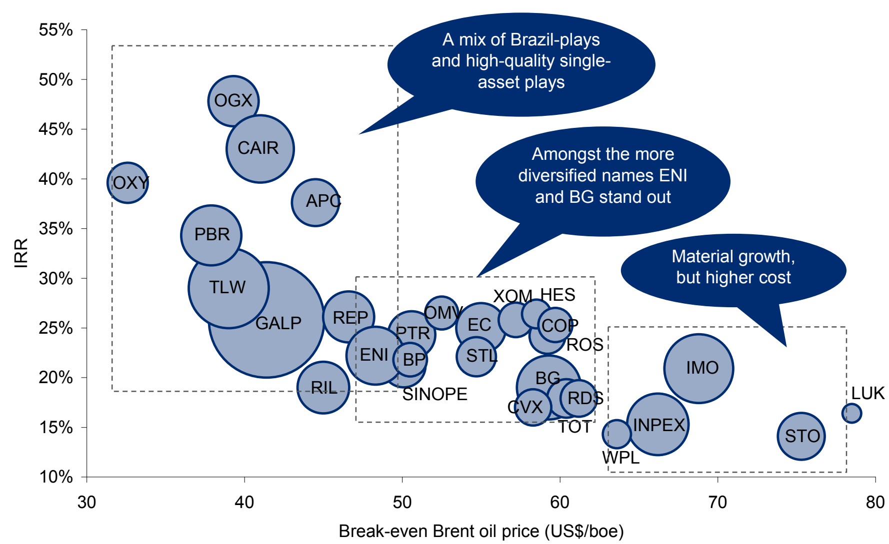
The centre-piece of our work is a detailed study of the industry development cost-curve over this decade where we model nearly 300 development and pre-development E&P opportunities that the group is pursuing. Changes since our January report have been a slight rise in the breakeven of pre-salt Brazil (although it is still firmly 1st-quartile), an escalation in Australian LNG (mostly 4th-quartile) and a cancellation/deferral of one or two of the highest-cost projects (e.g. Shtokman, Fort Hills) as the industry looks to reflect changing market dynamics (European gas glut, the growth in US shale oil) and a growing realization that history (and the world economy) does not support a steepening cost-curve. Overall the changes are not dramatic. We still see a wide disparity in growth and returns characteristics across the group. A handful of names have the potential to deliver transformational growth from their portfolios, many from portfolios that look economically advantaged. In contrast growth from many of the industry's established players looks anaemic and comes with a relatively high portfolio breakeven, in effect positioning these companies with higher operational leverage to the commodity (and running contrary to the market view of many of these names as 'defensives').

Figure 1. Our 300-project 'new investment' cost-curve



Source: Citi Research

Figure 2. The cost-curve as it maps onto corporate investment portfolios



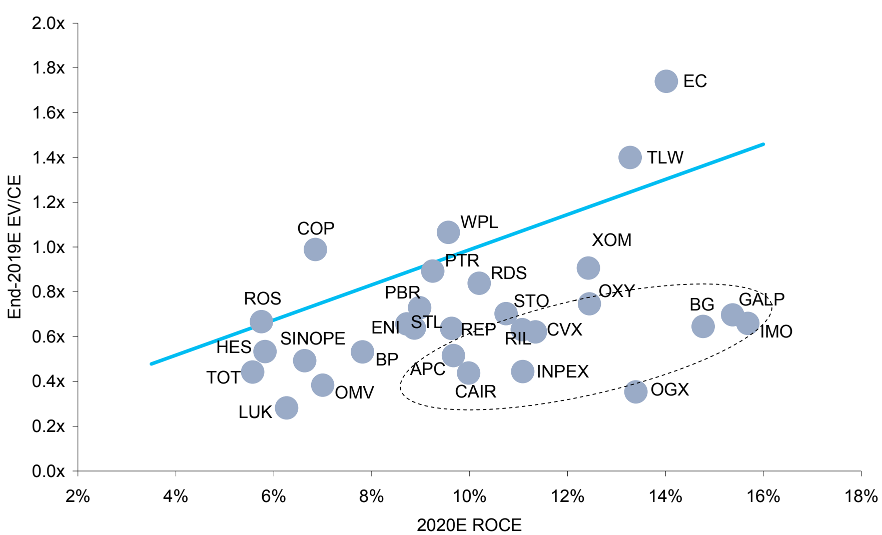
Source: Citi Research

Investment summary (II)

Overlaying the financial and valuation screens around the cost-curve/portfolio view tells an interesting story for the group. Our central conclusion is that the market is largely unwilling to reward the growth ambitions of those that have it. Figure 3 suggests the growth characteristics of **BG, APC, IMO, OGX, STO, INPEX and GALP** look substantially undervalued on an unlevered basis, while Figure 4 adds **PBR** into the list once leverage is included. Reasons for this discounting likely reflect specific concerns around execution delivery (OGX, INPEX), financing (OGX, PBR, BG, GALP) and country risk (Brazil), although we would highlight that the economically-robust nature of those growth portfolios should go a long-way towards offsetting those concerns. Specifically on the issue of financing we would highlight that in an uncertain world economically-robust assets are much easier to finance than those at the top-end of the curve; all leverage should not be viewed equally, in our view. Assuming good delivery to generate the levels of ROE we expect, then we see fair equity value of these growth-orientated names up to 2x current levels. Conceptually this implies an annualized return of 9% p.a. through the decade (and investor patience in-line with growth-delivery), however we argue that in current equity markets that look increasingly starved of growth opportunities, near-term returns for this group could be more significant.

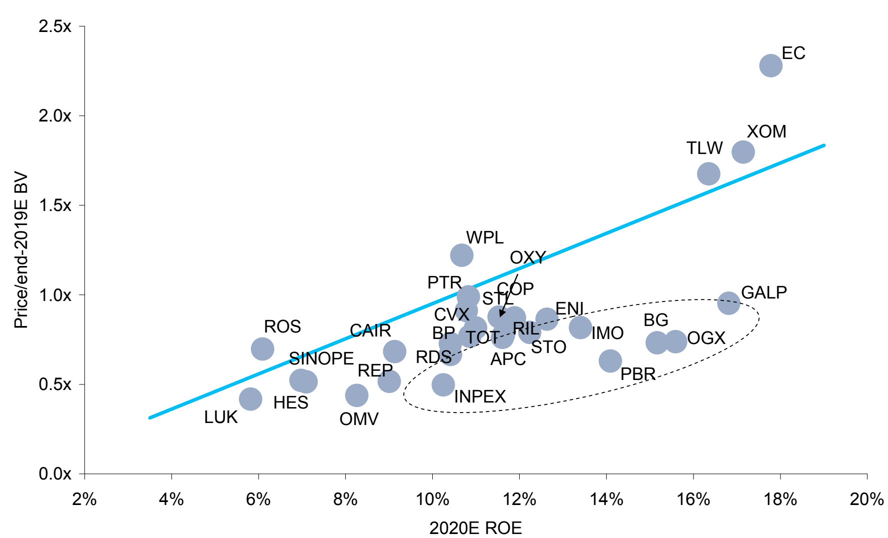
In contrast to the discounted valuations of the growth names, the market looks more than willing to ascribe reasonable value to the ‘defensive’ income characteristics of many of the large-cap oil names. This is in tune with many of the dividend yield –CDS spreads investment strategies. But investors should be cognisant of the fact that relatively high breakevens of most of the large-cap development portfolios suggest that cuts to (already anaemic) growth-capital may be needed to preserve those ‘defensive’ characteristics. In general terms we would argue that future returns just look to support current payouts, therefore on the current capital structure we think share price appreciation implies a lower dividend yield. Of the large-cap, traditional integrated oils, we think **ENI** and **CVX** look the most interesting, offering in our view good combinations of defensible income and economically robust growth.

Figure 3. Valuation in relation to end-decade unlevered returns



Source: Citi Research. * trend-line is theoretical value based on ROCE.

Figure 4. Valuation in relation to end-decade levered returns



Source: Citi Research. * trend-line is theoretical value based on ROE.

Key picks

APC	High profitability growth portfolio driven largely by US unconventional oil position (Wattenberg/Niobrara) and some international growth (Ghana/Mozambique) sees a strong valuation emerge post-2016 on our numbers. Note we assume a US$1.0-2.5 B liability for 'Tronox' litigation in our valuation.
BG	Although one could argue a case for both, we push BG versus GALP as a non-Brazilian play on the Brazilian pre-salt. Cost-escalation has seen QCLNG rise up the curve, but the pre-salt developments remain firmly 1st-quartile on our analysis, a position that enables competitive funding in case of lower oil prices/cash flow distress.
INPEX	The Ichthys LNG development in Australia remains the growth engine for Inpex, delivering a doubling of cash flows through the end of the decade and competitive returns. The 2010 capital-raising and asset sales have left the balance sheet well-capitalised to fund this growth.
PBR	While both Brazilian oils Petrobras and OGX see valuation support on our screens, we prefer the former where we think the market has moved to discount that Brazil fuel pricing caps will cripple ambitious investment plans. Our view is that necessary reforms are coming soon leaving a fully-financed PBR that offers transformational growth.
STO	Santos is transitioning from a business with high cost, declining assets to one underpinned by new LNG and a reinvigorated Cooper Basin. We think the market overstates the risks around this strategy and note that the key projects that underpin this shift are both contracted and financed, while recent hikes in domestic gas pricing support the potential of Cooper growth.
ENI	While it is the sale of gas-utility SRG that makes the current headline on Eni, we think it is the transformation of the E&P business that is important for investors to understand (and value). Eschewing industry M&A trends (heavy oil and unconventional gas), Eni has instead embarked on a strategy that provides strong and profitable growth from Africa, Russia/FSU and Europe.
CVX	A material, and well-financed growth profile over the 2012-16 period looks to stand out versus other large cap peers. Although a question of execution hangs over these growth plans, exacerbated by accidents in Brazil, Nigeria and in US refining, the discount on our value-screens suggests to us that the market is already discounting a fairly prudent view of targets delivery.

Investment overview

	Analyst	Rec	Price 11-Sep-12	TP (local)	DY (%) 2012E	ETR (%)		%Chg (US$-basis) 1M	3M	12M	YTD	12M Rel*	Mkt Cap US$ bn
Anadarko	Morris	Buy	71.6	115.0	0.5	61		4.1	14.1	3.2	-5.0	50	36.2
BG	Alsford	Buy	1271	1530	1.3	22		-0.7	11.3	6.7	14.9	58	67.9
BP	Syme	Neutral	443	435	4.6	3		7.5	21.1	20.2	3.2	75	135.5
Cairn India	Handa	Buy	340	377	-	11		2.0	-3.8	-1.4	0.3	43	11.9
Chevron	Khan	Buy	114.2	120.0	3.1	8		10.4	24.8	-5.4	-3.5	55	224.5
Conoco	Khan	Buy	56.4	67.0	4.7	24		5.2	-29.0	-49.2	-55.7	10	68.8
Ecopetrol	Medeiros	Sell	58.5	51.0	5.0	-8		-2.2	0.5	37.0	30.7	68	117.8
ENI	Syme	Buy	18.0	20.0	6.0	17		2.6	7.3	-10.4	-3.1	45	83.7
Exxon	Khan	Buy	89.6	97.0	2.4	11		1.3	10.3	24.7	5.7	99	413.6
GALP	Alsford	Neutral (H)	12.8	13.1	1.9	5		14.5	46.1	-10.4	10.8	53	12.6
Hess	Khan	Buy (H)	54.6	57.0	0.7	5		2.0	11.5	-15.4	10.4	35	18.7
Imperial	Khan	Buy	47.0	53.0	1.0	14		5.7	19.2	8.3	16.7	79	41.0
Inpex	Miyazaki	Buy	445000	630000	1.5	43		-2.1	3.5	-6.4	-7.1	23	21.4
Lukoil	Smith	Buy	61.2	66.3	4.7	13		7.3	17.5	28.1	8.7	97	52.5
Occidental	Khan	Neutral	86.4	86.0	2.4	2		-4.8	4.1	9.4	-7.2	50	70.4
OGX	Medeiros	Neutral (H)	6.5	7.7	-	19		-3.4	1.3	1.4	-6.6	32	10.5
OMV	Syme	Neutral	26.5	26.0	4.2	2		6.4	24.3	1.6	13.2	64	11.2
Petrobras (Ord)	Medeiros	Buy	22.3	28.0	5.7	31		3.7	21.7	-13.3	-8.2	35	145.2
Petrochina	Cunningham	Neutral	9.5	10.7	4.2	17		5.0	15.2	29.1	11.1	80	226.1
RD Shell (A)	Syme	Neutral	2238	2200	4.8	3		1.3	11.9	13.8	-2.5	82	230.7
Reliance	Handa	Neutral	790.4	847.0	1.1	8		-3.1	0.8	-0.6	-12.5	22	46.7
Repsol	Syme	Buy	15.5	18.0	5.1	21		14.6	28.6	-21.0	-34.1	38	25.4
Rosneft	Smith	Buy	6.4	7.3	2.1	15		-2.4	-6.9	3.8	-0.8	22	68.4
Santos	Greenwood	Buy	11.7	16.6	2.5	45		3.3	4.2	8.7	-1.9	39	11.7
Sinopec	Cunningham	Neutral	7.0	7.4	2.6	8		0.8	13.6	19.3	7.5	100	79.9
Statoil	Alsford	Neutral	149.0	150.0	4.6	5		2.6	12.1	18.3	0.6	62	82.2
Total	Syme	Neutral	41.2	40.0	5.7	3		1.1	9.5	19.5	-0.5	61	124.8
Tullow	Alsford	Neutral	1357	1550	0.9	15		6.0	7.9	7.5	5.1	32	19.8
Woodside	Greenwood	Buy	34.7	42.0	3.6	25		-1.2	3.5	15.6	1.9	77	29.7
Group					**2.6**			**2.6**	**11.3**	**6.7**	**0.3**	**53**	**2,489.0**

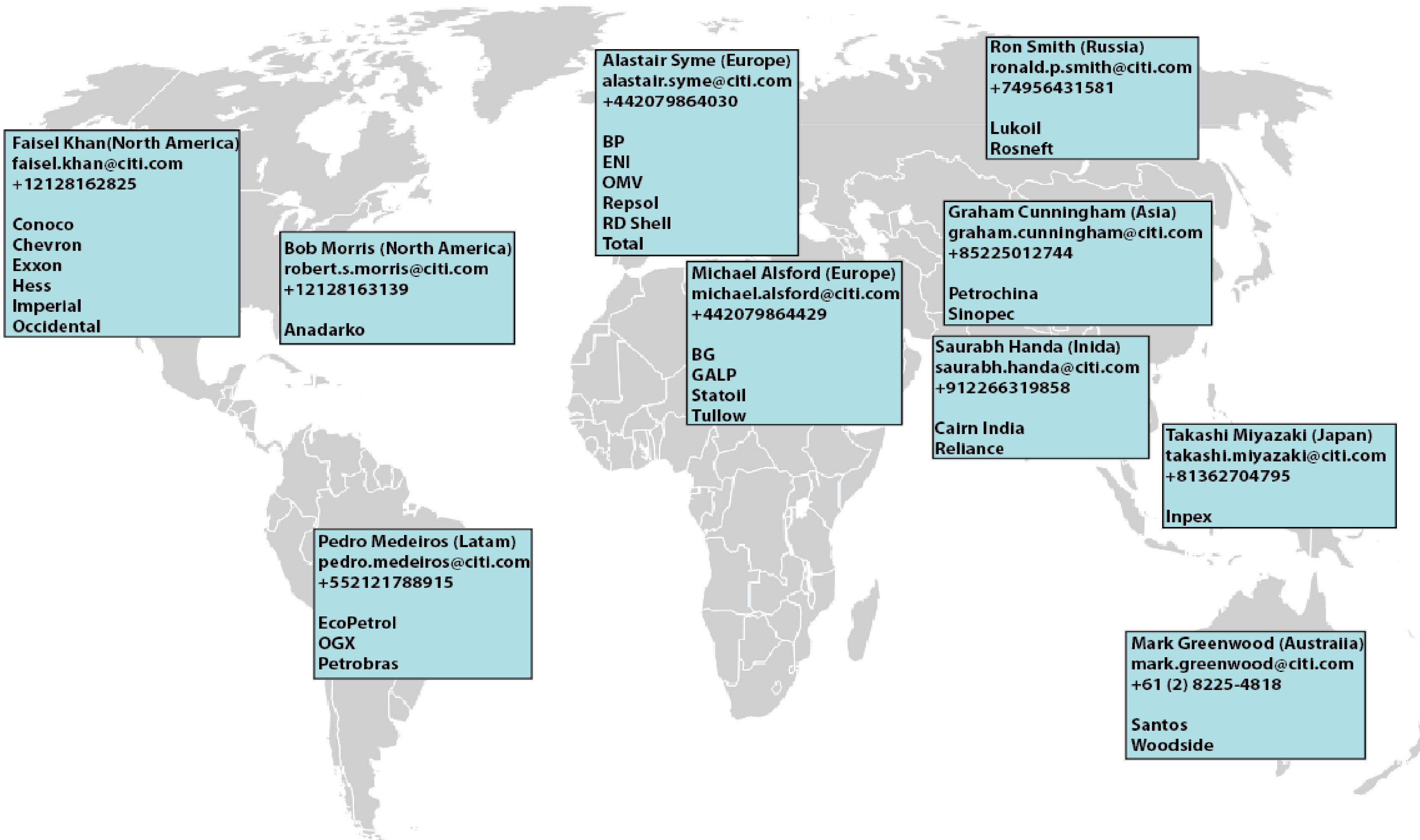
Source: Citi Research DataCentral. *12M Rel is (Current price – 52 week low price)/(52 week price – 52 week low price). A score of 100 would indicate the current price is trading at its 52 week high.

Sector cribsheet

	Balance sheet		Distribution		Financial			
	end-12E gearing	5-year bond Z-spread	2012-16E free cash flow as % of op. cash flow	2012-16E dividend as % of op. cash flow	ROCE 2012	ROCE 2016	ROCE 2020	Op. cash flow CAGR 2011-20E
Anadarko	56%	150	5%	2%	7.8%	8.2%	9.7%	9.8%
BG	35%	70	-11%	10%	9.5%	13.0%	14.8%	13.2%
BP	24%	65	23%	24%	8.9%	9.0%	7.8%	4.1%
Cairn India	-12%	na	61%	15%	18.5%	11.2%	10.0%	3.3%
Chevron	-9%	35	26%	17%	16.4%	12.1%	11.3%	4.3%
Conoco	41%	100	3%	22%	6.5%	7.5%	6.9%	0.2%
Ecopetrol	20%	325	26%	45%	23.8%	13.6%	14.0%	2.4%
ENI	9%	130	30%	23%	8.4%	9.3%	8.7%	5.2%
Exxon	4%	55	44%	19%	16.7%	12.9%	12.4%	1.9%
GALP	24%	na	-7%	19%	6.1%	9.5%	15.4%	32.5%
Hess	43%	175	-11%	2%	7.3%	6.2%	5.8%	5.5%
Imperial	6%	na	14%	9%	17.3%	16.3%	15.7%	8.2%
Inpex	-16%	na	-102%	8%	8.7%	3.6%	11.1%	12.1%
Lukoil	10%	260	26%	14%	13.8%	6.1%	6.3%	-0.8%
Occidental	5%	30	28%	17%	11.0%	12.9%	12.4%	3.1%
OGX	51%	1,000	-2%	0%	-1.1%	10.0%	13.4%	na
OMV	39%	55	17%	19%	9.7%	7.5%	6.9%	2.7%
Petrobras (Ord)	44%	185	-43%	22%	5.8%	5.2%	9.0%	2.6%
Petrochina	29%	135	23%	22%	10.2%	10.9%	9.2%	6.4%
RD Shell	9%	40	27%	24%	10.8%	10.4%	9.6%	3.4%
Reliance	14%	305	30%	10%	7.8%	9.4%	11.1%	4.5%
Repsol	30%	280	9%	24%	9.7%	9.9%	10.2%	5.7%
Rosneft	31%	na	18%	14%	10.6%	8.3%	5.7%	-1.6%
Santos	27%	na	-18%	14%	4.7%	8.5%	10.7%	8.7%
Sinopec	51%	115	17%	11%	7.3%	9.6%	6.6%	4.8%
Statoil	13%	20	16%	17%	9.8%	8.3%	8.9%	2.8%
Total	27%	30	17%	25%	8.1%	6.2%	5.6%	3.6%
Tullow	19%	na	-48%	12%	8.7%	7.7%	13.3%	12.8%
Woodside	21%	230	50%	25%	9.5%	11.8%	9.6%	8.1%
Group	**24%**	**-**	**17%**	**17%**	**9.5%**	**9.4%**	**9.7%**	**4.4%**

Source: Citi Research DataCentral. *12M Rel is (Current price – 52 week low price)/(52 week price – 52 week low price). A score of 100 would indicate the current price is trading at its 52 week high.

Global Oil Vision coverage



Source: Citi Research

An Investment Framework for the Oil Industry

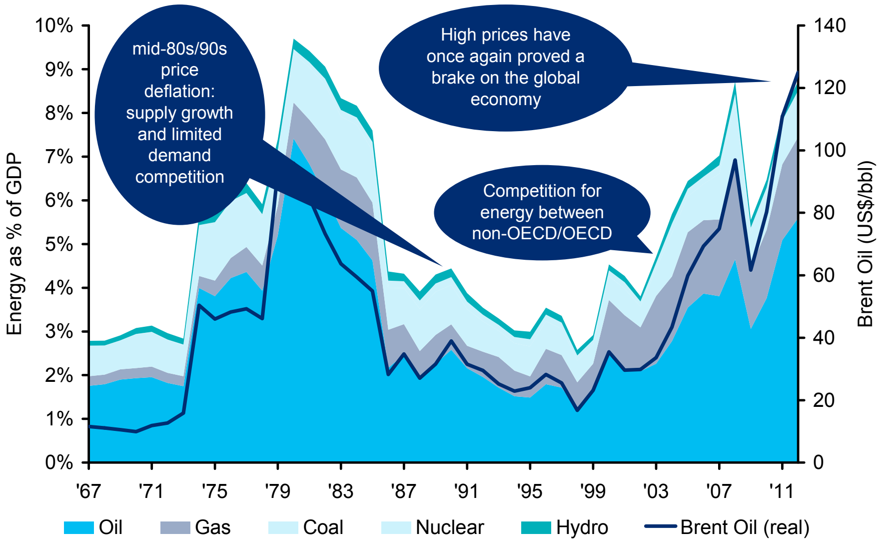
Turning tides

The role of the energy industry is to provide affordable energy for the global economy. In an uncertain macro environment the question of affordability becomes a central one. Once again, oil prices look to have tested a level that the global (or at least OECD) economy can absorb (Figure 5). Those that believe in inflationary prices either believe this relationship breaks, or accept lower growth.

Noticeable to us over recent months is a growing appreciation by at least some industry players that history (and the world economy) does not support a steepening cost-curve. Attitudes look to be shifting a little, certainly around the edges of the portfolio, with some high cost project cancellations/deferrals (Shtokman, Canada heavy oil) and some changes in approach towards the North American energy landscape. The CEO language of a couple of years ago “we are investing on the basis of rising oil and gas prices” has been replaced by a more sobering assessment of the future, and many companies are now starting to talk about ‘dynamic capital’ that can flex in response to prices and margins, rather than be forced to take a firm view.

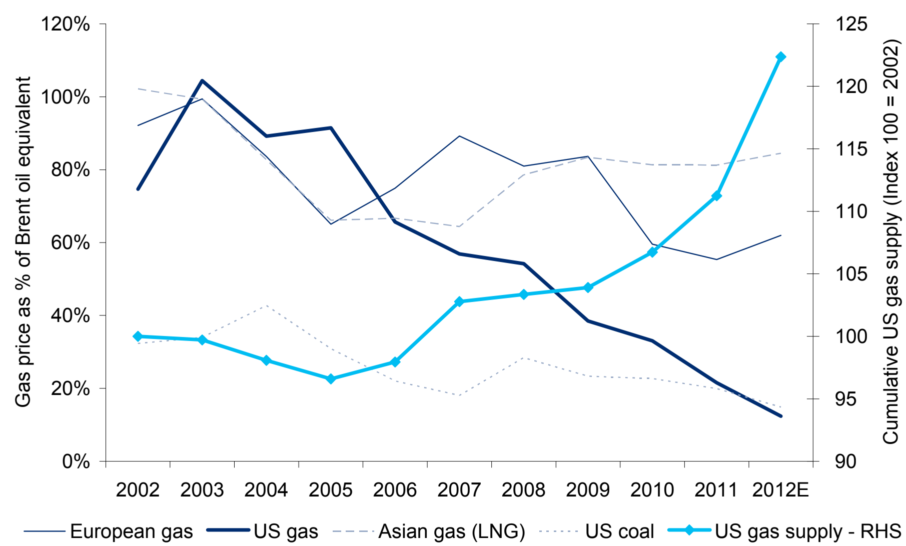
The industry’s need to be responsive has been aptly demonstrated with the changing margin dynamics in North American energy, particularly on natural gas. In an almost perfect example of economic theory, a technology-led supply-response has deflated gas pricing to a point where it now trades at parity with coal (Figure 6). The speed of the change has been dramatic and, while few would argue that supply within the global oil market offers the same scope for growth/change, there are certainly localized threats to North American oil pricing that can be enough to change attitudes towards large-scale investment decisions such as Canadian heavy oil.

Figure 5. Primary energy as a % of global GDP (US$ basis)



Source: World Bank, BP Statistical Review of World Energy, Citi Research estimates

Figure 6. US gas prices have been perfectly harmonized with supply-response of market

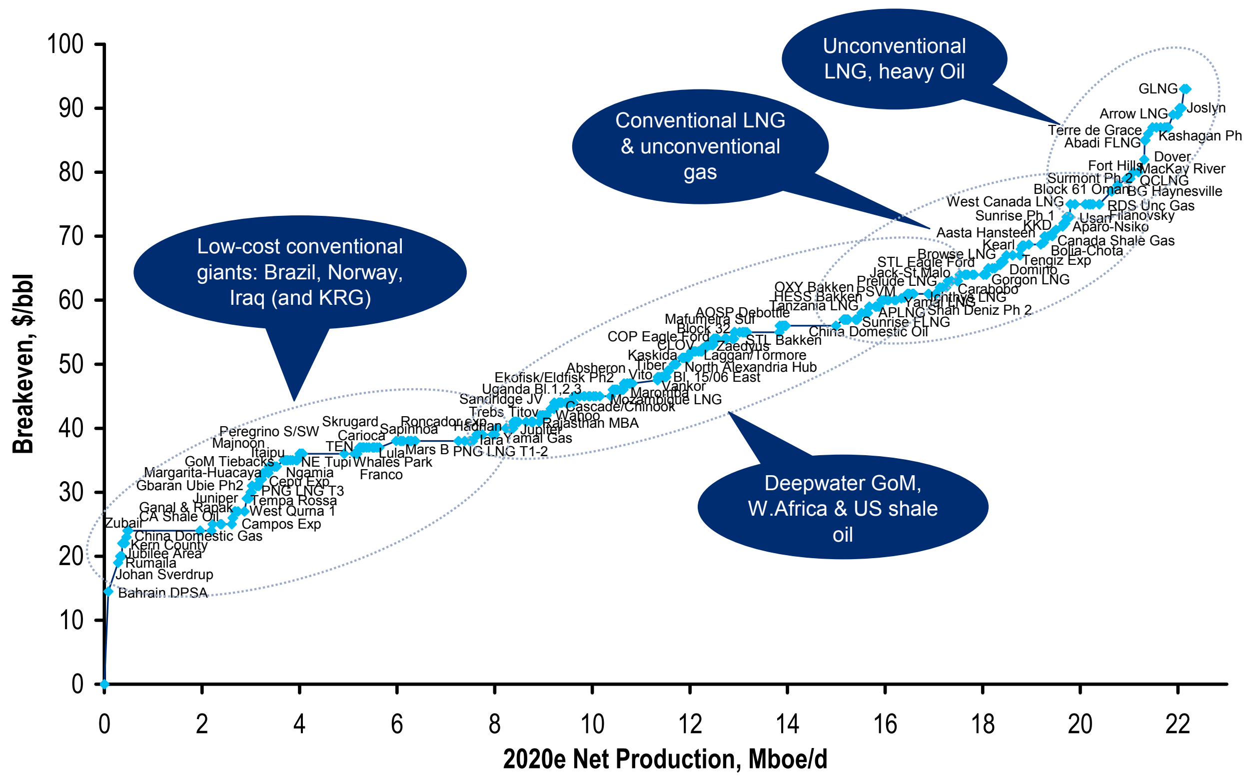


Source: World Gas Intelligence, Bloomberg, Citi Research estimates

Subtle changes to the curve

Since we last updated our new investment cost-curve (300 projects in the development or pre-development phase) there have been a number of changes. Three components have moved higher on the curve: (1) Australian Greenfield LNG, reflecting the escalation of costs in that specific market; (2) elements of US unconventional gas and oil, mainly reflecting infrastructure (e.g. transport) issues that need to be resolved; (3) some escalation in offshore pre-salt Brazil reflecting local cost-pressures and offshore service cost inflation, although these remain firmly 1st-quartile projects. We have seen some exits in the 4th-quartile – the cancellation of the Stokman LNG offshore Russia, and the apparent deferral of two heavy oil greenfield projects in Canada, Fort Hills and Josyln – and one notable new entrant in Kurdistan, formerly the domain of the smaller independents, as large-cap players look more willing to take on the political risks involved. However, despite all these changes the curve remains much the same as it was, with marginal costs up around US$90/bbl and a shallow slope indicating that prices would need to move substantially to see investment decisions change.

Figure 7. Industry will develop 300 key projects by 2020; the marginal ones need US$90/bbl+ oil to make a return



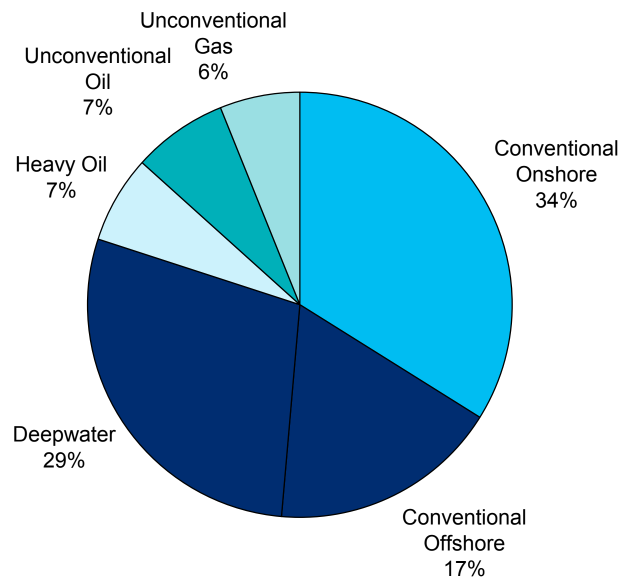
Source: Citi Research. * size of bubble = portfolio NPV as % of end-12E E&P capital employed.

Cost-curve changes (I): heavy oil cannibalized by shale oil

Based on our revised cost-curve we see a shifting balance of supply versus expectations at the start of the year. Iraq, heavy oil and, to some extent, unconventional gas have emerged as the losers, the latter evidenced by heavy writedowns from the industry at 2Q. Outside of North America we see Kurdistan and East Africa (gas and potentially oil) as having emerged positively to varying degrees. Within North America we note that supply expectations from unconventional oil ("shale oil") look to remain robust, however that supply now looks to be playing a role in cannibalizing heavy oil in Canada.

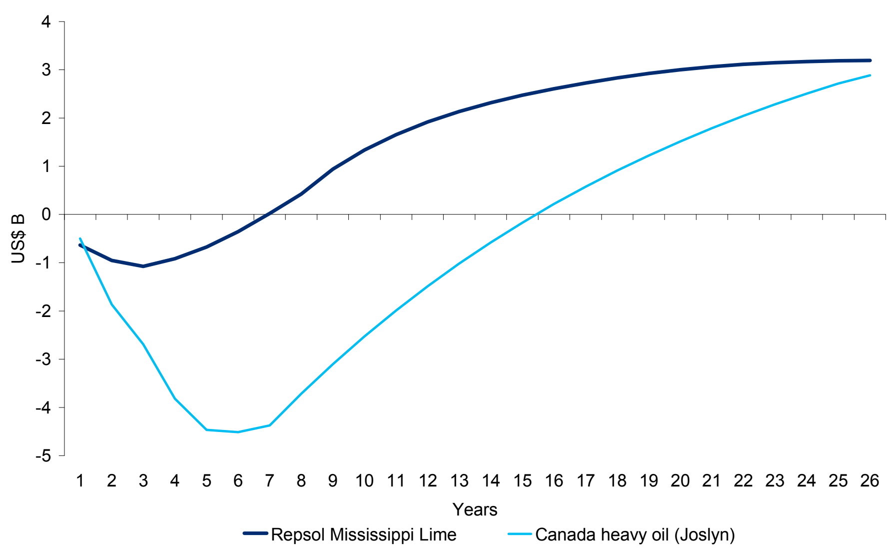
The Shale Oil versus Canadian Heavy debate is best considered around economic profile. Two projects – in this case Mississippi Lime for "shale oil" and Joslyn for greenfield Canada heavy – have similar NPVs under our forecasts, but markedly different rates of return (Figure 9). The Mississippi investment pays back within six years and offers a 30%+ rate of return; Joslyn a 15 year payback and a 10% return. The only way a company could economically argue investing in the latter is by accepting a lower discount rate which would then offer gearing to any commodity price inflation at the back-end of the field life. That of course comes back to the central point as to whether companies can rightly invest on the basis of a steepening cost-curve. It is no surprise to us to see heavy oil being sacrificed by corporates (and Wall Street) in exchange for securer near-term growth and returns.

Figure 8. Mapping the cost-curve as incremental 2020 oil and gas supply by source



Source: Citi Research estimates

Figure 9. Shale Oil vs Heavy Oil – cumulative net cash flow discounted @ 10%



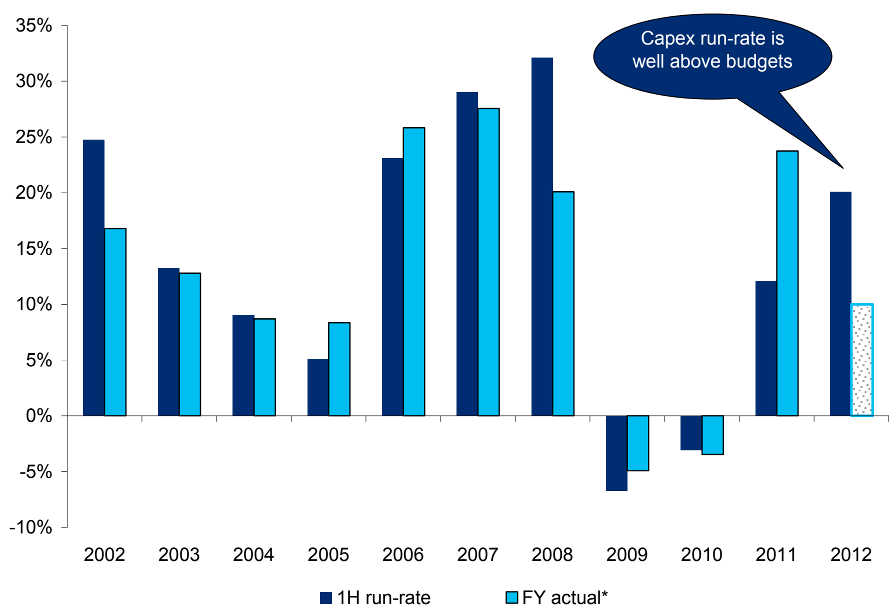
Source: Citi Research estimates

Cost curve changes (II): inflationary pressures, particularly offshore

The other change in the curve this year has been in the form of some signs of cost-inflation, most noticeable in Australian LNG (both coal bed methane and offshore) and in the deepwater offshore of Brazil. Some of this is country-specific (tight labour markets and the desire for local investment), but some too is broader industry. In fact across our study group 1H12 upstream capex was on a +20% YoY run-rate, well above start of year budget indications. Anecdotal evidence from the companies suggests this is largely inflationary.

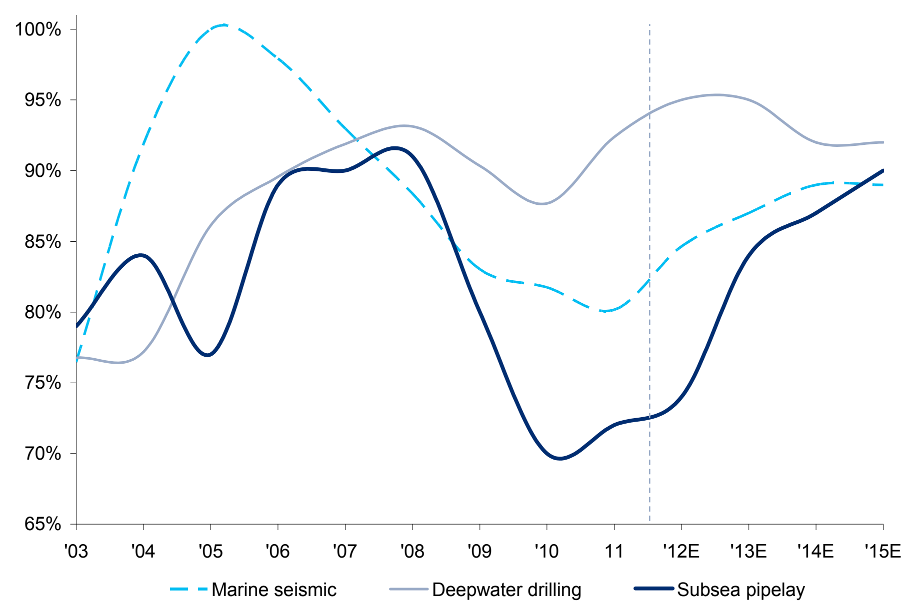
We think signs of inflation look pretty consistent with a tightening utilization picture across all things offshore (Figure 11), an issue that could start to pose a greater risk to the industry over the next few years. We think deepwater players need to secure that supply now, and the willingness of companies to adopt long-term contracts (e.g. SDRL/BP 7 year rig contract) signals that the industry shares our view. The losers in this scenario will be marginal deepwater developments (that get pushed out) and to the phasing of offshore projects later in the decade. In this regard we have taken quite prudent timing assessments on end-decade offshore developments such as Mozambique gas.

Figure 10. Upstream organic capex (ex-acquisitions) – YoY growth



Source: Company reports and Citi Research estimates. *2012 reflects start of year budgets.

Figure 11. Offshore services utilization by activity

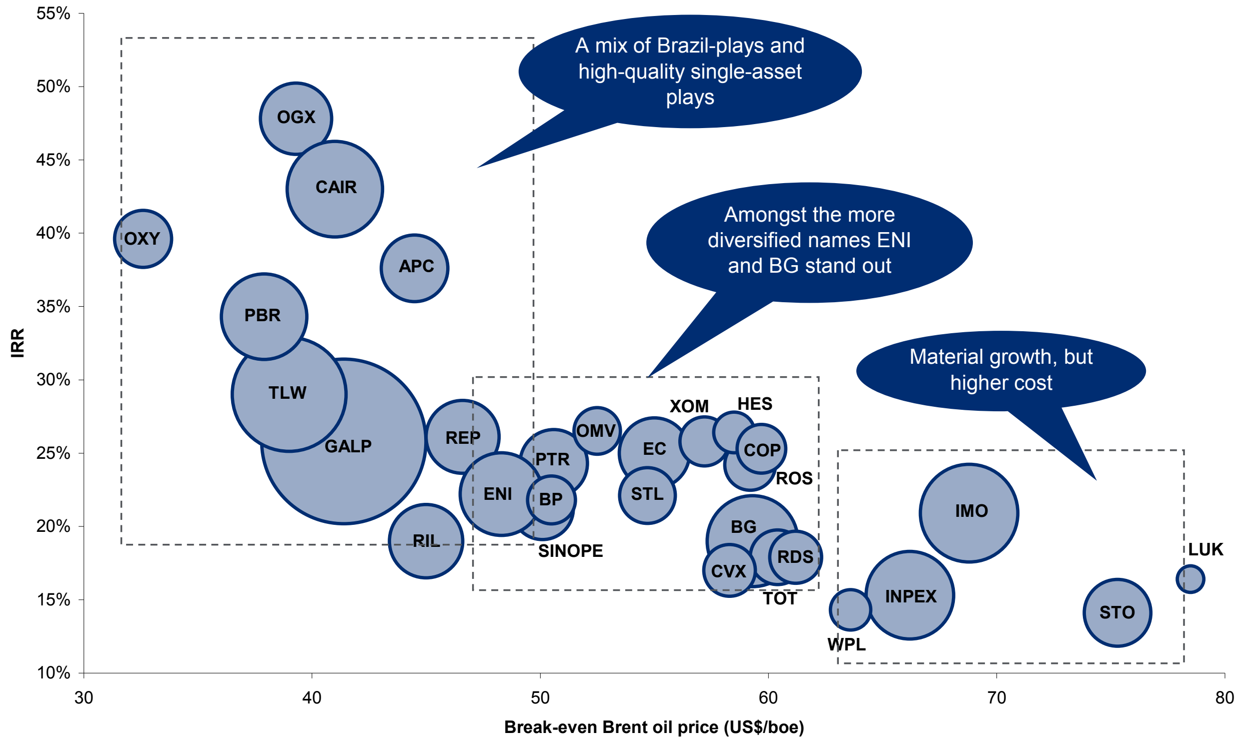


Source: Company reports, Citi Research estimates

Mapping Upstream portfolios

Figure 12 takes the cost-curve and puts it in the context of the upstream growth ambitions for each of the companies. Each company's development and pre-development portfolio to 2020 is shown in terms of the average oil price breakeven and average rate of return, while the size of the bubble shows the future portfolio materiality in relation to the current asset base. There are a number of names that look well placed around both materiality and profitability metrics, particularly the pure-plays on Brazil (GALP, PBR, OGX). We also note the material portfolios of TLW, BG and CAIR look well-placed, albeit with BG suffering some returns-dilution from Australia. INPEX, IMO and STO also offer considerable materiality, although all coming from within portfolios with higher breakevens that the industry average. Within the large-cap names, although subtle, we would note the well-placed portfolio of ENI.

Figure 12. Upstream portfolios to 2020 offer a wide spread of profitability, breakeven and materiality characteristics

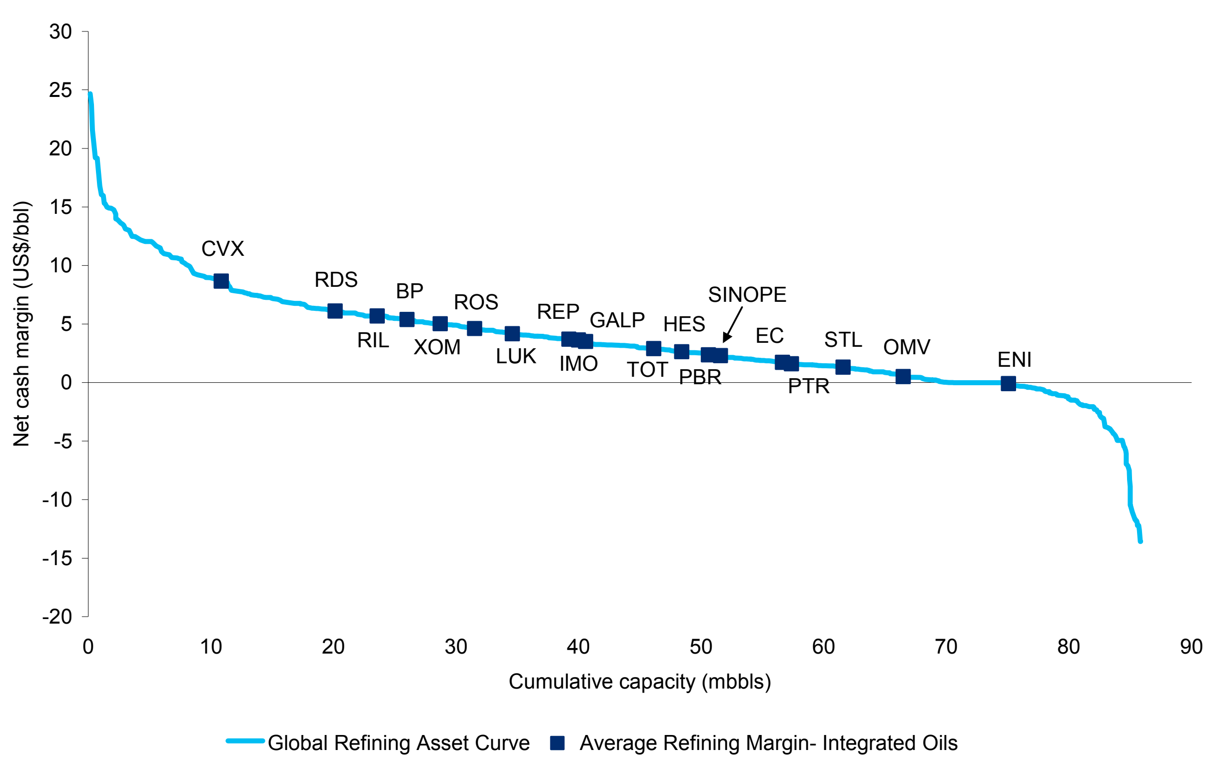


Source: Citi Research. * size of bubble = portfolio NPV as % of end-12E E&P capital employed.

Downstream positioning

Most of the companies added into this report are Upstream-focused, and our picture of the Downstream is largely unaltered from January. We see the challenge for the industry is to maintain the competitiveness of OECD-focused assets, in a global market where OECD remains ex-growth and oversupplied. OECD refining will be the real battle-ground. OECD assets can win, but they have to be advantaged and well placed on the curve – case in point is cost-competitive European coastal refineries that have been the main beneficiaries of growing MENA import requirements through 2012. The changing landscape around US unconventional oil and gas should continue to see some clear beneficiaries around that market, although we note that Gulf Coast deep conversion (e.g. RDS, TOT, XOM) could also well suffer. In our models we see the industry as continuing to struggle to hold on to cost-of-capital returns and expect portfolio rationalization to continue as the key theme.

Figure 13. Aggregate refining portfolios shown against the global refining cost-curve (of c. 500 refineries)



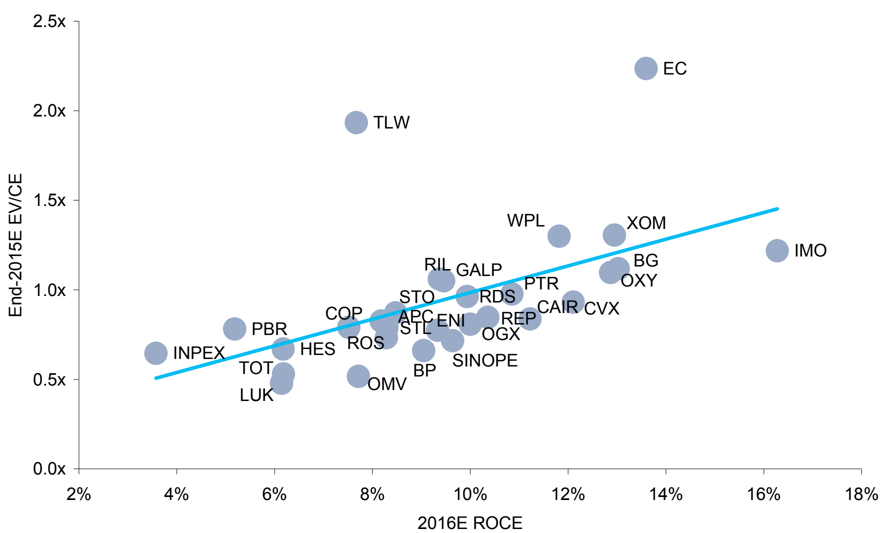
Source: Company data, OGJ, Citi Research estimates

Valuation screens

Overlaying our financial and valuation screens around the cost-curve/portfolio view tells an interesting story for the group. Our central conclusion is that the market is largely unwilling to reward the growth ambitions of those that have it. Figure 3 suggests the growth characteristics of **BG, APC, IMO, OGX, STO, INPEX and GALP** look substantially undervalued on an unlevered basis. Reasons for this discounting likely reflect specific concerns around execution delivery (OGX, INPEX), financing (BG, GALP) and country risk (Brazil), although we would highlight that in an uncertain macro world the economically-robust nature of those growth portfolios should, in our view, go a long-way towards offsetting those concerns.

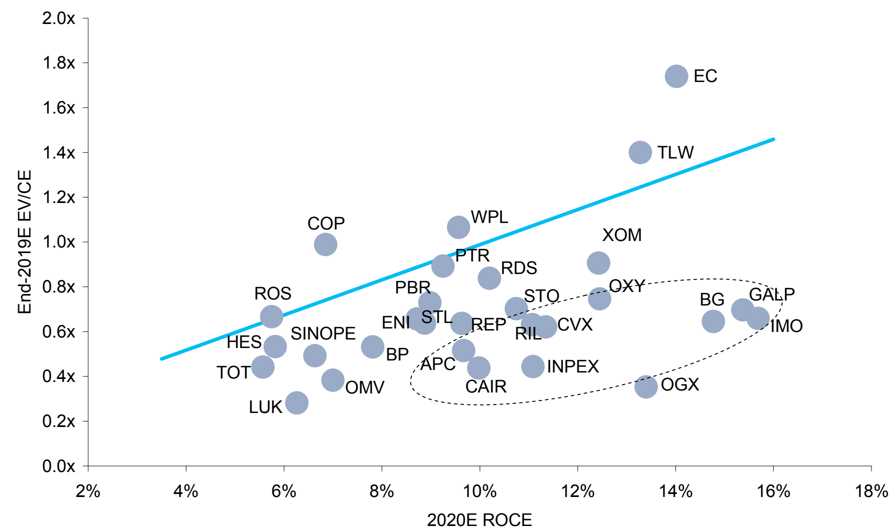
In contrast to the discounted valuations of the growth names, the market looks more than willing to ascribe reasonable value to the 'defensive' income characteristics of many of the large-cap oil names. This is in tune with many of the dividend yield – CDS spreads investment strategies. But investors should be cognisant of the fact that relatively high breakevens of most of the large-cap development portfolios suggest that cuts to (already anaemic) growth-capital may be needed to preserve those 'defensive' characteristics. In general terms we would argue that future returns just look to support current payouts, therefore on the current capital structure we think share price appreciation implies a lower dividend yield. Of the large-cap, traditional integrated oils, we think **ENI** and **CVX** look the most interesting, offering in our view good combinations of defensible income and economically robust growth.

Figure 14. EV/CE (based on end-2015E net debt and CE) versus 2016E ROCE



Source: Citi Research

Figure 15. EV/CE (based on end-2019E net debt and CE) versus 2020E ROCE*



Source: Citi Research. * trend-line is theoretical value based on ROCE.

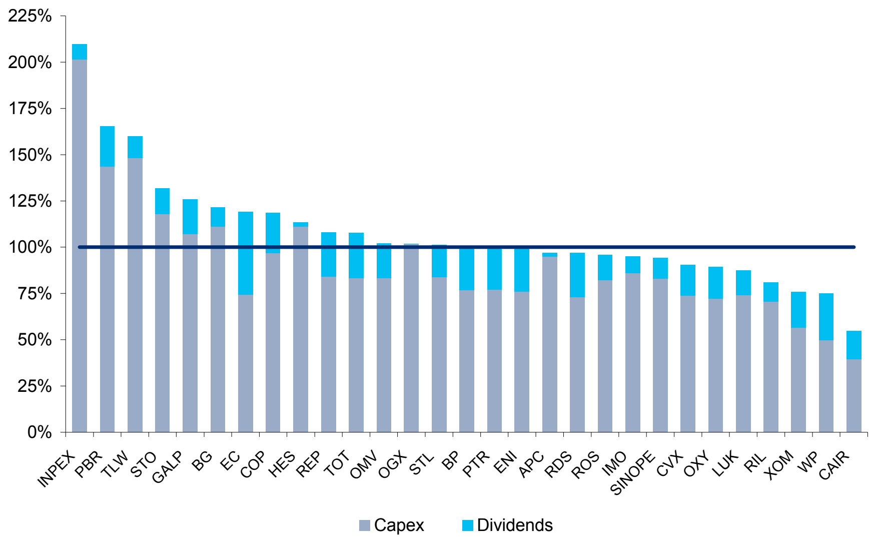
Capital structure and levered-returns

The issue of leverage is an interesting one. We find many investors (and companies) shy away from debates about leverage, perhaps with the 2008 debt crisis so recent in memories. But is leverage wrong in a low interest rate environment, particularly if it is used to fund growth in economically attractive, returns-enhancing portfolios? Not all leverage should be viewed equally, in our view.

Of the half a dozen current 'over spenders' in the industry (Figure 16) we would argue that the projects that are being invested in are economically strong and defensible. We would also argue that the debt market understands this point quite well; a PBR borrowing margin at 195 bps over 5 year US Treasuries looks fairly reasonable finance to us, while BG was similarly able to raise competitive hybrid capital through 1H.

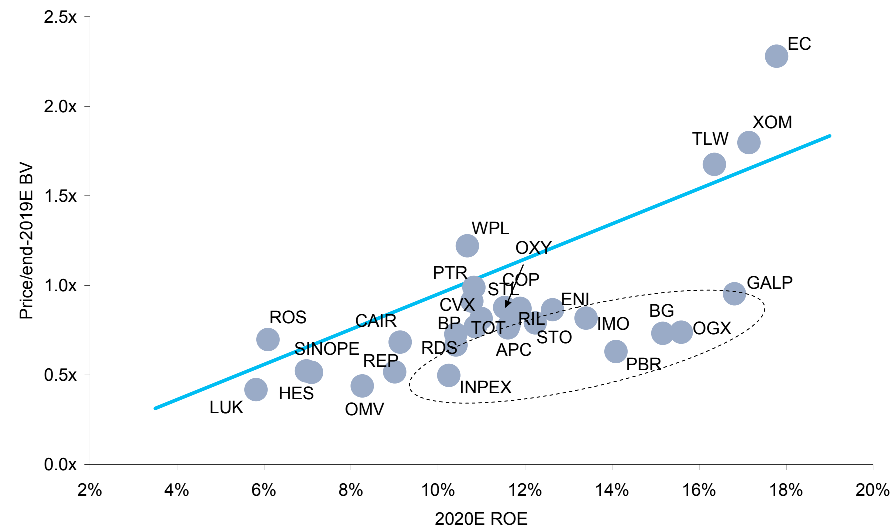
Relatively high leverage clearly helps the value case on some names, a case in point being PBR where the unlevered return does not actually look that compelling. This circles back in some respects to the debate on the valuation of the large-cap names. These companies can borrow very competitively and with a high cost of equity / low cost of debt environment, we continue to question the reluctance of these names to look to retire equity. Without the benefit of high-return growth, it is difficult to see how shareholder returns can be enhanced any other way.

Figure 16. Outgoings as a % of 2012-16E operating cash flow (@ average oil price US$100/bbl)



Source: Citi Research

Figure 17. Equity value versus end-decade levered returns*



Source: Citi Research. * trend-line is theoretical value based on ROE.

Valuations – PE

	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E
Anadarko	22.5x	21.0x	16.9x	12.6x	11.1x	9.7x	8.7x	7.6x	6.8x	6.3x
BG	17.3x	15.4x	13.6x	11.0x	8.7x	6.9x	5.7x	4.6x	4.6x	4.4x
BP	6.4x	7.9x	7.5x	7.4x	7.1x	6.4x	6.8x	6.8x	6.7x	6.3x
Cairn India	9.4x	7.3x	5.9x	6.8x	7.9x	8.4x	8.3x	8.8x	8.0x	7.3x
Chevron	7.5x	7.9x	9.2x	9.6x	9.0x	8.1x	7.9x	7.7x	7.4x	7.2x
Conoco	6.3x	10.0x	12.1x	11.1x	9.8x	9.1x	9.0x	8.7x	8.5x	8.5x
EcoPetrol	10.4x	13.9x	15.2x	18.3x	17.2x	16.0x	15.0x	14.0x	13.1x	12.3x
ENI	9.3x	9.5x	9.4x	8.5x	7.7x	7.2x	7.1x	6.9x	6.6x	6.4x
Exxon	9.5x	11.1x	12.0x	11.2x	10.3x	9.3x	8.5x	7.8x	7.2x	6.6x
GALP	47.5x	24.2x	22.6x	20.4x	16.8x	12.3x	9.8x	8.0x	6.1x	5.7x
Hess	14.6x	9.5x	9.1x	8.6x	8.5x	8.2x	7.7x	7.6x	7.3x	6.8x
Imperial	11.2x	10.8x	11.3x	11.3x	8.6x	7.1x	6.7x	6.6x	6.0x	5.7x
Inpex	16.5x	9.0x	8.6x	12.1x	12.8x	12.9x	17.0x	7.5x	4.6x	4.7x
Lukoil	4.6x	4.0x	4.7x	4.9x	5.5x	6.9x	6.9x	6.8x	6.6x	6.4x
Occidental	11.4x	13.4x	12.3x	10.7x	9.2x	8.6x	8.2x	7.8x	7.5x	7.2x
OGX	na	na	na	21.7x	8.8x	6.6x	5.3x	4.7x	4.6x	4.5x
OMV	8.4x	5.4x	6.3x	6.7x	6.8x	5.9x	5.0x	5.0x	4.9x	5.0x
Petrobras (Ord)	7.3x	11.8x	9.6x	10.2x	9.8x	10.4x	8.9x	6.9x	5.2x	4.4x
Petrochina	10.8x	10.7x	9.9x	10.4x	9.3x	8.3x	7.8x	7.4x	7.3x	9.2x
RD Shell (A)	9.0x	8.5x	8.7x	8.3x	7.6x	7.3x	6.9x	6.8x	6.7x	6.6x
Reliance	12.4x	12.0x	11.3x	11.0x	10.6x	8.4x	7.5x	6.7x	6.3x	5.8x
Repsol	10.0x	9.1x	9.4x	9.4x	9.6x	8.7x	8.2x	7.8x	7.0x	6.3x
Rosneft	5.0x	6.0x	8.0x	8.3x	7.5x	6.2x	10.6x	10.4x	10.1x	9.9x
Santos	23.2x	16.5x	20.7x	17.1x	12.7x	10.1x	8.4x	7.2x	6.9x	6.5x
Sinopec	7.2x	9.7x	6.5x	6.1x	6.1x	6.0x	5.7x	5.4x	5.2x	7.2x
Statoil	10.0x	8.6x	9.4x	8.8x	8.7x	8.6x	8.2x	7.9x	7.3x	7.0x
Total	8.1x	8.0x	8.2x	8.1x	7.4x	6.9x	6.4x	6.5x	6.6x	6.5x
Tullow	32.3x	31.7x	27.9x	32.8x	34.9x	24.5x	14.6x	11.8x	10.3x	9.8x
Woodside	17.6x	15.2x	17.7x	13.0x	11.5x	11.2x	12.2x	11.0x	11.1x	11.3x
Group	**10.0x**	**9.9x**	**9.5x**	**10.4x**	**9.0x**	**8.4x**	**8.2x**	**7.5x**	**6.8x**	**6.5x**

Source: Citi Research

Valuations – EV/DACF

	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E
Anadarko	na	6.5x	6.4x	5.4x	4.8x	4.2x	3.7x	3.1x	2.5x	2.1x
BG	11.2x	10.4x	9.9x	8.5x	7.1x	5.6x	4.5x	3.4x	3.0x	2.5x
BP	6.2x	7.1x	6.6x	5.0x	4.7x	4.5x	4.5x	4.5x	4.3x	3.9x
Cairn India	7.3x	5.3x	4.2x	4.3x	4.4x	4.3x	3.7x	3.4x	2.7x	2.0x
Chevron	5.0x	4.9x	5.4x	5.2x	4.7x	4.1x	3.7x	3.4x	3.0x	2.7x
Conoco	4.5x	7.1x	6.4x	6.1x	5.7x	5.4x	5.2x	5.0x	4.9x	4.7x
EcoPetrol	9.6x	10.8x	10.7x	12.2x	11.9x	11.2x	10.6x	10.0x	9.4x	8.7x
ENI	4.7x	4.3x	4.4x	4.0x	3.6x	3.3x	3.1x	2.9x	2.6x	2.4x
Exxon	7.1x	8.2x	8.0x	7.4x	6.8x	6.2x	5.6x	5.1x	4.7x	4.2x
GALP	38.5x	10.7x	11.7x	10.7x	9.5x	7.2x	5.7x	4.5x	3.2x	2.6x
Hess	5.8x	4.7x	4.6x	4.3x	4.2x	4.0x	3.7x	3.5x	3.3x	3.0x
Imperial	9.4x	8.9x	9.7x	9.6x	7.3x	5.8x	5.1x	4.5x	3.7x	3.1x
Inpex	7.5x	4.2x	4.5x	5.9x	7.0x	7.7x	8.3x	3.5x	1.7x	1.3x
Lukoil	3.1x	3.1x	3.5x	3.2x	2.9x	3.0x	2.6x	2.1x	1.7x	1.3x
Occidental	6.6x	7.3x	6.9x	6.2x	5.4x	4.9x	4.5x	4.1x	3.7x	3.4x
OGX	na	na	na	27.9x	9.9x	6.7x	4.7x	3.2x	2.2x	1.2x
OMV	3.8x	3.6x	3.7x	3.8x	3.8x	3.4x	2.9x	2.8x	2.7x	2.6x
Petrobras (Ord)	4.1x	5.1x	6.5x	7.0x	7.3x	7.6x	7.3x	6.2x	5.2x	4.5x
Petrochina	6.1x	6.0x	5.2x	5.0x	4.6x	4.4x	4.1x	3.9x	3.7x	3.3x
RD Shell (A)	5.8x	5.3x	5.7x	5.4x	5.0x	4.6x	4.3x	4.1x	3.8x	3.7x
Reliance	8.6x	6.6x	7.9x	8.3x	7.7x	5.2x	4.2x	3.1x	2.3x	1.4x
Repsol	5.6x	5.7x	5.3x	5.1x	5.0x	4.7x	4.8x	4.8x	4.6x	4.3x
Rosneft	5.1x	5.1x	5.7x	5.6x	4.7x	4.1x	4.7x	4.4x	4.1x	3.8x
Santos	7.8x	8.8x	9.2x	8.3x	6.6x	5.6x	5.3x	4.4x	3.9x	3.5x
Sinopec	5.2x	5.4x	4.2x	3.9x	3.6x	3.4x	3.2x	3.0x	2.7x	2.4x
Statoil	3.9x	3.8x	4.3x	4.0x	3.9x	3.7x	3.5x	3.2x	2.9x	2.7x
Total	4.9x	5.3x	5.1x	5.1x	4.7x	4.4x	4.1x	4.0x	3.9x	3.8x
Tullow	14.4x	15.7x	13.5x	15.0x	15.9x	12.7x	8.2x	6.4x	5.4x	5.0x
Woodside	17.4x	7.6x	9.8x	7.3x	7.4x	6.8x	6.7x	7.2x	7.8x	6.7x
Group	**6.1x**	**5.9x**	**6.1x**	**5.6x**	**5.0x**	**4.7x**	**4.5x**	**4.0x**	**3.7x**	**3.1x**

Source: Citi Research

Valuations – Dividend Yield

	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E
Anadarko	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
BG	1.2%	1.3%	1.4%	1.5%	1.6%	1.7%	1.9%	2.0%	2.2%	2.4%
BP	4.1%	4.7%	5.1%	5.3%	5.5%	5.6%	5.8%	6.0%	6.1%	6.3%
Cairn India	0.0%	0.0%	3.4%	2.9%	2.5%	2.4%	2.4%	2.3%	2.5%	2.7%
Chevron	2.7%	3.1%	3.1%	3.1%	3.1%	3.4%	3.6%	3.6%	3.8%	4.0%
Conoco	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
Ecopetrol	5.7%	5.0%	4.6%	2.7%	2.9%	3.1%	3.3%	3.5%	3.8%	4.0%
ENI	5.8%	6.0%	6.0%	6.2%	6.3%	6.4%	6.5%	6.7%	6.8%	6.9%
Exxon	2.1%	2.4%	2.6%	2.7%	2.8%	2.9%	3.1%	3.2%	3.3%	3.4%
GALP	1.6%	1.9%	2.1%	2.3%	2.5%	2.6%	2.8%	2.9%	3.1%	3.2%
Hess	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Imperial	0.9%	1.0%	1.1%	1.2%	1.3%	1.4%	1.5%	1.6%	1.7%	1.9%
Inpex	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.8%	2.2%	2.2%
Lukoil	4.2%	4.7%	4.1%	4.6%	4.1%	3.3%	3.3%	3.4%	3.4%	3.5%
Occidental	2.0%	2.4%	2.7%	2.9%	3.0%	3.2%	3.4%	3.5%	3.6%	3.7%
OGX	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
OMV	4.1%	4.2%	4.3%	4.4%	4.4%	4.5%	4.6%	4.7%	4.8%	4.9%
Petrobras (Ord)	4.7%	5.7%	4.0%	4.2%	4.3%	4.4%	4.5%	4.6%	4.9%	5.3%
Petrochina	4.2%	4.2%	4.5%	4.3%	7.6%	8.4%	9.0%	9.5%	9.6%	7.6%
RD Shell (A)	4.7%	4.8%	5.0%	5.1%	5.2%	5.3%	5.4%	5.6%	5.7%	5.8%
Reliance	1.0%	1.1%	1.1%	1.2%	1.3%	1.6%	1.8%	2.0%	2.2%	2.3%
Repsol	7.3%	5.0%	5.4%	5.8%	6.3%	6.7%	7.1%	7.4%	7.8%	8.2%
Rosneft	1.8%	2.1%	2.1%	2.1%	2.3%	11.1%	7.4%	7.6%	7.8%	8.0%
Santos	2.5%	2.5%	2.5%	2.5%	3.9%	5.0%	6.0%	6.9%	7.2%	15.3%
Sinopec	5.1%	2.6%	3.9%	4.1%	4.2%	4.3%	4.5%	4.6%	4.8%	3.5%
Statoil	4.4%	4.6%	4.8%	5.1%	5.3%	5.6%	5.8%	6.1%	6.4%	6.8%
Total	5.5%	5.7%	5.7%	5.7%	5.7%	5.8%	5.9%	6.0%	6.1%	6.2%
Tullow	0.9%	0.8%	0.9%	0.9%	1.0%	1.0%	1.1%	1.2%	1.4%	1.5%
Woodside	3.1%	3.6%	3.1%	3.8%	4.3%	4.4%	4.1%	4.5%	4.5%	4.4%
Group	**2.7%**	**2.6%**	**3.1%**	**2.9%**	**3.1%**	**3.4%**	**3.6%**	**3.6%**	**3.8%**	**4.0%**

Source: Citi Research

Valuations – Free Cash Flow Yield

	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E
Anadarko	-17.8%	4.0%	0.4%	5.1%	6.3%	8.3%	10.4%	14.5%	18.3%	19.9%
BG	-4.8%	-4.4%	-5.8%	-2.2%	0.1%	4.1%	8.2%	13.3%	14.4%	16.2%
BP	2.2%	-0.6%	2.4%	6.9%	7.3%	8.2%	7.3%	7.5%	8.0%	9.3%
Cairn India	7.1%	11.7%	12.5%	7.4%	9.2%	8.6%	10.7%	10.6%	11.1%	12.0%
Chevron	6.5%	4.6%	2.6%	4.5%	5.6%	7.2%	8.0%	8.7%	9.3%	9.9%
Conoco	9.2%	-5.4%	-0.5%	1.6%	3.3%	3.9%	4.2%	4.7%	5.1%	5.1%
EcoPetrol	3.7%	1.9%	3.3%	0.9%	2.1%	3.0%	3.5%	4.1%	4.7%	5.4%
ENI	3.5%	7.1%	4.5%	6.7%	7.4%	7.8%	7.8%	8.1%	8.7%	9.3%
Exxon	5.6%	4.3%	5.4%	6.1%	6.1%	6.5%	6.8%	7.1%	7.2%	7.4%
GALP	-7.3%	-5.6%	-2.4%	-0.8%	-3.2%	0.6%	4.0%	9.4%	16.4%	18.3%
Hess	-13.2%	-15.4%	-2.3%	-0.1%	-0.1%	3.1%	3.6%	3.7%	4.1%	5.1%
Imperial	1.4%	-1.8%	-2.3%	1.2%	4.1%	8.0%	9.0%	9.7%	9.6%	10.7%
Inpex	1.9%	4.5%	-21.0%	-33.6%	-26.5%	-17.3%	1.3%	14.6%	30.8%	27.4%
Lukoil	8.3%	4.0%	-1.5%	14.4%	14.1%	9.0%	12.7%	14.5%	14.2%	14.1%
Occidental	6.8%	2.0%	3.3%	4.5%	6.0%	6.7%	7.4%	8.0%	8.3%	8.8%
OGX	-6.1%	-11.6%	-13.6%	-1.0%	8.0%	13.7%	18.3%	21.1%	22.9%	23.4%
OMV	5.0%	15.0%	10.4%	6.2%	3.9%	7.6%	12.1%	12.9%	13.6%	12.5%
Petrobras (Ord)	-5.2%	-11.2%	-10.1%	-10.3%	-7.6%	-5.5%	-4.0%	0.4%	5.6%	9.5%
Petrochina	2.1%	1.3%	4.1%	5.9%	9.5%	6.6%	11.7%	11.8%	12.7%	13.7%
RD Shell (A)	2.3%	7.1%	4.0%	4.7%	6.0%	6.4%	7.0%	7.4%	7.6%	8.3%
Reliance	-0.9%	-0.8%	-3.2%	-5.5%	2.2%	11.0%	13.3%	15.1%	16.2%	17.6%
Repsol	3.7%	5.4%	4.3%	5.0%	5.0%	0.5%	2.4%	4.7%	9.7%	10.5%
Rosneft	3.7%	-0.6%	-0.9%	-0.4%	11.3%	11.4%	10.9%	12.1%	12.1%	11.4%
Santos	-13.2%	-21.5%	-6.4%	-3.6%	-1.4%	9.1%	9.2%	14.0%	19.1%	19.0%
Sinopec	1.9%	-3.8%	1.7%	7.6%	13.6%	13.0%	13.5%	14.2%	14.7%	15.1%
Statoil	4.2%	-2.1%	1.6%	5.5%	5.9%	6.3%	7.5%	8.7%	9.9%	10.3%
Total	3.2%	4.8%	3.1%	3.5%	4.9%	6.0%	7.6%	8.0%	7.8%	8.0%
Tullow	-0.6%	-3.2%	-3.1%	-4.0%	-5.0%	-3.2%	1.7%	5.2%	7.1%	7.6%
Woodside	-6.1%	5.6%	5.7%	7.5%	6.2%	8.0%	6.2%	2.0%	-1.5%	5.1%
Group	**2.2%**	**1.3%**	**1.6%**	**4.5%**	**5.6%**	**6.7%**	**7.6%**	**8.7%**	**9.7%**	**10.5%**

Source: Citi Research

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Company Summaries

Anadarko – Buy, US$115/share price target

Strong long-term portfolio asset value with significant international growth in the second half of the decade

We see APC around a framework of high profitability growth, driven in the main by the North American unconventional liquids position (Wattenburg, Eagle Ford) and by international growth (Ghana/Mozambique). That growth helps the valuation emerge from the pack through the post-2016 period, leaving an equity that we think looks considerably discounted by the back-end of the decade. But investors may not have to be that patient around growth-delivery, as management continue to reaffirm their position that at least some of the material Mozambique position is for sale. We also note the potential near-term calibration of the Tronox liability, where we assume a US$1.0-2.5 B liability will prove much lower than plaintiff aspirations.

- **North America unconventional liquids drive the near-term –** We see APC's growth profile over the decade as in two phases. The near-term growth potential looks strong, underpinned by Eagle Ford and Wattenberg liquids growth and to some extent by other unconventional plays (the new Haynesville liquids-rich, Permian Avalon and Marcellus horizontal plays). We note the potential of the Wattenberg in particular, a play that maps well onto our cost-curve (firmly 1st-quartile) and offers APC significant resource: management recently indicated a resource potential of the Niobrara and Codell formations of up to 1.5 B boe (net), enough we think to grow that position 15%+ per annum (incremental volumes 60% oil and 10% NGLs). Anadarko owns ~2/3s of its acreage in these areas in perpetuity and with the full mineral rights. This significantly enhances the returns for the company on wells drilled on the Land Grant sections while it collects a royalty on sections it farms out to others.

- **International drives the back-end –** Gulf of Mexico and Ghana (Jubilee/TEN) represent other sources of material growth, but through the back-end of the decade the emphasis undoubtedly shifts to the potential of Mozambique where gas resources on Area 1 (36.5% APC) now sit in the 30-60 TCF range. We current model Mozambique LNG as a 4 Train initial development, with equity gas split equally between Areas 1 and 4; economics look attractive at around the US$45/bbl reflecting the vast resource size and attractive fiscal environment, although the shallower waters of Area 1 probably offer more certainty to this number. APC management have reaffirmed a desire to monetise a portion of its stage, perhaps structured as a farm-down in exchange for a capital carry (similar to what it did on Lucius). The PTTEP/Cove deal sets a reference price of US$8.2 B (~$16 per share) as a read-across valuation, although the size of APC's stake could warrant a premium to that.

- **Tronox –** The legal implications of Tronox remains a near-term uncertainty. Although we still think a liability of US$1.0-2.5 B represents a sensible outcome, compared to plaintiff aspirations in excess of US$18.9 B, it is understandable that such a wide bid/ask spread from the legal process weighs on the current valuation.

- **Exploration –** In addition to growth, an active exploration programme lies at the heart of APC's offering to investors, with deepwater Gulf, offshore Ghana and Mozambique all providing a focus over the coming 12 months. We note in particular on Mozambique the frontier potential of the southern Area 1, as follow-on to the 2010 Iron Clad well, where the presence of oil suggests there may be different play opportunities in the basis.

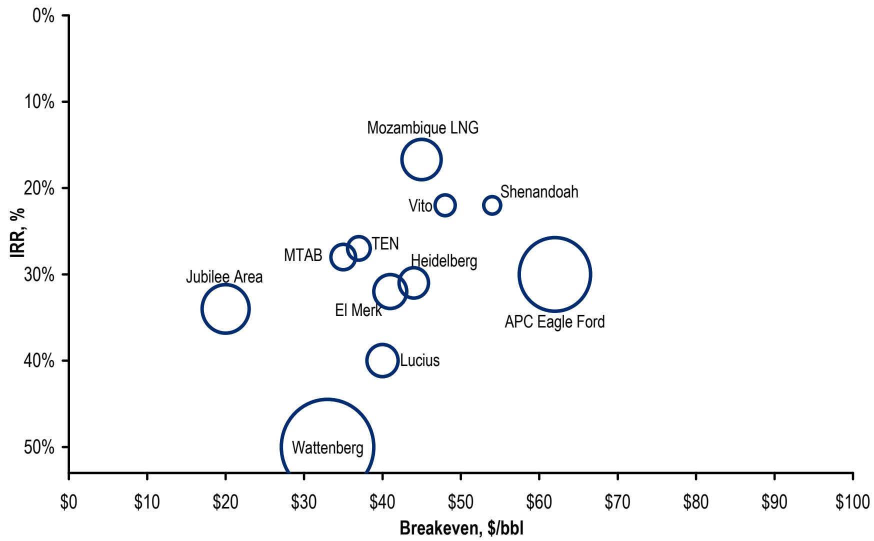
Figure 18. APC summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	73.2	98.1	61.8	80.0	110.2	109.3	99.0	95.0	98.1	100.8	103.6	106.5	109.5	112.6	-1.8%	0.2%
WTI oil (US$/bbl)	72.3	99.7	61.8	79.5	95.1	90.7	85.8	92.4	95.1	97.8	100.6	103.5	106.5	109.6	0.6%	1.6%
US gas (US$/MMBtu)	7.0	8.9	4.0	4.4	4.0	2.6	3.9	4.5	5.0	5.3	5.3	5.3	5.3	5.3	5.6%	3.1%
E&P volumes (kboepd)	578	563	604	643	679	723	772	813	838	882	930	1,015	1,099	1,142	5.4%	5.9%
YoY growth	1.1%	-2.5%	7.2%	6.5%	5.6%	6.4%	6.8%	5.3%	3.1%	5.3%	5.4%	9.1%	8.3%	3.9%		
% oil	45%	39%	39%	41%	43%	44%	48%	50%	49%	49%	49%	47%	45%	45%		
E&P cash margins (US$/bbl)	21.4	28.4	20.3	22.9	28.8	27.3	27.4	30.4	31.9	33.2	34.1	34.7	35.0	35.7	2.8%	2.4%
Per share data:																
EPS (US$)	2.82	5.15	(1.12)	1.82	3.38	3.49	4.29	5.76	6.56	7.46	8.30	9.52	10.61	11.49	17.2%	14.6%
DPS (US$)	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.0%	0.0%
Valuation Ratios:																
P/E	25.3x	13.8x	(63.8x)	39.1x	22.5x	21.0x	16.9x	12.6x	11.1x	9.7x	8.7x	7.6x	6.8x	6.3x		
EV/DACF	21.8x	9.2x	nm	9.3x	nm	6.5x	6.4x	5.4x	4.8x	4.2x	3.7x	3.1x	2.6x	2.2x		
Dividend yield	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%		
Free cash yield	-4.7%	3.4%	-5.5%	-0.4%	-17.8%	4.0%	0.3%	5.2%	6.5%	8.5%	10.8%	14.9%	18.9%	20.5%		
Cash flow:																
Upstream	4.5	5.8	4.5	5.4	7.1	7.2	7.7	9.0	9.8	10.7	11.6	12.9	14.1	14.9	8.4%	8.5%
Other and corporate	(2.4)	(1.1)	(1.2)	(1.0)	(7.3)	(0.4)	(0.7)	(0.9)	(0.9)	(0.8)	(0.9)	(0.9)	(0.8)	(0.8)		
Sources of funds	**2.2**	**4.8**	**3.3**	**4.4**	**(0.2)**	**6.9**	**7.0**	**8.2**	**8.9**	**9.9**	**10.8**	**12.0**	**13.2**	**14.1**		
Changes in working capital	0.3	1.6	(0.0)	0.6	(0.7)	1.7	0.3	1.3	1.5	1.8	2.2	3.0	3.7	3.9		
Cash flow from operations	**2.5**	**6.4**	**3.2**	**5.0**	**(0.8)**	**8.5**	**7.3**	**9.4**	**10.4**	**11.7**	**13.0**	**15.0**	**16.9**	**18.0**	8.2%	9.8%
Capex	(4.1)	(5.3)	(5.1)	(5.2)	(5.6)	(7.1)	(7.2)	(7.6)	(8.1)	(8.7)	(9.2)	(9.8)	(10.3)	(10.8)	9.2%	7.5%
Free cash flow	**(1.6)**	**1.1**	**(1.9)**	**(0.2)**	**(6.4)**	**1.4**	**0.1**	**1.8**	**2.3**	**3.0**	**3.8**	**5.2**	**6.6**	**7.2**		
Ordinary dividends	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	0.1%	0.0%
as % of operating c/flow	7%	3%	5%	4%	-21%	2%	2%	2%	2%	2%	1%	1%	1%	1%		
Discretionary free cash flow	**(1.8)**	**1.0**	**(2.1)**	**(0.3)**	**(6.6)**	**1.3**	**(0.1)**	**1.7**	**2.1**	**2.8**	**3.6**	**5.1**	**6.5**	**7.0**		
Disposals/(Acquisitions)	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Equity change	0.1	(0.7)	1.3	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(1.8)**	**1.0**	**(2.1)**	**(0.3)**	**(6.6)**	**1.3**	**(0.1)**	**1.7**	**2.1**	**2.8**	**3.6**	**5.1**	**6.5**	**7.0**		
Balance sheet:																
Net debt	13.5	10.0	9.2	9.3	12.5	12.1	11.7	10.5	9.0	7.2	4.9	2.0	(1.7)	(5.6)		
Net debt/EBITDA	2.3x	1.2x	2.7x	1.6x	3.4x	1.4x	1.4x	1.0x	0.8x	0.6x	0.4x	0.1x	(0.1x)	(0.3x)		
Interest cover	5.5x	11.5x	4.9x	7x	4x	11x	11x	13x	14x	16x	17x	19x	21x	22x		
Net debt/equity	82%	53%	45%	44%	66%	56%	50%	40%	31%	22%	13%	5%	-4%	-11%		
Capital employed:																
Upstream	43.4	42.5	42.8	44.1	44.4	47.0	49.3	51.6	54.2	57.1	60.1	63.1	66.2	69.6	5.2%	5.1%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Upstream	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:																
Upstream	3.3%	7.3%	-0.2%	2.7%	1.7%	7.8%	6.1%	7.3%	7.8%	8.2%	8.5%	9.1%	9.5%	9.7%		
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group	**3.3%**	**7.3%**	**-0.2%**	**2.7%**	**1.7%**	**7.8%**	**6.1%**	**7.3%**	**7.8%**	**8.2%**	**8.5%**	**9.1%**	**9.5%**	**9.7%**		

Source: Company reports and Citi Research

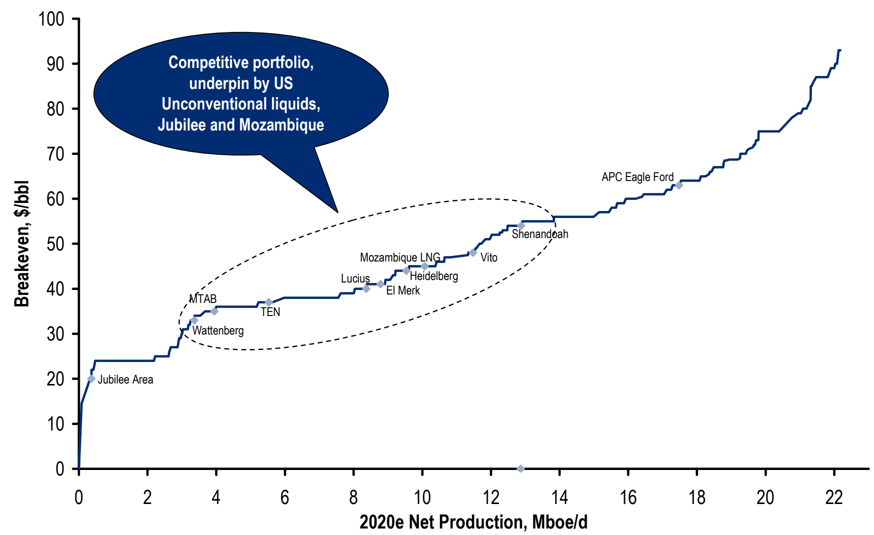
Anadarko - Upstream

Figure 19. Anadarko project portfolio (2012-2020 start-ups)



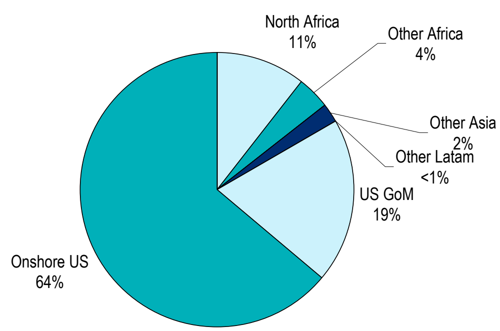
Source: Citi Research

Figure 20. Anadarko project portfolio versus the industry cost-curve



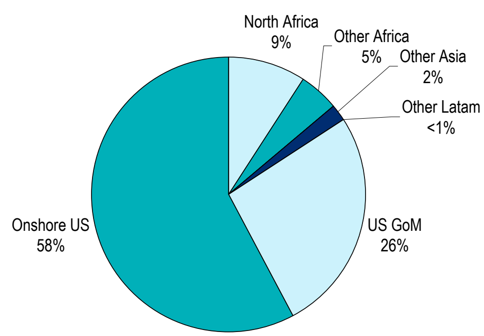
Source: Citi Research

Figure 21. 2012E cash flow by region



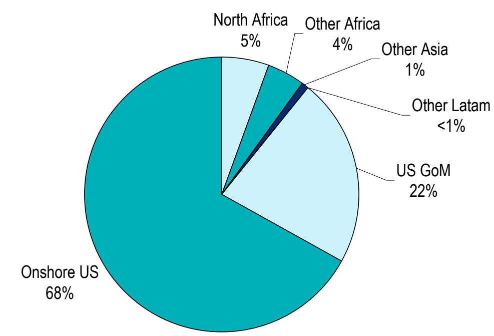
Source: Citi Research

Figure 22. 2016E cash flow by region



Source: Citi Research

Figure 23. 2020E cash flow by region



Source: Citi Research

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BG – Buy, price target 1,530p/share

Brazil ramp-up helps deliver sector-leading growth and returns at an attractive valuation

We believe BG offers a differentiated story around growth, high returns and deep resource opportunity in a sector that is generally lacking all three. Growth is driven primarily by the ramp of high margin Brazil pre-salt production, which is likely to represent c. 50% of group cashflows by 2020 (from c. 4% in 2011). While there may well prove to be risks around the delivery of these growth plans, we believe the modular nature of the Brazil ramp up and its position on the cost curve help mitigates these risks.

- **High returns in E&P driven by Brazil –** we forecast upstream cashflows to increase by 19% CAGR 2011-16, above the sector average, driven principally by the ramp up of Brazil. We forecast Brazil will represent c. 30% of upstream cashflows by 2015, rising to almost 60% by 2020. Upstream returns remain high given strong economics from the Brazilian pre-salt projects. We estimate the breakeven of Brazil pre-salt at c. US$35/boe and see these projects achieving IRRs of c. 35%. While there remain concerns around delivery of these projects, the modular nature of the development should help to mitigate this risk in our view.

- **LNG growth driven by volume uplift –** LNG currently accounts for 28% of group cashflows in 2012. We forecast LNG supply volumes to rise from c. 12mtpa currently to c. 30mpta by the end of the decade, in line with BG's 2020 target, driven primarily by the delivery of QC LNG Trains 1 and 2 in Australia and Sabine Pass in the US. We have also included risked volumes (33%) from a third train at QC LNG and from a two-train Tanzania LNG project given the need to de-risk further upstream volumes before both projects can be sanctioned. We see additional projects within BG's current LNG portfolio (15mpta Lake Charles export project) that could deliver higher LNG supply volumes than currently forecast. We also see a tightening LNG market over the next decade with the level of uncontracted volumes falling significantly by 2015/16, which should support the margin outlook for BG's LNG business over the medium-term.

- **Growth can be funded** – high investment requirements see BG continuing to raise borrowing levels until 2015. However, capitalisation and cashflow is strong and we do not anticipate net debt /EBITDA climbing above 1.3x. BG has made steps to extend the duration and size of its debt facilities. In addition, BG continues to retain high equity stakes in key assets (e.g. QC LNG and Brazil), which it could look to partially monetise in the medium-term.

- **Valuation** – BG screens attractively on both our group and UOV-screens with high returns and growth from its upstream portfolio; on our metrics the valuation looks more in line with sector peers over the 5-year time frame, but looks attractive on the end-decade time frame with the need to believe in the growth and take on board the potential risks around delivery. While delivery risk remains a concern to us, we believe the modular nature of its developments in both Brazil and Australia should help mitigate this risk.

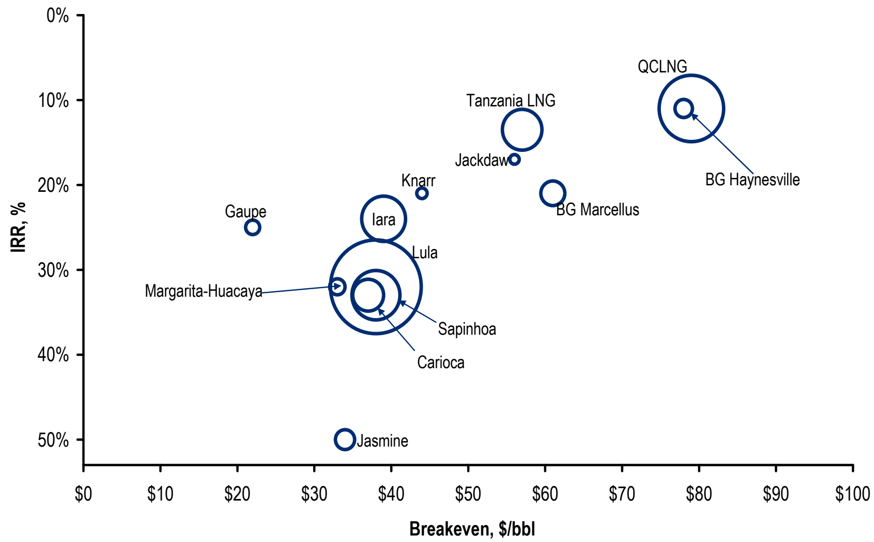
Figure 24. BG summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.3	110.8	110.9	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
US$/GBP rate	2.00	1.89	1.55	1.54	1.60	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58		
LNG volumes (mpta)	11.9	12.4	12.4	13.0	12.8	12.7	12.8	14.9	20.5	24.8	26.8	27.8	28.7	30.2	14.2%	10.0%
E&P volumes (kboepd)	604	620	644	646	641	690	748	805	895	1,092	1,231	1,395	1,380	1,377	11.2%	8.9%
YoY growth	0.5%	2.6%	3.9%	0.4%	-0.7%	7.5%	8.5%	7.5%	11.2%	22.1%	12.8%	13.3%	-1.1%	-0.2%		
% oil	13%	14%	13%	12%	11%	13%	16%	22%	28%	32%	37%	38%	38%	38%		
E&P cash margins (US$/boe)	19.0	24.1	16.7	19.2	21.3	22.8	22.9	26.1	28.5	30.0	32.1	34.8	36.5	37.7	7.1%	6.6%
Per share data:																
Adjusted EPS (US$)	1.06	1.74	1.03	1.19	1.28	1.37	1.46	1.81	2.29	2.87	3.52	4.33	4.35	4.50	18%	15%
Adjusted EPS (GBP)	0.53	0.92	0.66	0.77	0.80	0.87	0.93	1.15	1.45	1.82	2.23	2.74	2.76	2.85	18%	15%
DPS (US$)	0.19	0.21	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.35	0.38	0.41	0.44	0.47	8%	8%
DPS (GBP)	0.09	0.11	0.12	0.14	0.15	0.16	0.17	0.19	0.20	0.22	0.24	0.26	0.28	0.30	8%	8%
Valuation ratios:																
P/E	7.6x	11.9x	15.9x	14.8x	15.8x	15.4x	13.8x	11.2x	8.9x	7.0x	5.8x	4.7x	4.7x	4.5x		
EV/DACF	4.3x	8.0x	9.3x	9.2x	11.2x	10.5x	10.0x	8.7x	7.3x	5.8x	4.7x	3.7x	3.0x	2.5x		
Dividend yield	1.9%	1.0%	1.1%	1.1%	1.2%	1.3%	1.4%	1.5%	1.6%	1.7%	1.9%	2.0%	2.2%	2.3%		
Free cash yield	7.5%	4.7%	-2.1%	-1.7%	-4.7%	-4.3%	-5.7%	-2.2%	0.1%	4.1%	8.1%	13.2%	14.3%	16.1%		
Cash flow:																
Upstream	4.2	5.4	3.92	4.5	5.0	5.7	6.3	7.7	9.3	12.0	14.4	17.7	18.4	18.9	19%	16%
LNG	0.8	2.2	1.7	1.8	2.0	2.2	2.8	3.0	3.7	4.0	4.6	4.9	5.1	5.3	15%	12%
Other (T&D, Corporate, financing)	0.7	0.8	0.6	0.8	0.6	(0.1)	(0.7)	(0.9)	(1.1)	(1.0)	(0.9)	(0.7)	(1.1)	(1.0)		
Sources of funds	**5.8**	**8.4**	**6.3**	**7.1**	**7.5**	**7.9**	**8.3**	**9.8**	**12.0**	**15.0**	**18.1**	**21.9**	**22.3**	**23.2**		
Changes in working capital	(0.3)	0.1	(0.7)	(0.8)	(0.6)	0.2	-	-	-	-	-	-	-	-		
Cash flow from operations	**5.5**	**8.5**	**5.6**	**6.4**	**6.9**	**8.1**	**8.3**	**9.8**	**12.0**	**15.0**	**18.1**	**21.9**	**22.3**	**23.2**	17%	14%
Capex	(3.4)	(5.3)	(6.8)	(7.4)	(10.3)	(11.1)	(12.2)	(11.3)	(11.9)	(12.2)	(12.5)	(12.8)	(12.5)	(12.2)	3%	2%
Free cash flow	**2.1**	**3.3**	**(1.2)**	**(1.1)**	**(3.4)**	**(3.0)**	**(4.0)**	**(1.5)**	**0.1**	**2.8**	**5.6**	**9.1**	**9.9**	**11.1**		
Ordinary dividends	(0.5)	(0.7)	(0.6)	(0.7)	(0.8)	(0.9)	(0.9)	(1.0)	(1.1)	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)		
as % of operating c/flow	10%	8%	11%	11%	11%	10%	11%	10%	9%	8%	7%	6%	6%	7%		
Minority dividend	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	(0.3)		
Discretionary free cash flow	**1.5**	**2.5**	**(1.9)**	**(1.8)**	**(4.3)**	**(3.9)**	**(5.0)**	**(2.6)**	**(1.1)**	**1.5**	**4.1**	**7.5**	**8.1**	**9.2**		
Disposals	0.9	0.0	0.0	0.9	0.2	3.0	-	-	-	-	-	-	-	-		
Acquisitions	(1.2)	(3.8)	(2.0)	(1.5)	(0.5)	-	-	-	-	-	-	-	-	-		
Equity change	(1.0)	(0.4)	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-		
Surplus (deficit)	**0.2**	**(1.7)**	**(3.7)**	**(2.4)**	**(4.5)**	**(0.8)**	**(5.0)**	**(2.6)**	**(1.1)**	**1.5**	**4.1**	**7.5**	**8.1**	**9.2**		
Balance sheet:																
Net debt	(0.1)	1.8	4.8	7.0	11.3	11.2	16.2	18.8	20.0	18.5	14.3	6.8	(1.3)	(10.5)		
Net debt/EBITDA	(0.0)	0.2x	0.6x	0.8x	1.1x	1.0x	1.3x	1.2x	1.0x	0.7x	0.5x	0.2x	(0.0)	(0.3)		
Cash interest cover	nm	nm	28.7x	41.9x	34.3x	38.2x	21.0x	14.4x	16.1x	19.8x	26.9x	43.1x	80.5x	nm		
Net debt/equity	0%	10%	21%	26%	38%	35%	45%	45%	41%	32%	21%	8%	-1%	-10%		
Capital employed:																
Upstream	8.6	13.2	19.8	25.6	31.4	36.8	42.2	46.9	51.5	55.5	58.9	61.6	63.9	65.6	12%	9%
LNG	3.4	3.9	4.8	6.1	8.3	11.7	15.0	18.0	21.1	24.1	27.2	30.2	33.1	35.7	24%	18%
Other	3.0	2.9	3.6	2.8	2.9	0.1	0.3	0.5	0.7	0.9	1.1	1.3	1.4	1.6		
% Upstream	57%	66%	70%	74%	74%	76%	73%	72%	70%	69%	68%	66%	65%	64%		
Return on capital employed:																
Upstream	30.2%	30.5%	9.8%	8.5%	8.4%	7.8%	7.5%	9.4%	11.0%	13.5%	15.6%	18.8%	18.7%	18.6%		
LNG	18.8%	47.1%	31.6%	27.6%	19.8%	15.4%	14.0%	11.9%	12.2%	11.1%	11.1%	10.4%	9.4%	8.9%		
Aggregate group	**27.0%**	**33.4%**	**16.0%**	**13.9%**	**12.2%**	**11.5%**	**11.2%**	**12.2%**	**13.3%**	**14.8%**	**16.2%**	**18.1%**	**16.8%**	**16.3%**		

Source: Company reports and Citi Research

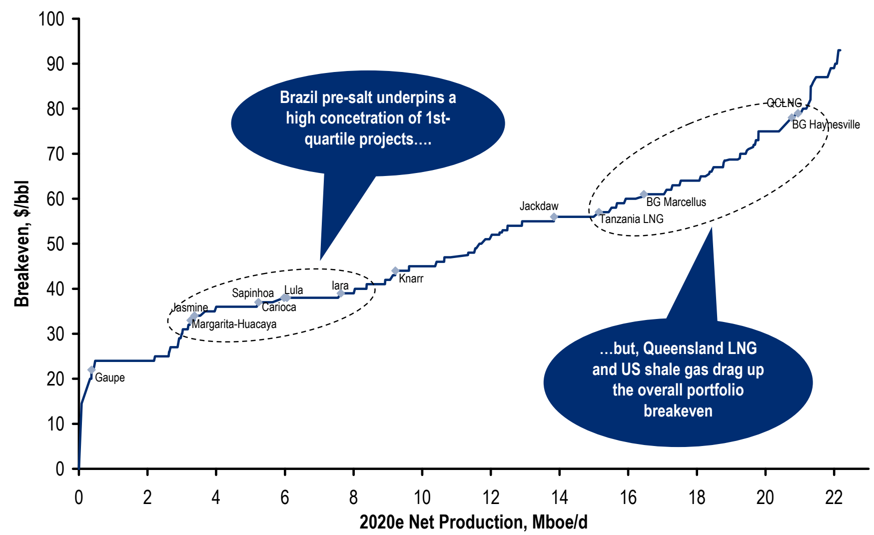
BG - Upstream

Figure 25. BG project portfolio (2012-2020 start-ups)



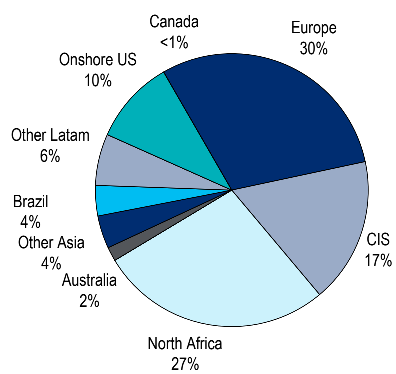
Source: Citi Research

Figure 26. BG project portfolio versus the industry cost curve



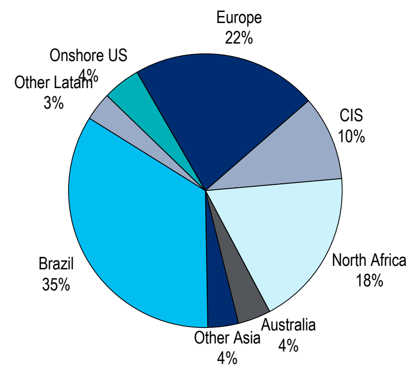
Source: Citi Research

Figure 27. 2011E cash flow by region



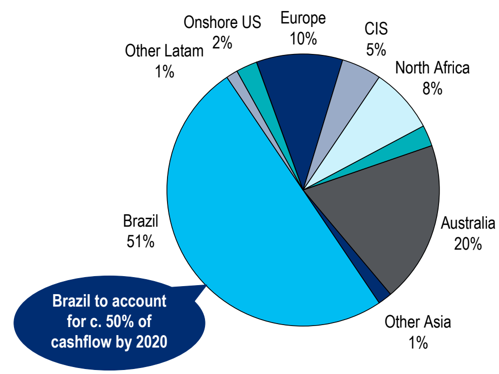
Source: Citi Research

Figure 28. 2015E cash flow by region



Source: Citi Research

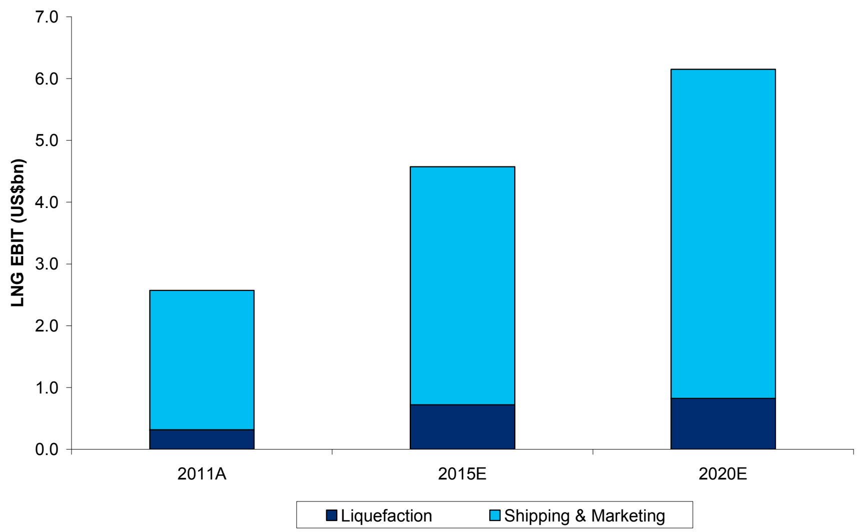
Figure 29. 2020E cash flow by region



Source: Citi Research

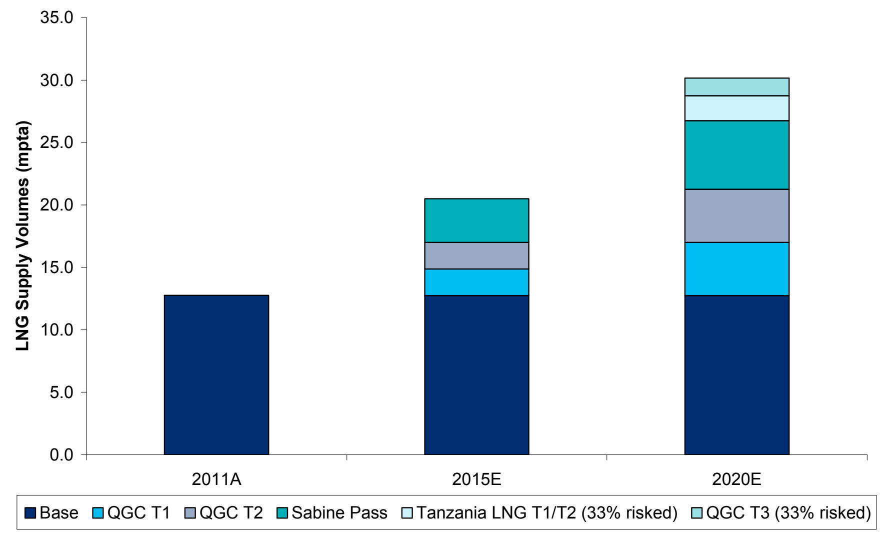
BG - LNG

Figure 30. LNG business by segment



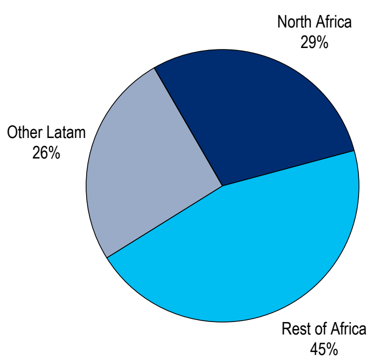
Source: Citi Research

Figure 31. LNG supply Volumes out to 2020



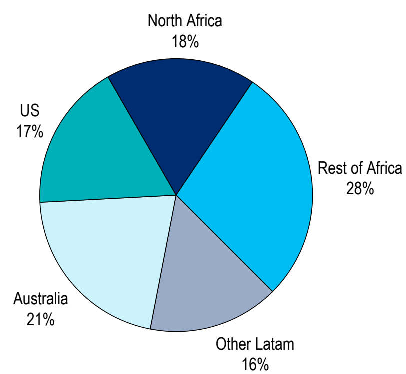
Source: Citi Research

Figure 32. 2012E supply volumes by region



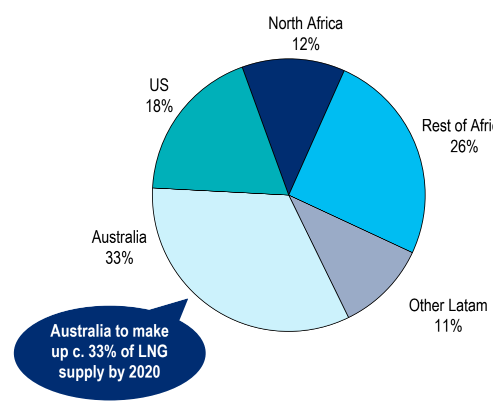
Source: Citi Research

Figure 33. 2016E supply volumes by region



Source: Citi Research

Figure 34. 2020E supply volumes by region



Source: Citi Research

BP – Neutral, 435p price target

Change continues, but Macondo, TNK-BP and growth-delivery remain navigational challenges

Although the operational and financial turnaround that BP hoped for in 2012 has not yet materialized, a summer of asset sales and asset writedowns suggests that a re-focused BP is trying to emerge. What looks to be on offer is a company that retains good profitability metrics, but with a somewhat anaemic growth profile versus peers and one that it probably too heavily dependent on the speed of operations in the Gulf to engineer what growth there is. Acquisitions may be used to diversify this outlook. The value case also remains clouded by two near-term issues, both of which have wide value-impacts around them. The obvious one is the ongoing uncertainty around the Macondo legal battle, a battle that we still think is heading to court where the risks of a gross negligence outcome remain high. The second is the prospective sale of TNK-BP which we think may struggle to achieve the value that the market believes.

- **Change continues –** Although BP 1H12 earnings have shown a company that is in a fair state of flux (high maintenance activity, margin squeeze), portfolio-wise the company continues to re-shape. 2012 has seen the capital base reduced by 7% reflecting US$10 B of asset sales (mainly non-core North America) and US$4 B of North American asset writedowns. Publically, a further 8-10% could still on the cards through assets disposals of Texas City (US refining) and TNK-BP (Russia).

- **Energizing growth remains a challenge –** BP's pre-Macondo strategy was built on clear and profitable growth in three principal asset positions – US Gulf of Mexico, US unconventional gas and deepwater Angola – which, combined, were set to contribute around half the company's value-adjusted growth this decade. But the pace of two of these three legs looks more questionable today. The Gulf (one-fifth of growth) remains at risk from tighter industry regulation and perhaps a greater scrutiny on BP for ultra deepwater projects such as Kaskida and Tiber, while BP's US unconventional position suffers from a relatively high breakeven (BP's US gas business is currently operating at a loss). This leaves the growth portfolio with decent profitability characteristics versus peers, mainly reflecting the GoM position, but one where the growth looks pretty anaemic (E&P top-line 0-1% p.a. 2012-16E).

- **Exploration centre-stage –** Faced with these challenges 'new BP' began a strategic shift towards greater exploration. Over 2010/11 the company divested US$18 B of marginal or mature assets and recycled some US$17 B of that into assets with more significant exploration potential, particularly in offshore Brazil and India. This strategic shift sees the company back its core competency in exploration. The issue for investors is that there is a long lead-time to judge the success.

- **Macondo still lacks visibility –** Clear from recent court filings is that the DOJ is pursuing a gross negligence case against BP, arguing that although no single decision was reckless, collectively they were, thereby elevating the level of negligence. The trial starts 14th January 2013 and we think the DOJ case looks pretty strong, in theory raising the spectre of fines and penalties approaching US$25 B (US$21 B of Clean Water Act and US$4 B economic damages for five States). However, we would also expect that any financial ruling would consider BP's compensatory and remedial spending to-date in the Gulf, and precedent might suggest a reduction to perhaps 30-50% of the award. The tricky aspect around settling this pre-trial is the political fallout for the US Administration for agreeing to a reduced sum, and the fact that the DOJ may actually want aspects of the case aired in public. Finally, rig-owner RIG may be expected to bear some of the financial penalty. All-in this makes it very difficult for the market to get transparency. We are using a sum of US$10 B (post-tax) for BP's remaining Macondo penalties, but gaining visibility on that number being right or wrong may take some time; under a trial scenario the financial penalties might not be known until 2H14.

- **TNK-BP sale remains opaque –** Also lacking visibility is the prospective sale of BP's 50% stake in TNK-BP (Russia) we think the lack of a buoyant market poses a risk to price/completion. AAR looks to be offering something BP does not want (to only buy half the stake), while we question the ability and desirability of the other public bidder, Rosneft, to offer what the market thinks TNK-BP is worth (US$25-30 B is market consensus).

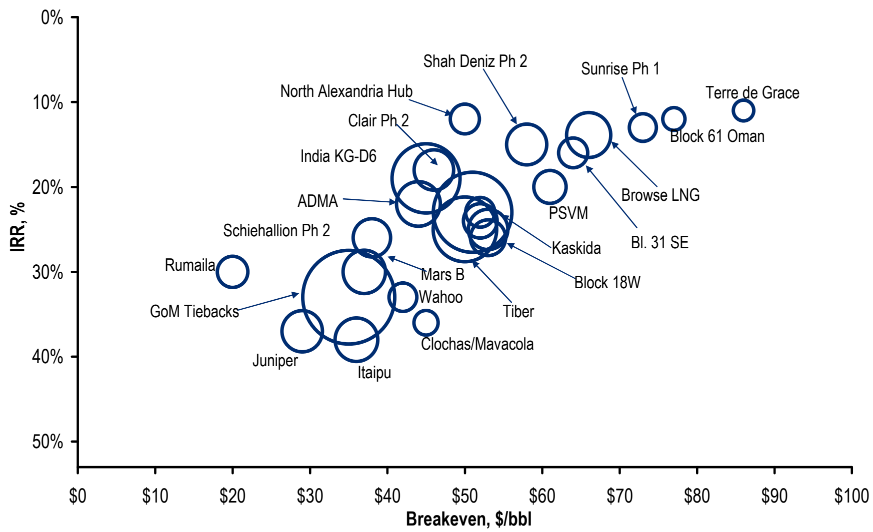
Figure 35. BP summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
Realised US gas (US$/MMbtu)	5.4	6.8	3.1	3.9	3.3	2.2	2.8	3.2	3.6	4.0	4.1	4.3	4.4	4.5	3.8%	3.4%
BP indicator refining margin	9.9	6.5	4.0	4.4	4.2	5.8	6.2	6.3	6.2	6.1	6.0	5.9	5.8	5.7	7.9%	3.5%
E&P volumes (mboepd) - ex-TNK-BP	2.91	2.91	3.01	2.86	2.46	2.33	2.31	2.32	2.37	2.32	2.40	2.40	2.43	2.56	-1.2%	0.4%
YoY growth	-1.6%	0.2%	3.4%	-5.2%	-13.8%	-5.5%	-0.7%	0.4%	2.1%	-2.2%	3.4%	0.2%	1.2%	5.4%		
% oil	54%	54%	56%	53%	52%	51%	53%	52%	52%	48%	48%	45%	43%	43%		
E&P cash margins (US$/boe) - ex-TNK-BP	22.4	30.0	19.8	23.7	28.0	26.8	27.8	28.3	29.0	30.8	28.7	28.5	28.8	29.6	1.9%	0.6%
Per share data:																
EPS adjusted (cents)	0.98	1.39	0.77	1.08	1.13	0.90	0.94	0.96	1.00	1.11	1.04	1.03	1.05	1.13	0%	0%
EPS adjusted (pence)	49.2	75.2	49.5	69.7	70.5	57.3	60.6	61.2	64.2	71.2	66.6	66.3	67.5	72.3	0%	0%
DPS (cents)	0.42	0.55	0.42	0.07	0.29	0.33	0.36	0.37	0.38	0.40	0.41	0.42	0.43	0.45	6%	5%
DPS (pence)	21.0	29.4	27.9	4.4	18.1	21.0	23.3	23.9	24.7	25.4	26.2	27.0	27.8	28.6	41%	45%
Valuation ratios:																
P/E	11.6x	7.1x	8.7x	6.2x	6.3x	7.9x	7.5x	7.4x	7.1x	6.4x	6.8x	6.8x	6.7x	6.3x		
EV/DACF	6.3x	4.5x	5.5x	8.9x	6.2x	7.1x	6.5x	5.0x	4.7x	4.5x	4.5x	4.4x	4.3x	3.9x		
Dividend yield	3.7%	5.5%	6.5%	1.0%	4.1%	4.7%	5.1%	5.3%	5.4%	5.6%	5.8%	5.9%	6.1%	6.3%		
FCF yield	3.2%	10.0%	6.1%	-4.0%	2.2%	-0.6%	2.4%	6.9%	7.3%	8.2%	7.3%	7.5%	8.1%	9.3%		
Cash flow:																
Upstream	23.8	31.9	21.8	24.7	25.2	22.8	23.5	24.0	25.1	26.0	25.1	25.0	25.6	27.7	1%	1%
Downstream	7.3	5.0	5.4	7.3	9.0	6.2	8.8	8.9	9.4	9.2	9.1	8.9	8.8	8.6	0%	-1%
BP-TNK dividend	1.3	2.1	1.7	1.8	4.5	2.5	1.6	1.4	1.4	1.5	1.5	1.7	1.8	1.9		
Corporate, financing, Macondo	(1.8)	(6.3)	2.4	(17.4)	(12.3)	(8.9)	(8.9)	(1.8)	(1.8)	(1.6)	(1.3)	(1.0)	(0.7)	(0.4)		
Sources of funds	**30.6**	**32.7**	**31.3**	**16.4**	**26.4**	**22.6**	**24.9**	**32.5**	**34.0**	**35.1**	**34.4**	**34.6**	**35.4**	**37.8**	6%	4%
Changes in working capital	(5.9)	5.3	(3.6)	(2.8)	(4.3)	(1.9)	-	-	-	-	-	-	-	-		
Cash flow from operations	**24.7**	**38.1**	**27.7**	**13.6**	**22.2**	**20.7**	**24.9**	**32.5**	**34.0**	**35.1**	**34.4**	**34.6**	**35.4**	**37.8**	10%	6%
Capex	(19.2)	(22.3)	(20.0)	(18.8)	(19.2)	(21.5)	(21.7)	(23.2)	(24.3)	(24.1)	(24.6)	(24.6)	(24.6)	(25.3)	5%	3%
Free cash flow	**5.5**	**15.8**	**7.7**	**(5.1)**	**3.0**	**(0.8)**	**3.3**	**9.3**	**9.8**	**11.0**	**9.7**	**10.0**	**10.8**	**12.5**		
Ordinary dividends	(8.1)	(10.3)	(10.5)	(2.6)	(4.1)	(5.7)	(6.9)	(7.2)	(7.4)	(7.6)	(7.8)	(8.0)	(8.3)	(8.5)	13%	9%
as % of operating cflow	33%	27%	38%	19%	18%	28%	28%	22%	22%	22%	23%	23%	23%	23%		
Minority dividends	(0.2)	(0.4)	(0.4)	(0.3)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)		
Discretionary free cash flow	**(2.8)**	**5.0**	**(3.2)**	**(8.1)**	**(1.4)**	**(6.7)**	**(3.8)**	**1.9**	**2.2**	**3.2**	**1.7**	**1.8**	**2.3**	**3.8**		
Disposals	4.3	3.5	2.7	13.4	6.1	9.0	2.5	-	-	-	-	-	-	-		
Acquisitions	(1.4)	(6.6)	(0.3)	(4.3)	(12.3)	(0.3)	-	-	-	-	-	-	-	-		
Equity change	(7.1)	0.0	0.0	0.0	0.1	0.0	-	-	-	-	-	-	-	-		
Surplus (deficit)	**0.0**	**1.9**	**(0.8)**	**1.1**	**(7.6)**	**2.0**	**(1.3)**	**1.9**	**2.2**	**3.2**	**1.7**	**1.8**	**2.3**	**3.8**		
Balance sheet:																
Net debt	26.8	25.0	26.2	25.9	29.0	27.8	29.1	27.1	24.9	21.7	19.9	18.1	15.8	12.0		
Net debt/EBITDA	0.7x	0.5x	0.8x	0.6x	0.6x	0.7x	0.7x	0.6x	0.6x	0.5x	0.4x	0.4x	0.3x	0.2x		
Cash interest cover	21.4x	24.8x	23.8x	12.8x	19.1x	17.9x	32.4x	36.6x	41.3x	46.6x	51.6x	na	na	na		
Net debt/equity	28%	27%	26%	27%	26%	23%	22%	19%	16%	13%	11%	9%	8%	6%		
Capital employed:																
Upstream	75.8	83.8	92.0	96.3	106.8	105.5	111.7	118.2	125.0	132.7	140.3	147.5	166.2	172.9	5%	12%
Downstream	47.9	41.2	46.5	48.4	50.9	52.5	51.3	52.6	54.0	55.4	56.8	58.1	59.4	60.7	2%	5%
TNK-BP	8.8	8.9	9.1	10.0	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	-2%	-2%
% Upstream (ex-TNK-BP)	57%	63%	62%	62%	64%	63%	65%	66%	66%	67%	68%	69%	71%	71%		
Return on capital employed:																
Upstream	18.7%	28.7%	11.7%	13.4%	10.6%	8.5%	9.0%	8.7%	8.6%	9.6%	7.8%	7.2%	6.3%	6.4%		
Downstream	6.6%	5.6%	6.2%	7.7%	9.1%	6.0%	8.4%	8.6%	8.8%	8.4%	8.1%	7.8%	7.4%	7.2%		
TNK-BP (dividend/book value)	15.1%	24.1%	18.3%	18.6%	46.8%	27.2%	17.7%	15.1%	15.6%	16.0%	16.8%	18.4%	19.4%	20.4%		
Aggregate group	**14.1%**	**21.3%**	**10.3%**	**12.1%**	**11.8%**	**8.9%**	**8.9%**	**8.6%**	**8.6%**	**9.0%**	**8.1%**	**7.7%**	**7.6%**	**7.8%**		

Source: Company reports and Citi Research

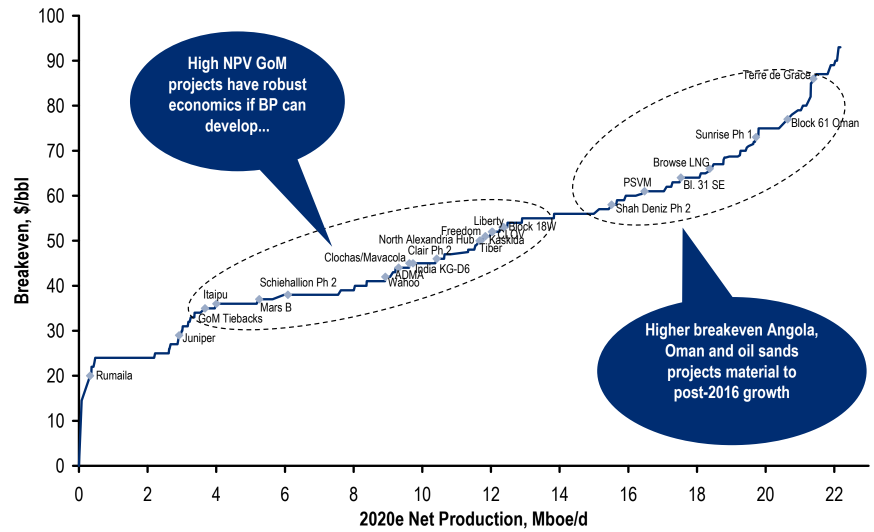
BP - Upstream

Figure 36. BP project portfolio (2012-2020 start-ups)



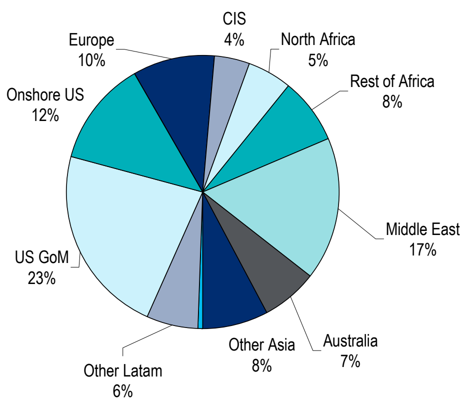
Source: Citi Research

Figure 37. BP project portfolio versus the industry cost-curve



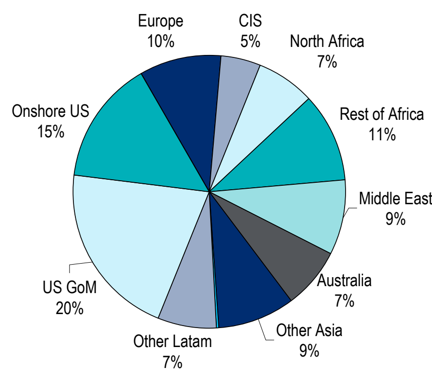
Source: Citi Research

Figure 38. 2012E cash flow by region (ex TNK-BP)



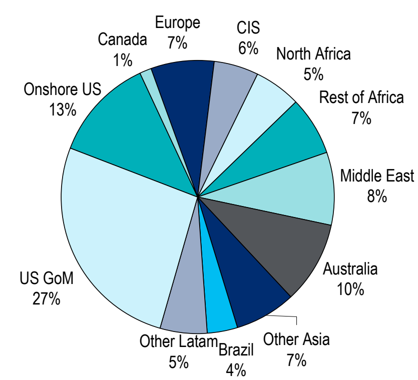
Source: Citi Research

Figure 39. 2016E cash flow by region (ex TNK-BP)



Source: Citi Research

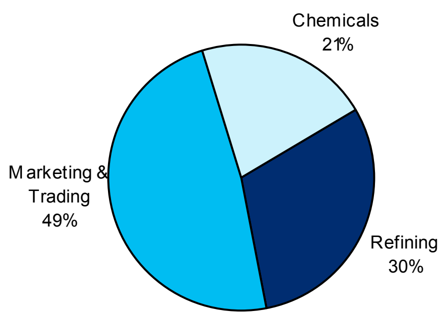
Figure 40. 2020E cash flow by region (ex TNK-BP)



Source: Citi Research

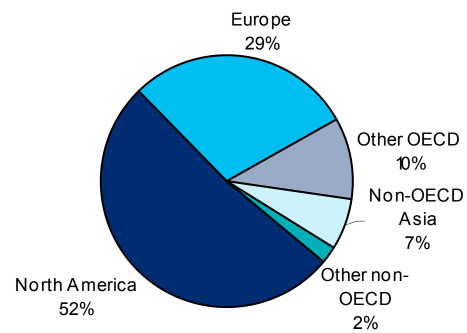
BP – Downstream

Figure 41. 2016E cash flow by segment



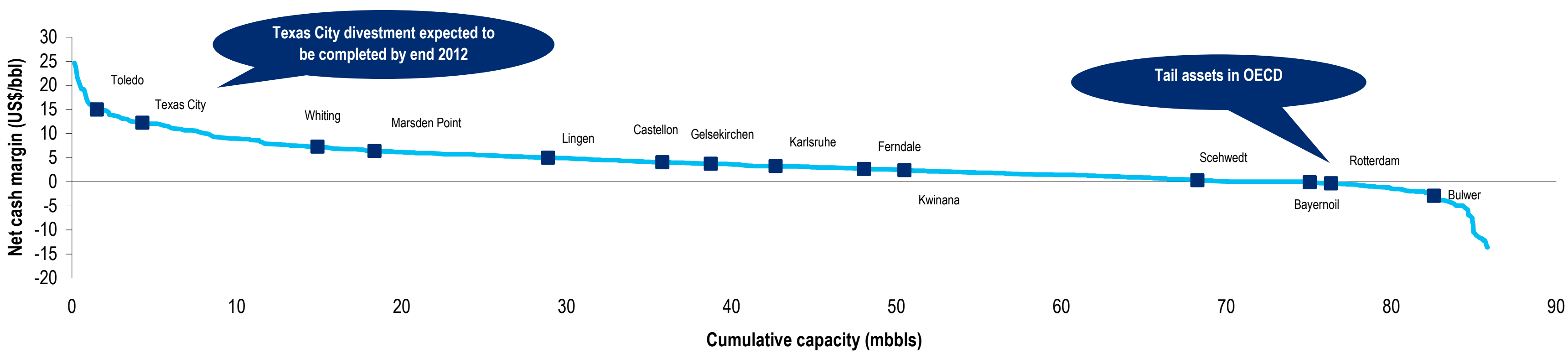
Source: Citi Research

Figure 42. 2015E cash flow by region



Source: Citi Research

Figure 43. BP refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Cairn India – Buy, Rs377/share price target

Cashing in on Growth

Cairn India is a promising growth story in Indian E&P. It offers a robust balance sheet – no debt, stable and rising cash flows, and increasing clarity on deployment of cash. While there have been questions and concerns on governance and cash use post the change in ownership of Cairn India and more recently post the stepping down of the incumbent CEO, the core upstream business prospects of the company remain robust, with good production growth visibility. Cairn recently upgraded estimates of its Rajasthan reserve base and has shown signs of being able to move beyond its existence as a single-asset company by acquiring stakes and making discoveries in overseas blocks.

- **Rajasthan growth engine —** Cairn India had, in April, upgraded its Rajasthan resource base from 6.5 to 7.3 bn boe, accompanied by an increase in peak production potential to 300 kbpd (from 230 kbpd earlier), and has provided a reasonable amount of clarity on the potential path to achieve that number. While there have been some minor near-term delays as the company works towards sorting out bottlenecks in its downstream evacuation capacity, we still expect the company to successfully deliver a 15% volume CAGR over the next two years (from 175 kbpd currently to 230 kbpd by mid-CY14). The course from 230 kbpd (which will be achieved solely from the Mangala/Bhagyam/Aishwariya – MBA fields) to 300 kbpd will be charted with further exploration in the Rajasthan block, for which the company, along with its partner ONGC, has been actively pushing the Indian government for approvals, as well as with production kicking in from some of the smaller discoveries and low permeability deposits (e.g. Barmer Hill) in the block.

- **Cash clarity —** Notwithstanding adverse changes to Cairn's royalty and cess payment regime over the last year, the company has been generating substantial free cash flow and is already meaningfully net cash. In recent times, with the change in ownership, management churn, and dividends yet to commence, there have been some concerns around the usage of this cash, driving the stock's NAV discount. Recent announcements on its investment plans have, however, served to partially allay these fears – the company has plans to accelerate spending and has a $2bn capital expenditure target over the next 2 years, comprising $0.6bn each on exploration and development in Rajasthan and $0.8bn on exploration in other blocks (primarily Sri Lanka and KG onshore). This is nearly double the capital expenditure over the previous two years. Annual OCF generation of $2.2-2.3bn over this period (in a ~$95-105 oil world) will be more than sufficient to fund this even after accounting for ~$0.4-0.5bn of annual dividends (at the targeted 20% payout), leaving sufficient cash flow headroom. Cairn has also been scouting for inorganic opportunities, largely in the exploration stage, and the recent 60% farm-in into an offshore block in South Africa that has an existing gas discovery is a case in point.

- **Reserves upgraded, future looks bright —** The increase in the Rajasthan resource base from 6.5 to 7.3 bn boe comprises: (i) MBA resources of 2.1 bn boe (unchanged), (ii) in-place resources for other discoveries (incl. Barmer Hill) of 2.1 bn boe (vs. 1.9 earlier), and (iii) exploration upside of 3.1 bn boe (2.5 earlier). In addition, total recoverable reserves have also been raised from 1.4 to 1.7 bn boe comprising: (i) 1.0 bn boe in MBA (largely unchanged), (ii) 0.18 bn boe in other fields (vs. 0.15 earlier), and (iii) 0.53 bn boe from exploration prospects highlighted above (0.25 earlier) – the biggest driver of the upgrade. The more than doubling of Rajasthan's exploration potential reflects increasing confidence in the prospectivity of the asset, though monetization of this is contingent on timely government approvals.

- **Diversifying the asset pool —** One of the largest challenges for Cairn India will be to diversify beyond its dependence on a single large asset, with other producing fields (Ravva, Cambay Basin) being relatively miniscule. While it has significant prospects in the form of its Eastern KG onshore block (has quantified 0.55 bn boe of in-place resources from two light oil discoveries) as well as Sri Lanka offshore (two gas discoveries), it will likely have to rely on inorganic opportunities as well as build a strong reserve replacement track record. 2013 could be a landmark year for the company in this regard, in our view.

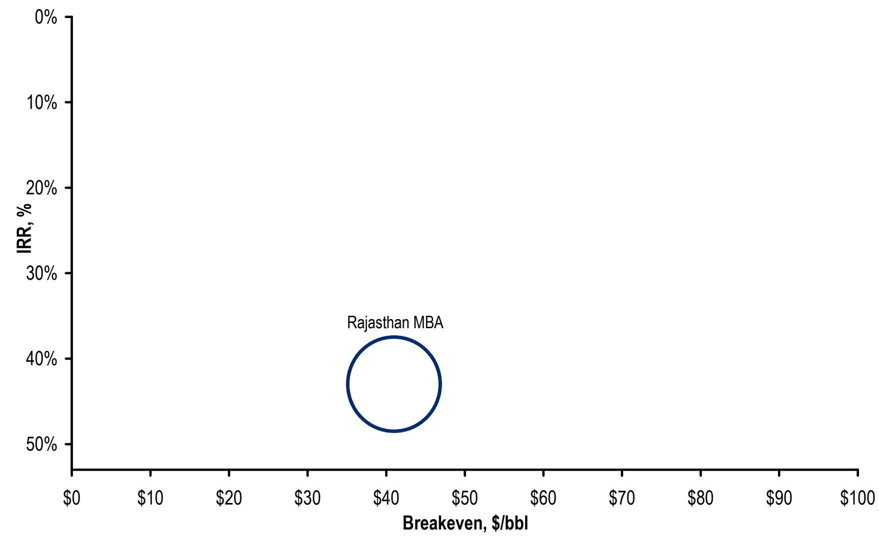
Figure 44. Cairn India summary financial model

Rs bn, unless stated	'10	'11	'12	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:													
Brent oil (US$/bbl)	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
INR/US$ rate	47.3	45.6	48.3	54.1	54.0	53.0	52.0	51.0	50.0	49.0	48.0		
E&P volumes (kboepd)	25	83	105	132	157	169	183	207	209	204	204	17.2%	10.6%
YoY growth		227%	27%	26%	18%	8%	8%	13%	1%	-2%	0%		
% Oil		95%	97%	98%	98%	99%	99%	99%	99%	100%	100%		
E&P cash margins (US$/boe)	17.6	51.3	42.2	49.0	38.1	32.4	28.5	25.8	24.2	26.5	28.8	-11.1%	-6.2%
Per share data:													
EPS (Rs)	5.4	33.3	41.6	58.5	50.3	43.5	40.9	41.5	39.1	42.9	47.1	4.2%	3.9%
DPS (Rs)	-	-	-	11.7	10.1	8.7	8.2	8.3	7.8	8.6	9.4		
Valuation ratios:													
P/E	62.8	10.2x	7.3x	5.9x	6.8x	7.8x	8.3x	8.2x	8.7x	7.9x	7.2x		
EV/DACF		8.1x	5.3x	4.2x	4.3x	4.4x	4.2x	3.8x	3.5x	2.7x	2.0x		
Dividend yield	0.0%	0.0%	0.0%	3.4%	2.9%	2.5%	2.4%	2.4%	2.3%	2.5%	2.7%		
Free cash yield	-5.3%	7.1%	11.7%	12.5%	7.4%	9.2%	8.6%	10.7%	10.6%	11.1%	12.0%		
Cash Flow:													
Upstream	7.7	70.8	78.3	127.8	117.7	106.1	99.2	99.5	92.3	97.1	103.1	7.0%	4.3%
Corporate and other	-	-	-	-	-	-	-	-	-	-	-		
Sources of funds	**7.7**	**70.8**	**78.3**	**127.8**	**117.7**	**106.1**	**99.2**	**99.5**	**92.3**	**97.1**	**103.1**	7.0%	4.3%
Changes in working capital	(6.6)	(7.4)	(7.6)	(5.9)	(4.3)	(3.0)	2.6	(0.4)	3.4	0.4	(0.4)		
Cash flow from operations	**1.1**	**63.4**	**70.7**	**121.9**	**113.4**	**103.2**	**101.8**	**99.0**	**95.8**	**97.5**	**102.7**		
Capex	(42.6)	(31.0)	(22.7)	(40.5)	(65.0)	(42.6)	(45.4)	(28.7)	(26.1)	(24.8)	(24.3)	7.9%	-2.7%
Operational free c/flow	**(41.5)**	**32.4**	**48.0**	**81.4**	**48.5**	**60.6**	**56.4**	**70.4**	**69.7**	**72.8**	**78.5**		
Ordinary dividends	-	-	-	(25.4)	(21.9)	(18.9)	(17.8)	(18.1)	(17.0)	(18.7)	(20.5)		
as % of operating c/flow	0%	0%	0%	31%	45%	31%	32%	26%	24%	26%	26%		
Discretionary free c/flow	**(41.5)**	**32.4**	**48.0**	**56.0**	**26.6**	**41.6**	**38.6**	**52.3**	**52.7**	**54.1**	**58.0**		
(Acquistions)/disposals	-	-	-	-	-	-	-	-	-	-	-		
Equity change	0.1	(0.4)	0.1	1.1	1.2	0.6	2.1	2.0	2.0	2.0	1.9		
Surplus (deficit)	**(41.5)**	**32.0**	**48.0**	**57.1**	**27.8**	**42.2**	**40.7**	**54.4**	**54.7**	**56.1**	**59.9**		
Balance sheet:													
Net debt	24.7	(16.8)	(57.1)	(114.2)	(142.0)	(184.3)	(225.0)	(279.3)	(334.0)	(390.0)	(450.0)		
Net debt/EBITDA	2.5x	(0.2)	(0.6)	(0.8)	(1.1)	(1.7)	(2.2)	(2.7)	(3.7)	(4.4)	(5.0)		
Cash interest cover	66.2x	28.0x	45.0x	90.8x	79.0x	70.2x	65.3x	68.1x	60.8x	60.8x	63.0x		
Net debt/equity	7%	-4%	-12%	-20%	-22%	-26%	-29%	-34%	-38%	-41%	-44%		
Capital employed:													
Upstream	368	406	451	485	536	562	584	593	598	607	618	7.6%	4.8%
Other	-	-	-	-	-	-	-	-	-	-	-		
% Upstream	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:													
Upstream	-	16.2%	16.3%	21.6%	16.9%	13.1%	11.3%	11.0%	9.6%	10.0%	10.5%		
Other	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group	**-**	**16.8%**	**18.5%**	**23.2%**	**17.6%**	**13.2%**	**11.2%**	**10.5%**	**9.0%**	**9.4%**	**10.0%**		

Source: Company Reports and Citi Research Estimates

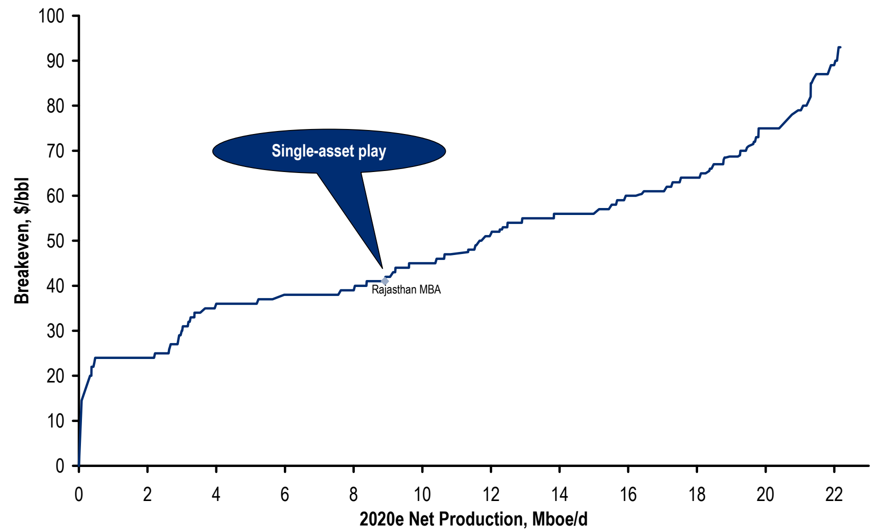
Cairn India - Upstream

Figure 45. Cairn India project portfolio (2012-2020 start-ups)



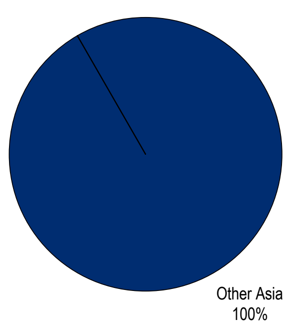
Source: Citi Research

Figure 46. Cairn India project portfolio versus the industry cost-curve



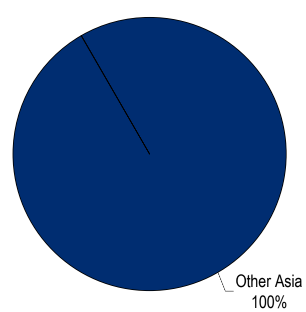
Source: Citi Research

Figure 47. 2012E cash flow by region



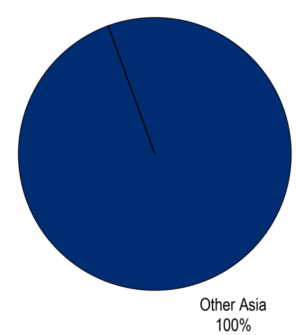
Source: Citi Research

Figure 48. 2016E cash flow by region



Source: Citi Research

Figure 49. 2020E cash flow by region



Source: Citi Research

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Chevron – Buy, US$120/share price target

Closing in on Growth Backlog

CVX continues to have one of the largest growth backlogs under development of all the major oil companies. Gorgon, Wheatstone, Jack-St. Malo, Big Foot and half dozen other meaningful projects under construction underpin a step change in CVX's oil and gas production capacity from 2.6mmb/d to 3.3mmb/d by 2017. The ability of CVX to execute on this growth backlog has recently been called into question. An oil spill in Brazil, a rig incident in Nigeria and an explosion at its refinery in California all beg the question as to whether CVX is spread too thin. We believe some of CVX's projects may be modestly over budget and/or slightly delayed.

- **Major Back Log –** e currently estimate CVX will grow production from 2.67mmb/d in 2012 to 3.45mmb/d in 2020. No other Major oil company offers this level of growth and this is the crux of our investment thesis. We estimate this project back log will add over $17 billion in annual cash flows to the company through the decade. This backlog is largely driven by projects in OECD countries.

- **Risks –** CVX has experienced some serious incidents over the last 12 months. The company experienced an oil spill at its operated project in Brazil. In Nigeria, the company had a major offshore incident. Recently, an explosion occurred at the company's Richmond refinery near San Francisco rendering the crude unit inoperable. Furthermore, the company's massive Gorgon project may be over budget. We expect to receive an update on Gorgon's construction and potential capex escalation by the end of the year. These recent issues have called into question CVX's ability to execute on its growth plan. In our view, CVX's growth plan is achievable, however, some projects might be late and some might be over budget. We believe we've incorporated some of these risks into our target price.

- **Downstream Leader** – CVX's downstream assets include roughly 2.0 mmb/d of refining capacity largely in the Pacific Rim. We currently estimate that CVX has one of the most of profitable refining networks of the integrated oil companies. Some of this advantage is a result of its exposure to California where margins have historically been high, although the recent recession on the West Coast has dampened that profitability. CVX also has interests in high conversion refining capacity in Korea and the US Gulf Coast. Further investments in lubricants and chemicals capacity in the Gulf Coast of the US are expected to further increase profitability by the end of the decade.

- **Valuation & 2020 Vision** – CVX currently trades at a discount to the group on current valuation and remains this way through the decade. In our view, the market remains skeptical on CVX's ability to deliver on growth. However, we believe this growth will be more transparent within the next 12-18 months as CVX moves past its peak spending levels. By the end of 2014, the Gorgon, Jack/St. Malo and Big Foot projects should all be online. We believe these projects will start to be discounted into the stock next year.

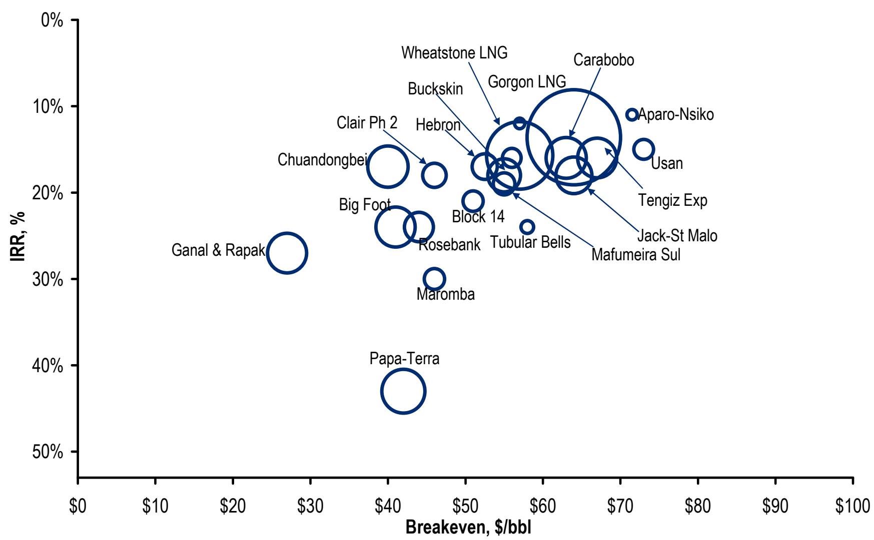
Figure 50. Chevron summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
Gulf Coast refining margin (US$/bbl)	13.4	10.1	6.9	7.6	10.1	9.7	7.4	7.5	7.6	7.6	7.6	7.6	7.6	7.6	-5.5%	-3.1%
E&P volumes (mboepd)	2.62	2.53	2.70	2.76	2.67	2.67	2.78	2.83	2.93	3.17	3.28	3.33	3.42	3.45	3.5%	2.9%
YoY growth	1.0%	-3.2%	6.6%	2.3%	-3.3%	0.0%	4.2%	1.8%	3.4%	8.1%	3.5%	1.6%	2.4%	1.1%		
% oil	68%	66%	69%	70%	69%	68%	67%	67%	66%	63%	60%	59%	58%	58%		
E&P cash margins (US$/bbl)	22.4	30.8	21.4	27.4	37.3	37.8	36.2	36.4	38.2	39.6	40.2	41.2	41.6	42.5	1.2%	1.5%
Per share data:																
EPS (US$)	8.77	11.68	5.24	9.48	13.44	13.77	12.41	11.99	12.77	14.08	14.56	14.82	15.41	16.01	0.9%	2.0%
DPS (US$)	2.26	2.53	2.66	2.84	3.09	3.51	3.60	3.60	3.52	3.92	4.08	4.16	4.32	4.56	4.9%	4.4%
Valuation Ratios:																
P/E	13.0x	9.8x	21.8x	12.0x	8.5x	7.9x	9.2x	9.5x	8.9x	8.1x	7.8x	7.7x	7.4x	7.1x		
EV/DACF	8.1x	6.3x	9.1x	6.3x	5.0x	4.9x	5.3x	5.2x	4.7x	4.1x	3.7x	3.3x	3.0x	2.7x		
Dividend yield	2.0%	2.2%	2.3%	2.5%	2.7%	3.1%	3.2%	3.2%	3.1%	3.4%	3.6%	3.6%	3.8%	4.0%		
Free cash yield	3.4%	4.3%	-0.2%	5.1%	6.3%	4.6%	2.6%	4.5%	5.6%	7.2%	8.0%	8.7%	9.3%	9.8%		
Cash flow:																
Upstream	21.4	28.5	21.1	27.6	36.4	36.9	36.8	37.7	40.9	45.8	48.1	50.1	51.8	53.6	4.7%	4.4%
Downstream	5.4	2.4	2.4	3.1	3.2	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.8%	2.9%
Other and corporate	(2.6)	0.4	(1.9)	0.5	(0.9)	0.0	(0.8)	(0.8)	(0.8)	(1.3)	(1.3)	(1.2)	(1.0)	(0.9)		
Sources of funds	**24.3**	**31.3**	**21.6**	**31.2**	**38.7**	**41.0**	**40.0**	**40.9**	**44.0**	**48.5**	**50.8**	**52.9**	**54.9**	**56.7**	4.6%	4.4%
Changes in working capital	0.7	(1.7)	(2.3)	0.1	2.3	(1.4)	(0.3)	0.1	0.3	(0.0)	(0.0)	0.1	(0.0)	(0.0)		
Cash flow from operations	**25.0**	**29.6**	**19.3**	**31.2**	**41.0**	**39.6**	**39.6**	**41.0**	**44.3**	**48.5**	**50.8**	**53.0**	**54.9**	**56.7**		
Capex	(16.7)	(19.7)	(19.8)	(19.6)	(26.5)	(29.2)	(33.9)	(31.0)	(31.6)	(32.4)	(32.9)	(33.5)	(34.0)	(34.6)	4.1%	3.0%
Free cash flow	**8.3**	**10.0**	**(0.5)**	**11.6**	**14.5**	**10.4**	**5.8**	**10.0**	**12.7**	**16.1**	**17.9**	**19.5**	**20.8**	**22.1**		
Ordinary dividends	(4.9)	(5.3)	(5.4)	(5.7)	(6.2)	(6.9)	(7.1)	(7.1)	(6.9)	(7.7)	(8.0)	(8.2)	(8.5)	(9.0)	4.5%	4.2%
as % of operating c/flow	19%	18%	28%	18%	15%	17%	18%	17%	16%	16%	16%	15%	16%	16%		
Discretionary free cash flow	**3.4**	**4.7**	**(5.9)**	**5.9**	**8.3**	**3.5**	**(1.3)**	**2.9**	**5.7**	**8.4**	**9.8**	**11.3**	**12.3**	**13.1**		
Disposals/(Acquisitions)	2.7	2.4	2.9	(1.6)	(1.3)	5.3	-	-	-	-	-	-	-	-		
Equity change	(6.4)	(6.8)	0.2	(0.3)	(3.2)	(2.2)	-	-	-	-	-	-	-	-		
Surplus (deficit)	**6.2**	**7.1**	**(2.9)**	**4.2**	**6.9**	**8.8**	**(1.3)**	**2.9**	**5.7**	**8.4**	**9.8**	**11.3**	**12.3**	**13.1**		
Balance sheet:																
Net debt	(0.9)	(0.7)	1.7	(5.6)	(9.9)	(12.8)	(11.5)	(14.4)	(20.2)	(28.6)	(38.4)	(49.7)	(62.0)	(75.2)		
Net debt/EBITDA	(0.0x)	(0.0x)	0.1x	(0.1x)	(0.2x)	(0.2x)	(0.2x)	(0.3x)	(0.3x)	(0.4x)	(0.6x)	(0.7x)	(0.9x)	(1.0x)		
Interest cover	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm		
Net debt/equity	-1%	-1%	2%	-5%	-8%	-9%	-7%	-8%	-11%	-13%	-17%	-20%	-23%	-25%		
Capital employed:																
Upstream	59.7	67.4	75.3	80.0	93.2	108.3	125.1	137.2	148.5	158.7	168.1	176.5	184.7	192.9	11.2%	8.4%
Downstream	19.6	22.1	21.6	22.0	21.4	23.2	24.9	26.5	28.1	29.6	31.1	32.5	33.9	35.2	6.7%	5.7%
% Upstream	75%	75%	78%	78%	81%	82%	83%	84%	84%	84%	84%	84%	85%	85%		
Return on capital employed:																
Upstream	26.1%	32.3%	15.0%	20.8%	28.7%	23.9%	18.9%	16.1%	15.9%	16.7%	16.2%	15.6%	15.4%	15.3%		
Downstream	22.6%	6.3%	6.0%	8.5%	9.5%	13.1%	11.7%	10.6%	9.7%	9.1%	8.5%	8.0%	7.6%	7.3%		
Aggregate group	**18.6%**	**20.8%**	**8.3%**	**14.2%**	**18.2%**	**16.4%**	**13.2%**	**11.7%**	**11.7%**	**12.1%**	**11.9%**	**11.5%**	**11.4%**	**11.3%**		

Source: Citi Research and Company Reports

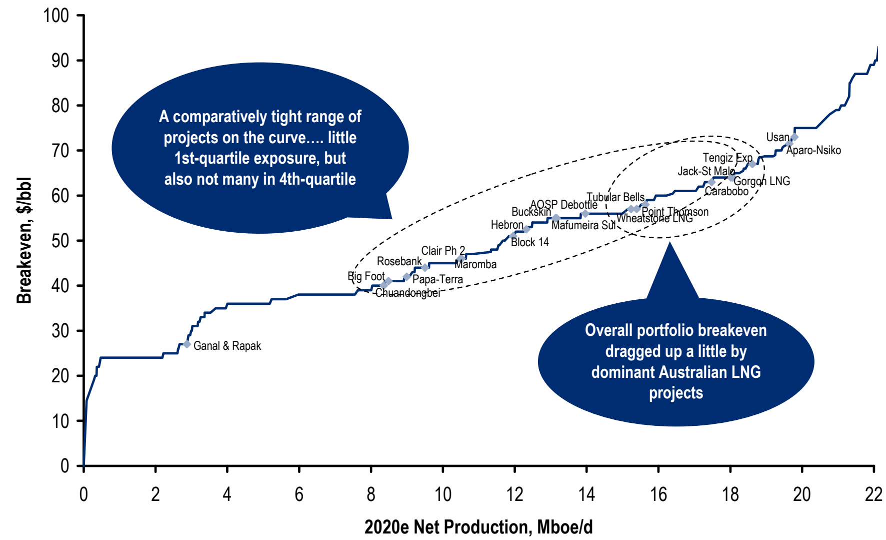
Chevron - Upstream

Figure 51. Chevron project portfolio (2012-2020 start-ups)



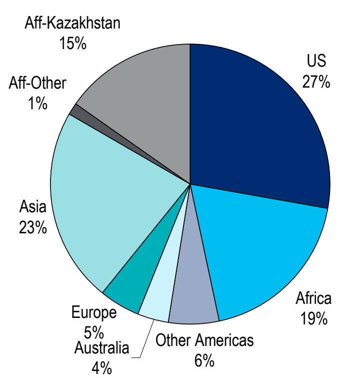
Source: Citi Research

Figure 52. Chevron project portfolio versus the industry cost-curve



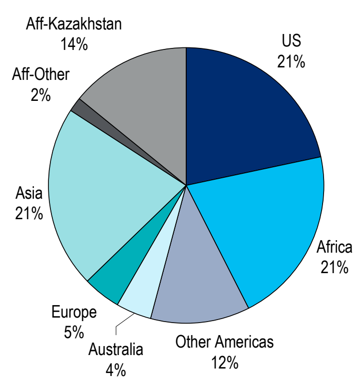
Source: Citi Research

Figure 53. 2012E cash flow by region



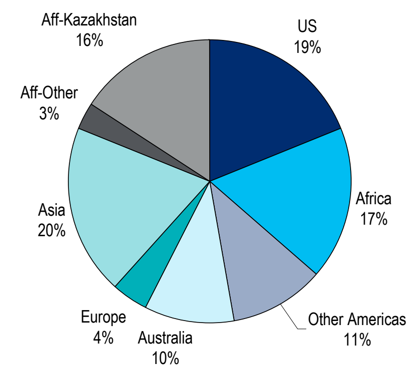
Source: Citi Research

Figure 54. 2016E cash flow by region



Source: Citi Research

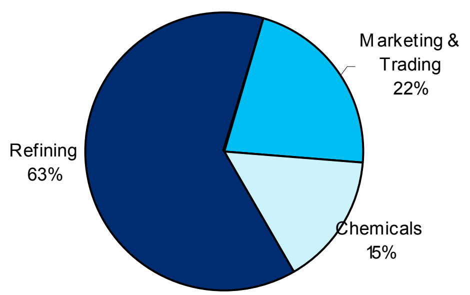
Figure 55. 2020E cash flow by region



Source: Citi Research

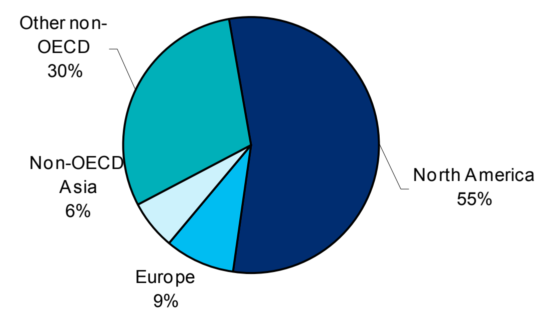
Chevron – Downstream

Figure 56. 2016E cash flow by segment



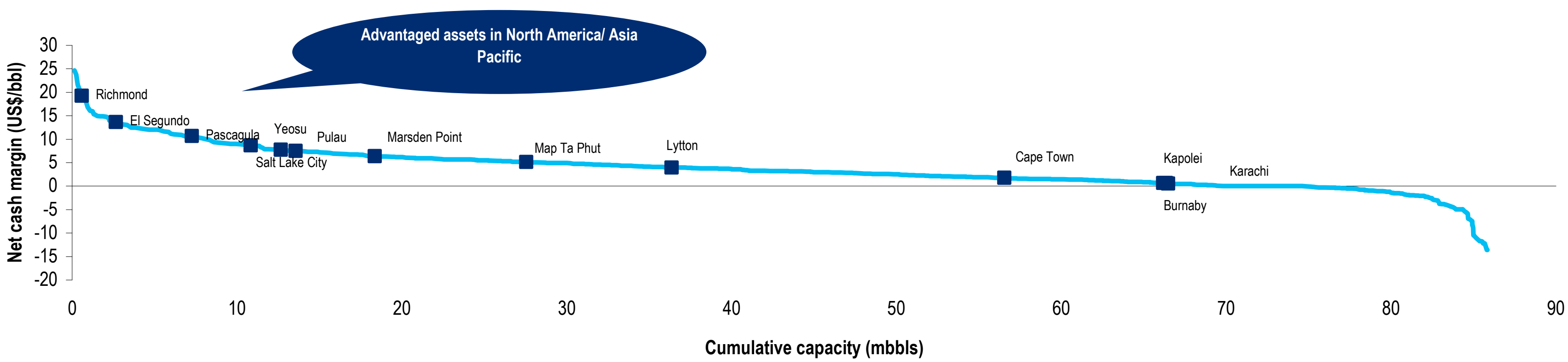
Source: Citi Research

Figure 57. 2015E cash flow by region



Source: Citi Research

Figure 58. Chevron refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Conoco – Buy, US$67/share price target

Trying to Shed the Old Conoco Image

COP had a history of being a serial acquirer. During the last decade the company bought almost $100 billion in assets. In our view, the retirement of the former Chairman and CEO, the split up of the company into separate downstream and upstream companies and the resulting backlog of upstream projects that came from COP's previous acquisition cycle has put COP in a much different position than where it was ten years ago. We estimate the company will grow production 5% annually through 2015. We believe that this near-term growth and management's focus on the dividend and organic growth will drive 10-15% total returns for shareholders through 2015. In our view, COP is a defensive stock.

- **Near-term Growth –** COP's growth trajectory has been difficult to gauge because the company has been selling upstream assets since 2008. However, our research and analysis shows that the underlying business is growing. A major ramp up in the Eagle Ford is under way that will increase production from almost nothing two years ago to 100mboe/d by the end of the year. This has been a grass roots effort and has provided the company with an average entry cost into the Eagle Ford of $300 per acre compared to $25,000 today for other peers. In Canada, COP continues to ramp-up production from the Foster Creek Christina Lake (FCCL) project, which is most likely the most prolific oil sands project in Alberta. Further growth in the Caspian, Southeast Asia and the redevelopment of fields in the North Sea all look to add another layer of production growth to the portfolio through 2014.

- **Restructuring Almost Complete –** Jim Mulva, COP's previous Chairman and CEO, retired in April. The company spun off its entire downstream business in May. Going forward the company still has a $7-$10 billion asset sale programme which is likely to mask some of the growth trajectory of the company.

- **Market Skeptical –** The market is currently sceptical on COP's ability to pay a +$3 billion dividend (4.7% yield), grow production 5% and balance what looks to be a $2 to $3 billion cash flow deficit per annum through 2014 at current commodity prices. We view these concerns as overblown. COP's coverage ratios (less than 1.0x net debt/EBITDA) are firmly in investment grade territory (A rated by S&P). Furthermore we believe that in the current interest rate environment borrowing to grow is accretive to shareholders.

- **Valuation & 2020 Oil Vision –** COP currently trades close to the industry multiple and is projected to remains in this position through 2015. We estimate the company will grow earnings by 10% annually through 2015 supported by a backlog of current growth (flat oil price). This growth coupled with nearly a 5% dividend yield give us comfort that COP offers near-term defensive qualities. Over the long-run however COP's valuation is still an open book given that much of its back log post 2015 is not yet clearly defined.

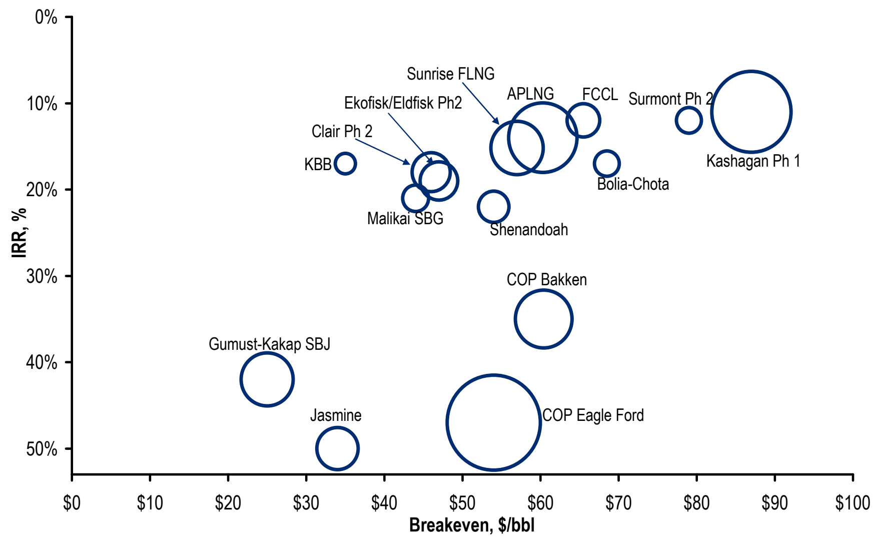
Figure 59. Conoco summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.7	61.9	79.7	110.9	108.2	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
WTI oil (US$/bbl)	72.3	99.7	61.8	79.5	95.1	90.7	85.8	92.4	95.1	97.8	100.6	103.5	106.5	109.6	0.6%	1.6%
US gas (US$/MMBtu)	7.0	8.9	4.0	4.4	4.0	2.6	3.9	4.5	5.0	5.3	5.3	5.3	5.3	5.3	5.6%	3.1%
E&P volumes (mboepd)	1.87	1.76	1.85	1.75	1.62	1.58	1.67	1.74	1.83	1.85	1.86	1.89	1.90	1.89	2.7%	1.7%
YoY growth	1.0%	-5.4%	5.1%	-5.5%	-7.5%	-2.5%	5.4%	4.6%	4.9%	1.3%	0.8%	1.3%	0.9%	-0.6%		
% oil	55%	54%	56%	56%	54%	55%	58%	58%	58%	59%	60%	61%	61%	61%		
E&P cash margins (US$/bbl)	17.7	31.3	18.1	32.4	26.9	24.2	24.5	25.3	26.5	27.6	28.4	29.2	29.9	30.8	0.6%	1.5%
Per share data:																
EPS (US$)	7.22	(5.70)	3.61	5.96	8.64	5.57	4.68	5.08	5.80	6.21	6.26	6.48	6.63	6.66	-6%	-3%
DPS (US$)	1.64	1.88	1.88	2.10	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	0%	0%
Valuation Ratios:																
P/E	7.8x	(9.9x)	15.7x	9.5x	6.6x	10.0x	12.1x	11.1x	9.8x	9.1x	9.0x	8.7x	8.5x	8.5x		
EV/DACF	3.5x	3.3x	6.0x	4.8x	4.5x	7.1x	6.4x	6.1x	5.7x	5.4x	5.2x	5.0x	4.8x	4.7x		
Dividend yield	2.9%	3.3%	3.3%	3.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%		
Free cash yield	13.2%	4.0%	1.9%	8.6%	8.0%	-5.2%	-0.5%	1.5%	3.2%	3.8%	4.1%	4.5%	4.9%	4.9%		
Cash flow:																
Upstream	14.3	15.1	12.3	20.7	15.9	14.1	14.9	16.1	17.6	18.7	19.3	20.1	20.8	21.3	3%	3%
Downstream	5.8	2.3	0.1	1.6	2.8	-	-	-	-	-	-	-	-	-		
Other and corporate	2.3	6.2	0.6	(7.2)	1.3	(1.8)	(0.6)	(0.8)	(0.9)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)		
Sources of funds	**22.4**	**23.6**	**13.0**	**15.1**	**19.9**	**12.3**	**14.2**	**15.3**	**16.7**	**17.8**	**18.3**	**19.1**	**19.8**	**20.3**	-2%	0%
Changes in working capital	1.8	(1.0)	(0.5)	1.9	(0.4)	(0.6)	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.0		
Cash flow from operations	**24.1**	**22.6**	**12.4**	**17.0**	**19.6**	**11.7**	**14.3**	**15.4**	**16.9**	**17.8**	**18.4**	**19.2**	**19.9**	**20.4**		
Capex	(11.8)	(19.1)	(10.9)	(9.8)	(13.3)	(15.4)	(14.7)	(14.3)	(14.7)	(15.1)	(15.5)	(16.0)	(16.4)	(16.9)	3%	3%
Free cash flow	**12.3**	**3.5**	**1.6**	**7.2**	**6.3**	**(3.7)**	**(0.4)**	**1.1**	**2.3**	**2.7**	**2.9**	**3.2**	**3.5**	**3.5**		
Ordinary dividends	(2.7)	(2.9)	(2.8)	(3.2)	(3.6)	(3.3)	(3.3)	(3.3)	(3.3)	(3.3)	(3.3)	(3.3)	(3.3)	(3.3)	-2%	-1%
as % of operating cflow	11%	13%	23%	19%	19%	28%	23%	22%	20%	19%	18%	17%	17%	16%		
Discretionary free cash flow	**9.7**	**0.6**	**(1.3)**	**4.1**	**2.7**	**(7.0)**	**(3.7)**	**(2.2)**	**(1.0)**	**(0.6)**	**(0.4)**	**(0.1)**	**0.2**	**0.2**		
Disposals/(Acquisitions)	3.2	1.5	0.9	15.2	7.5	2.6	-	-	-	-	-	-	-	-		
Equity change	(6.7)	(8.1)	0.0	(3.7)	(11.0)	(4.9)	-	-	-	-	-	-	-	-		
Surplus (deficit)	**12.9**	**2.1**	**(0.3)**	**19.2**	**10.1**	**(4.4)**	**(3.7)**	**(2.2)**	**(1.0)**	**(0.6)**	**(0.4)**	**(0.1)**	**0.2**	**0.2**		
Balance sheet:																
Net debt	20.2	26.7	28.1	14.1	16.3	19.3	23.0	25.2	26.3	26.9	27.3	27.4	27.3	27.1		
Net debt/EBITDA	0.6x	4.2x	1.4x	0.5x	0.5x	0.9x	1.1x	1.1x	1.1x	1.0x	1.0x	1.0x	0.9x	0.9x		
Interest cover	26.2x	6.8x	15.9x	25x	33x	31x	28x	27x	28x	29x	29x	30x	31x	32x		
Net debt/equity	23%	48%	45%	21%	25%	41%	47%	48%	47%	44%	42%	39%	36%	34%		
Capital employed:																
Upstream	89.6	78.0	69.5	73.9	48.1	54.7	59.8	63.9	67.9	71.7	75.4	79.1	82.7	86.2	8%	7%
Downstream	19.1	17.7	16.3	16.3	9.8	-	-	-	-	-	-	-	-	-		
% Upstream	82%	82%	81%	82%	83%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:																
Upstream	7.7%	7.7%	5.0%	16.3%	11.1%	13.9%	13.0%	13.0%	13.6%	13.7%	13.1%	12.9%	12.5%	12.1%		
Downstream	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group (Citi definition)	**9.0%**	**-11.8%**	**4.9%**	**10.0%**	**11.2%**	**6.5%**	**6.6%**	**6.8%**	**7.4%**	**7.5%**	**7.3%**	**7.2%**	**7.1%**	**6.9%**		

Source: Company Reports and Citi Research Estimates

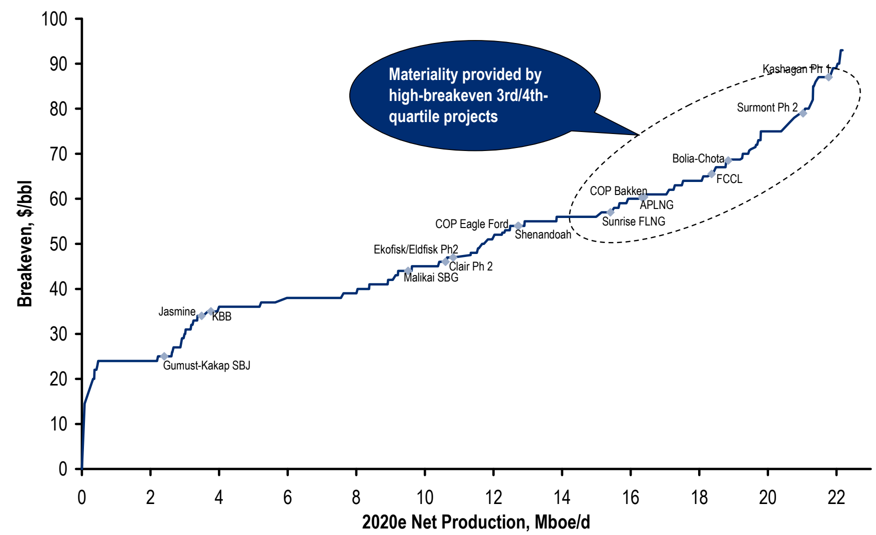
Conoco - Upstream

Figure 60. Conoco project portfolio (2012-2020 start-ups)



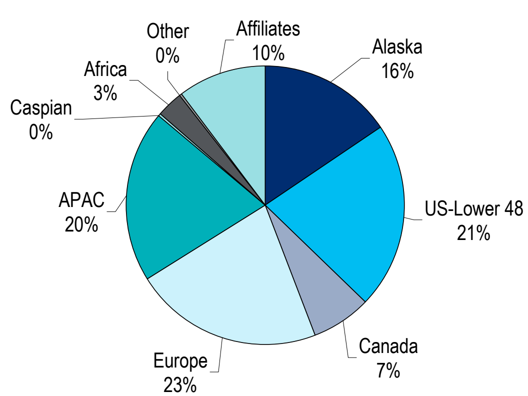
Source: Citi Research

Figure 61. Conoco project portfolio versus the industry cost-curve



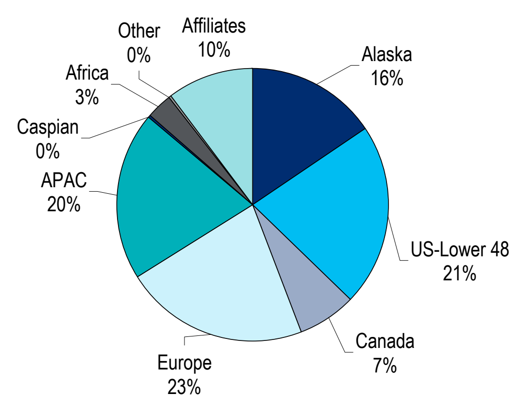
Source: Citi Research

Figure 62. 2012E cash flow by region



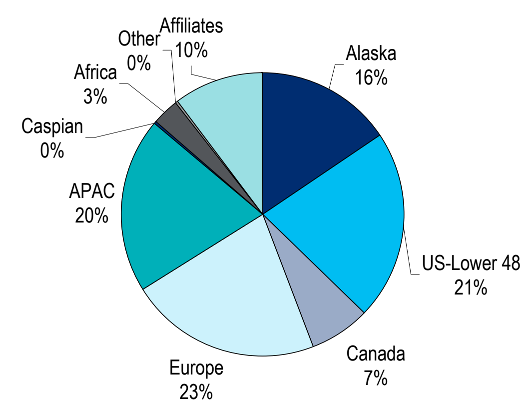
Source: Citi Research

Figure 63. 2016E cash flow by region



Source: Citi Research

Figure 64. 2020E cash flow by region



Source: Citi Research

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Ecopetrol – Sell, $51/ADR share price target

High growth priced in despite low visibility. Dividend yield sustainability depends on oil prices

Ecopetrol has been one of the best global oil performing stocks since 2011, up by more than 42% (dividend included) vs. XLE at -9% and Brent at +24%. It is a compelling turnaround NOC story delivering double digit oil production growth in the last years. However, we think the majority of its positive case has been supported by the company's policy of paying out 70% of earnings leading to a compelling yield over regional stocks. Looking ahead, our Sell is predicated on our long-term call to crude prices that may undermine its relevant 60% premium to current reserves Base NAV or 12% premium to its Adjusted NAV, which includes management 2020 target to almost triple reserves. Oil prices below $90/b would raise risks to the sustainability of its payout strategy and ultimately its dividend yield.

- **NAV premium despite low upstream visibility —** One of the main challenges to buying Ecopetrol today, in our view, lies in the visibility to achieve the company's current guidance and the market value premium to its NAV. Ecopetrol currently has 8 years of proven reserves life that needs to be replaced at a 2.4x rate per year over the next decade to sustain management's current guidance. While most of the improvement is expected to take place via a combination of (1) secondary and tertiary recovery, and (2) the expiration of current production sharing contracts with other companies, we do not have the proper visibility to support its market value.

- **Production growth as primary driver, but not without key challenges** – While we continue to discount compelling high single digit production growth rates to Ecopetrol in spite of its project granularity, Colombia has showed particular constraints recently that requires improvement in order to reduce the risk associated to the company's growth guidance. In 2012, (1) relevant delays to new environmental licences for new wells and facilities, (2) an apparent renewed wave of terrorist attacks to pipelines and (3) the investments/timing required for new mid-stream capacity have been driving negative revisions to growth expectations on a number of companies in the country.

- **Growing exploration abroad, offshore and through M&A —** We see Ecopetrol evolving into a sophisticated internationalized player, with the company starting to aggressively invest outside of Colombia – with a strong focus on offshore Brazil and the Gulf of Mexico in the last two years in addition to selective investments in Peru. The company also expects to drill its first domestic offshore wells in 2H12, though its early campaign seems more likely to be a search for gas instead of oil. More recently, Ecopetrol also changed its standard investment strategy to pursue international partnerships by acquiring roughly 7 new oil licences in Gulf of Mexico's last bid and with new acquisitions in Brazil. There were already two relevant finds that may prove commercial soon – Logan in the GoM and Itauna in Brazil's Campos basin.

- **Shale opportunity, upcoming 2H12 bid is key to define winners —** We also see Colombia as an emerging potential oil/gas shale player and a 2H12 bidding round may be key to define its winners. With a round largely focused on unconventional areas and new taxation terms revealed to incentivise shale development, we believe this theme will continue to grow in Ecopetrol's investment thesis. Over the next 12-months, not only do we expect Ecopetrol to participate in the round, but we see further appraisals planned for the La Luna discovery and new wells planned both by Shell and Exxon in the country to serve as catalysts for the outlook for unconventional oil in the country. We also think that Ecopetrol is engaged in finding partners that foster experience, technology and investments to support the exploration and development of the new frontier.

- **Sell mainly backed by negative view on oil prices and its underlying dividend impact —** In our view, it is largely trading on its dividend appeal to domestic and LatAm investors. We therefore expect that lower oil prices in the medium term may not only result in a lower yield, but also impact overall net base line production in light of the company's contract terms in Colombia. While we remain optimistic on oil prices for the next year, the lack of real price increases in our forecasts for the decade significantly decreases the attractiveness of its yield and may also raise risks to its dividend coverage if one considers that no material changes are made to its long-term investment programme.

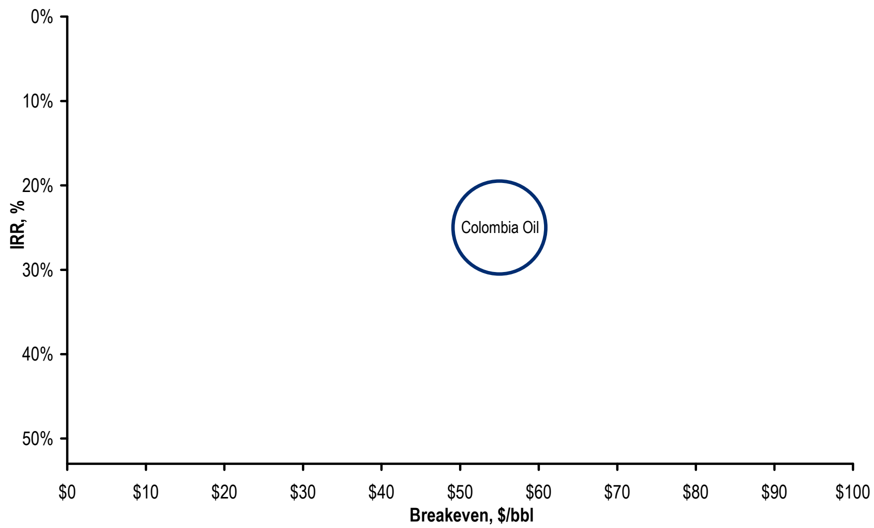
Figure 65. Ecopetrol summary financial model

Colombian Pesos Trn, unless stated	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:														
Brent oil (US$/bbl)	61.9	79.7	110.9	108.2	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	0.3%	0.2%
E&P volumes (mboepd)	521	580	668	722	754	800	849	887	926	967	1,011	1,056	9.6%	5.2%
YoY growth		11.3%	15.2%	8.1%	4.5%	6.1%	6.1%	4.4%	4.4%	4.5%	4.5%	4.5%		
% oil	82%	83%	85%	85%	87%	88%	88%	89%	89%	90%	90%	91%		
E&P cash margins (US$/bbl)	17.6	28.9	49.3	47.9	36.4	27.0	25.8	25.9	26.0	26.1	26.1	26.2	-11.9%	-6.8%
Per share data:														
EPS (pesos)	2.54	4.03	7.52	7.41	6.83	5.68	6.04	6.51	6.94	7.42	7.92	8.47	2.4%	1.3%
DPS (pesos)	1.78	2.83	6.01	5.19	4.78	2.84	3.02	3.25	3.47	3.71	3.96	4.23	-6.8%	-3.8%
Valuation ratios:														
P/E	41.4x	26.1x	14.0x	14.0x	15.3x	18.5x	17.4x	16.1x	15.1x	14.2x	13.3x	12.4x		
EV/DACF		14.3x	9.7x	10.9x	10.7x	12.2x	11.9x	11.3x	10.7x	10.0x	9.4x	8.7x		
Dividend yield	1.7%	2.7%	5.7%	4.9%	4.6%	2.7%	2.9%	3.1%	3.3%	3.5%	3.8%	4.0%		
Free cash yield	-1.6%	1.9%	3.7%	1.8%	3.3%	0.9%	2.0%	2.9%	3.4%	4.0%	4.6%	5.3%		
Cash flow:														
Upstream	11.5	15.0	25.7	26.3	23.6	20.2	20.8	22.0	23.0	24.2	25.4	26.7	0.8%	0.5%
Downstream	-	(0.2)	3.4	(1.2)	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6		
Other and corporate	2.2	0.1	(7.8)	(5.4)	(4.1)	(2.7)	(2.4)	(2.3)	(2.2)	(2.2)	(2.1)	(2.1)		
Sources of funds	**13.7**	**14.9**	**21.2**	**19.7**	**20.8**	**18.8**	**19.9**	**21.1**	**22.2**	**23.5**	**24.8**	**26.3**	4.3%	2.4%
Changes in working capital	(4.3)	(0.5)	2.2	(2.2)	0.0	(0.1)	0.0	0.0	0.1	0.1	0.1	0.1		
Cash flow from operations	**9.4**	**14.4**	**23.4**	**17.5**	**20.8**	**18.8**	**19.9**	**21.1**	**22.3**	**23.6**	**24.9**	**26.3**		
Capex	(12.9)	(10.3)	(15.3)	(13.5)	(13.7)	(16.8)	(15.5)	(14.9)	(14.9)	(14.9)	(14.9)	(14.9)	-0.6%	-0.3%
Free cash flow	**(3.4)**	**4.0**	**8.0**	**4.0**	**7.1**	**1.9**	**4.4**	**6.3**	**7.4**	**8.7**	**10.0**	**11.4**		
Ordinary dividends	(8.9)	(3.8)	(5.9)	(12.3)	(10.7)	(9.8)	(5.8)	(6.2)	(6.7)	(7.1)	(7.6)	(8.1)	6.7%	3.6%
as % of operating c/flow	95%	26%	25%	71%	51%	52%	29%	29%	30%	30%	31%	31%		
Discretionary free cash flow	**(12.3)**	**0.2**	**2.2**	**(8.4)**	**(3.6)**	**(7.9)**	**(1.5)**	**0.0**	**0.7**	**1.5**	**2.3**	**3.3**		
Disposals/(Acquisitions)	(1.1)	(1.2)	(0.9)	-	-	-	-	-	-	-	-	-		
Equity change	0.0	0.0	2.2	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(13.4)**	**(0.9)**	**1.3**	**(8.4)**	**(3.6)**	**(7.9)**	**(1.5)**	**0.0**	**0.7**	**1.5**	**2.3**	**3.3**		
Balance sheet:														
Net debt	2.1	4.9	0.7	9.9	13.5	21.4	22.8	22.8	22.1	20.6	18.2	14.9		
Net debt/EBITDA	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x		
Interest cover	nm	nm	34.9x	493.7x	nm	nm	nm	nm	nm	nm	nm	nm		
Net debt/equity	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Capital employed:														
Upstream	33.5	40.9	56.2	60.5	65.8	73.3	80.7	88.2	95.6	103.1	110.5	118.0	16.0%	8.6%
Downstream	13.6	17.8	22.3	22.7	23.1	23.5	23.9	24.2	24.5	24.8	25.1	25.4		
% Upstream	71%	70%	72%	73%	74%	76%	77%	78%	80%	81%	82%	82%		
Return on capital employed:														
Upstream		25.1%	32.2%	27.2%	21.4%	15.8%	14.4%	13.8%	13.3%	12.9%	12.6%	12.5%		
Downstream		-0.2%	2.6%	1.8%	2.9%	3.0%	3.1%	3.1%	3.2%	3.2%	3.3%	3.4%		
Aggregate group		**19.2%**	**28.4%**	**23.8%**	**19.1%**	**14.6%**	**13.7%**	**13.6%**	**13.5%**	**13.6%**	**13.8%**	**14.0%**		

Source: Company reports and Citi Research

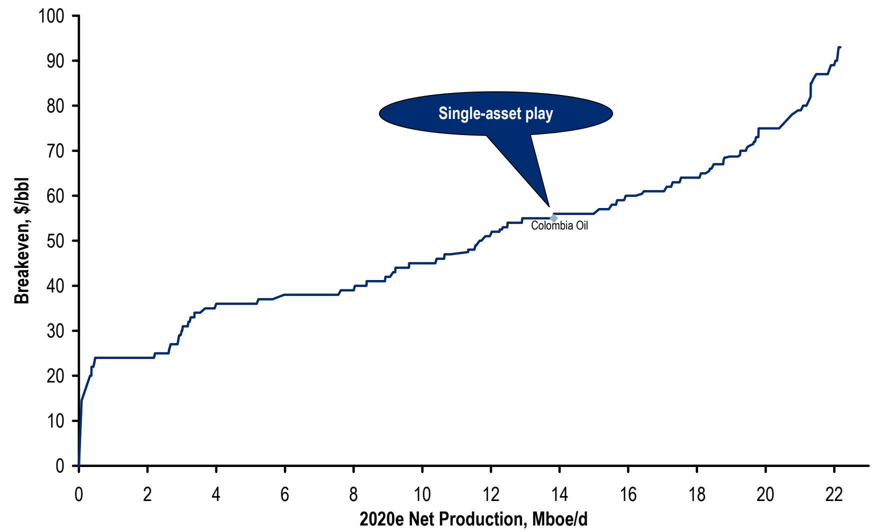
Ecopetrol - Upstream

Figure 66. Ecopetrol project portfolio (2012-2020 start-ups)



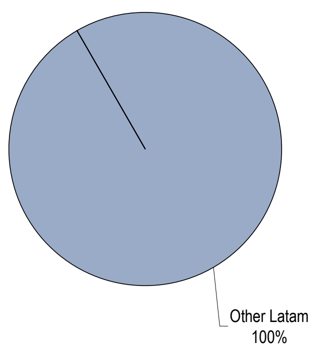
Source: Citi Research

Figure 67. Ecopetrol project portfolio versus the industry cost-curve



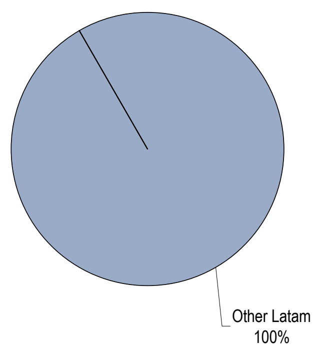
Source: Citi Research

Figure 68. 2012E cash flow by region



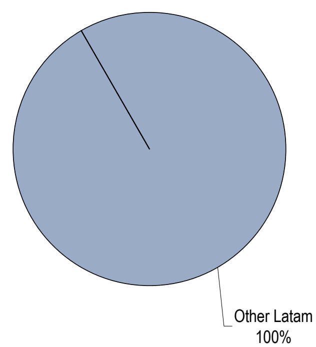
Source: Citi Research

Figure 69. 2016E cash flow by region



Source: Citi Research

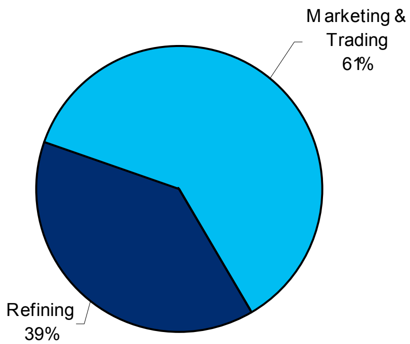
Figure 70. 2020E cash flow by region



Source: Citi Research

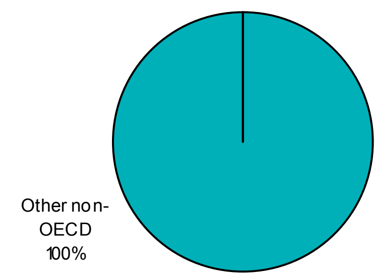
Ecopetrol – Downstream

Figure 71. 2016E cash flow by segment



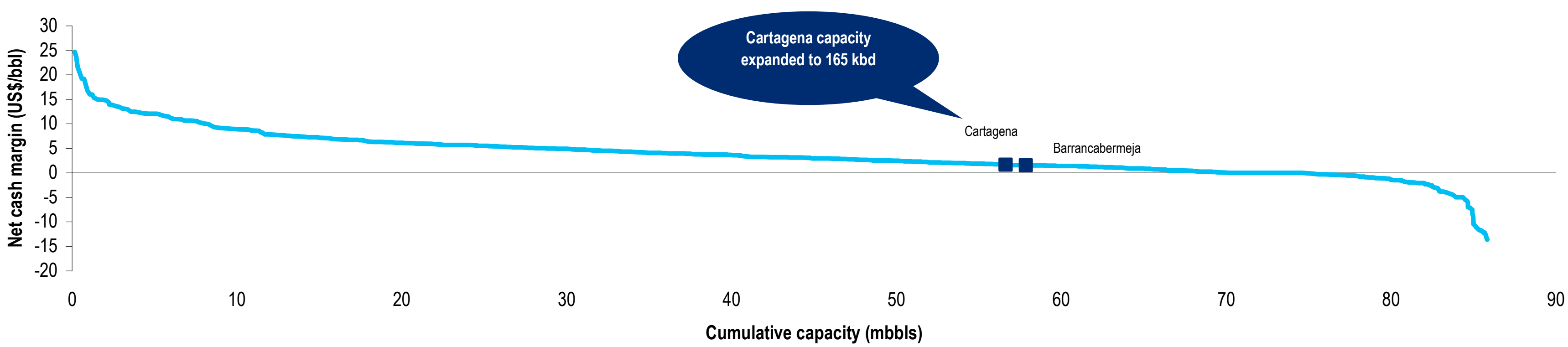
Source: Citi Research

Figure 72. 2016E cash flow by region



Source: Citi Research

Figure 73. Ecopetrol refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Eni – Buy, €20.0/share price target

World-class E&P business emerges from a post-SRG world

While it is the sale of gas-utility SRG that makes the current headlines on Eni, we think it is the transformation of the E&P business that is important for investors to understand (and value). Eschewing industry M&A-trends into long-term resources of Canadian heavy oil and unconventional gas over the last five years, Eni instead pursued a strategy that focused on core geographies in Africa, Europe and CIS/Russia and time-to-market exploration. The result is a business that is emerging with strong growth credentials; 9% CAGR cash flow growth over the 2011-16E period is twice the sector average, driven by a partial recovery in Italian gas margins and the start-up of key growth projects in E&P. We think the valuation begins to look quite discounted over 2014-16, and with Mozambique emerging as a world-class find that underpins post-2016 growth, we continue to see substantial scope for that discount to close.

- **SRG in the headlines –** Eni's sale of gas-utility SRG (to CDP) will complete in 4Q. The financial aspects of the transaction are important (debt deconsolidation and reduction), but we think so too will be the way that the market perception of Eni changes. We think the strange business mix (utility gas transmission, wholesale gas marketing, oil & gas, oil services) has been unhelpful towards investor understanding of the key drivers. The new business sees E&P at the core of the company, and we think it is that business that offers good growth and returns metrics versus sector peers.

- **A differing E&P strategy to peers –** While large-cap peers sought to acquire long-term resources in Canadian heavy oil (2006-08) or US unconventional gas (2008-10), Eni did not. As a result, the company is not sitting on the non-productive capital from those acquisitions that peers currently are. Eni did not see its competitive advantage in playing in these themes (or at the valuations of the time), and instead pursued a strategy that focused on core geographies in Africa, Europe and CIS/Russia and improving on time-to-market exploration. High profile successes in the Yukos auction in Russia, Norwegian Arctic exploration and, more recently, the world-class find in Mozambique have proved this strategy well, in our view.

- **E&P is well-positioned on the cost-curve** – We see meaningful top-line growth emerging, some 5% CAGR 2012-16E driven by the start-ups of key projects in Russia, Kazakhstan (Kashagan) and Norway. The E&P growth portfolio looks fairly well-positioned on the cost-curve, with materiality being driven from mainly 2nd-quartile projects. Kashagan is clearly the exception (ca. US$90/bbl breakeven) although from today's starting point we see that over-spend as having been absorbed in Eni's current equity valuation. In fact the PSC-contract structure of Kashagan should allow for meaningful margin-expansion in the next few years, enhancing cash flow growth to a level a little above the top-line growth rate. Portfolio visibility drops to some degree beyond 2016, particularly with a Kashagan II project now looking doubtful this decade (instead we expect a Kashagan I brownfield expansion product sometime around 2016/17). Filling the longer-term portfolio depends on Eni being able to continue what has been a strong exploration track-record in recent years, and on driving forward the monetization of Mozambique gas.

- **Gas stability –** Gas wholesaling, which accounts for around 9% of Eni's operating cash flow, has been heavily impacted by the recession. Further falls in gas demand in 1H12 have left import capacity utilization in the Italian market at around 55% (from 85% in 2005), leaving end-user prices subject to significant gas-on-gas competition. 2H12 earnings are likely to be tough, and our earnings forecasts are re-based to 2012 levels, although there is some evidence to suggest the outlook may improve.

- **Distribution –** a 4% dividend increase through 1H12 reflects that management are keen to distance Eni from Italian sovereign problems. That increase will put distributions at around 24% of operating cash flow in 2012, a little higher than peers, although against our forecasts for cash flow growth we expect that ratio to fall. We think the high/robust current yield and the outlook for growth is a critical combination for Eni, providing a valuation framework around which the company remains attractive versus peers.

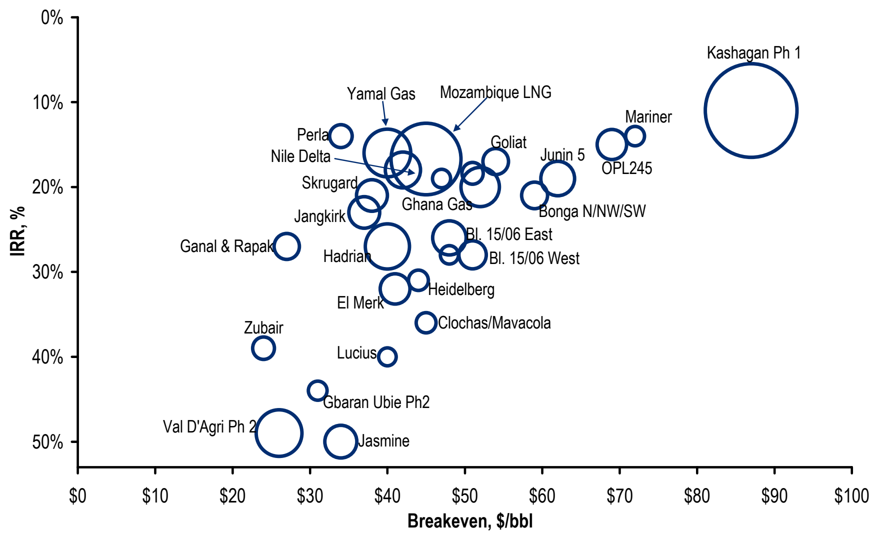
Figure 74. Eni summary financial model

€ B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.68	97.4	62.3	80.0	111.0	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
US$/EUR	1.37	1.46	1.39	1.32	1.39	1.28	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25		
E&P volumes (kboepd)	1.74	1.80	1.77	1.81	1.58	1.67	1.78	1.89	1.98	2.06	2.03	2.02	2.03	2.01	5.4%	2.7%
YoY growth	-1.9%	3.5%	-1.5%	2.6%	-12.9%	5.5%	6.9%	6.1%	4.6%	4.0%	-1.6%	-0.1%	0.4%	-1.0%		
% oil	59%	57%	57%	55%	53%	52%	54%	54%	55%	55%	53%	52%	51%	51%		
E&P cash margins (US$/boe)	24.2	28.6	22.6	24.7	30.7	30.3	27.3	28.0	28.8	29.2	29.7	30.3	30.8	31.5	-1.0%	0.3%
Per share data (EUR/share):																
EPS (consolidated accounts)	2.30	2.51	1.30	1.73	1.71	1.81	1.90	2.11	2.34	2.49	2.53	2.61	2.72	2.82		
EPS (at-equity)	2.31	2.61	1.28	1.66	1.75	1.86	1.76	1.97	2.21	2.37	2.42	2.53	2.65	2.78	6.2%	5.2%
DPS	1.30	1.30	1.00	1.00	1.04	1.08	1.08	1.10	1.12	1.15	1.17	1.19	1.22	1.24	2.0%	2.0%
Valuation ratios (at equity):																
P/E	7.3x	6.5x	13.2x	10.2x	9.6x	9.5x	9.4x	8.5x	7.7x	7.1x	7.0x	6.7x	6.4x	6.1x		
EV/DACF	4.7x	4.5x	5.6x	4.8x	5.1x	4.3x	4.4x	4.0x	3.6x	3.3x	3.1x	2.9x	2.6x	2.4x		
Dividend yield	7.7%	7.7%	5.9%	5.9%	6.1%	6.4%	6.4%	6.5%	6.6%	6.8%	6.9%	7.0%	7.2%	7.3%		
Free cash yield	9.0%	5.8%	3.0%	4.9%	3.4%	6.7%	4.6%	7.0%	7.7%	8.1%	8.1%	8.4%	9.0%	9.6%		
Cash flow:																
E&P	11.6	13.6	10.9	12.8	13.2	14.9	14.7	15.9	17.1	18.0	18.1	18.4	18.9	19.1	4.9%	4%
Gas & Power ex-SRG	2.5	2.1	2.1	1.6	0.6	1.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	18%	10%
Downstream	0.7	0.4	(0.2)	0.1	(0.2)	(0.2)	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3		
Other (corporate, financing)	(0.6)	(1.2)	(1.2)	(0.8)	(0.9)	(0.4)	(0.7)	(0.6)	(0.6)	(0.6)	(0.6)	(0.5)	(0.5)	(0.4)		
Core Eni cash flow	**14.3**	**14.9**	**11.5**	**13.7**	**12.6**	**15.5**	**15.4**	**16.8**	**18.2**	**19.2**	**19.2**	**19.6**	**20.1**	**20.4**	**9%**	**5%**
SRG dividend	0.3	0.2	0.3	0.3	0.3	-	-	-	-	-	-	-	-	-		
Saipem dividend	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2%	2%
GALP dividend	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0%	0%
Cash flow	**14.6**	**15.3**	**11.9**	**14.1**	**13.0**	**15.6**	**15.6**	**17.0**	**18.3**	**19.4**	**19.4**	**19.8**	**20.3**	**20.6**	**8%**	**5%**
Capex	(8.5)	(11.3)	(9.9)	(10.8)	(10.8)	(11.2)	(12.8)	(12.7)	(13.6)	(14.4)	(14.5)	(14.7)	(14.8)	(14.6)	6%	3%
Free cash flow	**6.1**	**3.9**	**2.0**	**3.3**	**2.3**	**4.4**	**2.8**	**4.3**	**4.7**	**5.0**	**4.9**	**5.1**	**5.5**	**5.9**		
Ordinary dividends	(4.6)	(5.4)	(4.2)	(3.6)	(3.7)	(3.8)	(3.9)	(4.0)	(4.0)	(4.1)	(4.2)	(4.3)	(4.4)	(4.4)	2%	2%
as % of operating c/flow	31%	35%	35%	26%	28%	25%	25%	23%	22%	21%	22%	22%	22%	22%		
Discretionary free cash flow	**1.5**	**(1.5)**	**(2.2)**	**(0.3)**	**(1.4)**	**0.6**	**(1.1)**	**0.3**	**0.7**	**0.9**	**0.8**	**0.9**	**1.2**	**1.5**		
Acquisitions	(9.7)	(2.6)	(2.9)	-	-	(0.3)	-	-	-	-	-	-	-	-		
Disposals	0.7	1.0	8.4	1.1	3.0	3.6	0.9	-	-	-	-	-	-	-		
SRG capital raising	-	-	(1.5)	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(7.6)**	**(3.1)**	**1.8**	**0.8**	**1.6**	**3.9**	**(0.2)**	**0.3**	**0.7**	**0.9**	**0.8**	**0.9**	**1.2**	**1.5**		
Balance sheet:																
Core net debt	8.8	10.1	9.9	9.1	7.5	3.6	3.8	3.5	2.8	2.0	1.2	0.4	(0.8)	(2.2)		
Net debt/EBITDA	1.4x	1.0x	1.8x	1.2x	1.1x	0.4x	0.5x	0.4x	0.3x	0.2x	0.1x	0.0x	(0.1)	(0.2)		
EBITDA interest cover	32.7x	29.2x	16.5x	23.3x	26.0x	65.9x	60.2x	71.3x	95.1x	na	na	na	na	na		
Net debt/equity	23.4%	23.5%	23.3%	21.4%	17.8%	8.6%	9.1%	8.3%	6.7%	4.7%	2.9%	0.9%	-1.9%	-5.3%		
Capital employed:																
E&P	23.8	30.4	32.5	37.6	42.0	44.4	47.7	50.1	52.9	55.8	58.8	61.7	64.4	67.0	6%	5%
Other businesses	22.2	20.3	17.7	20.1	20.5	20.2	19.7	19.2	18.6	18.1	17.6	17.0	16.5	15.9	-2%	-3%
Equity stakes (SRG, Saipem, GALP)	16.9	10.4	14.4	17.7	15.6	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2		
% E&P	38%	50%	50%	50%	54%	60%	62%	64%	65%	67%	69%	70%	71%	73%		
Return on capital employed:																
Upstream	29.4%	29.1%	12.3%	16.0%	16.4%	16.4%	14.8%	15.0%	15.4%	15.2%	14.4%	14.0%	13.7%	13.4%		
Other businesses	12.3%	11.2%	9.1%	6.5%	-1.2%	-4.0%	-2.7%	-2.3%	-2.2%	-2.2%	-2.6%	-3.0%	-3.5%	-4.0%		
Equity stakes (SRG, Saipem, GALP)	2.5%	3.5%	2.7%	2.3%	2.7%	1.7%	1.8%	1.8%	1.8%	1.8%	1.9%	1.9%	1.9%	1.9%		
Aggregate group	**16.1%**	**18.8%**	**9.3%**	**10.2%**	**9.0%**	**9.0%**	**8.7%**	**9.2%**	**9.8%**	**9.9%**	**9.6%**	**9.4%**	**9.3%**	**9.2%**		

Source: Company reports and Citi Research

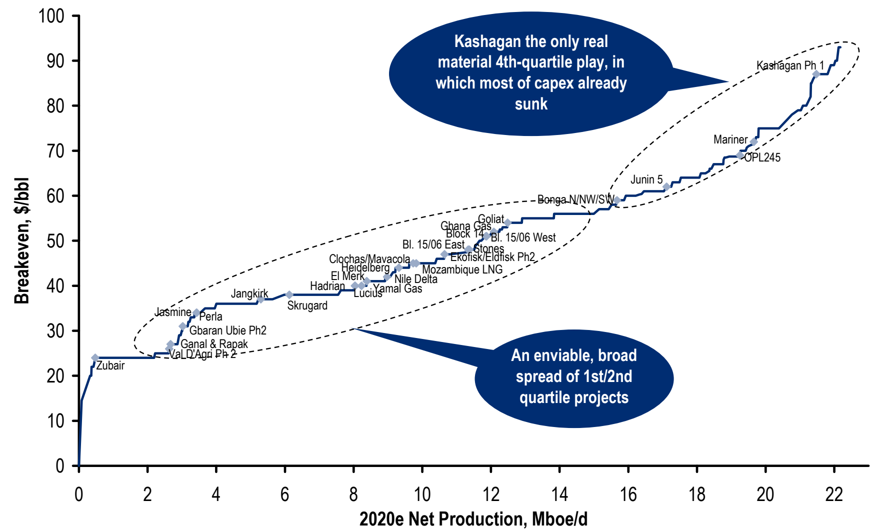
Eni - Upstream

Figure 75. Eni project portfolio (2012-2020 start-ups)



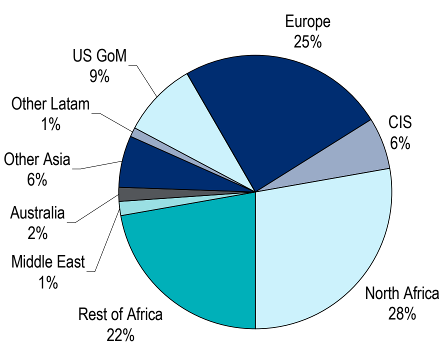
Source: Citi Research

Figure 76. Eni project portfolio versus the industry cost-curve



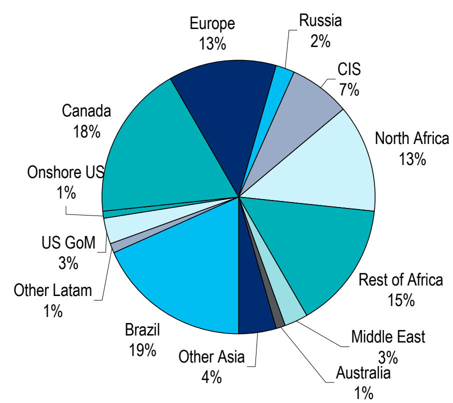
Source: Citi Research

Figure 77. 2012E cash flow by region



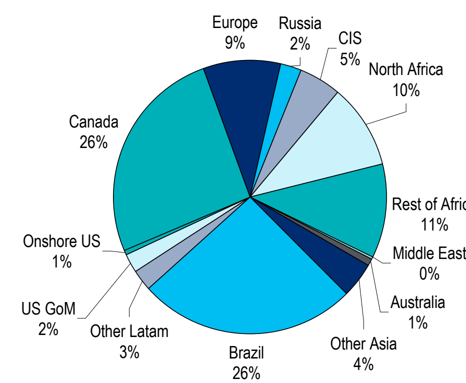
Source: Citi Research

Figure 78. 2016E cash flow by region



Source: Citi Research

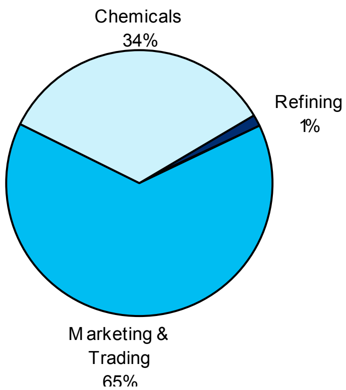
Figure 79. 2020E cash flow by region



Source: Citi Research

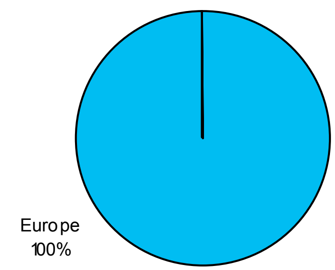
Eni – Downstream

Figure 80. 2016E cash flow by segment



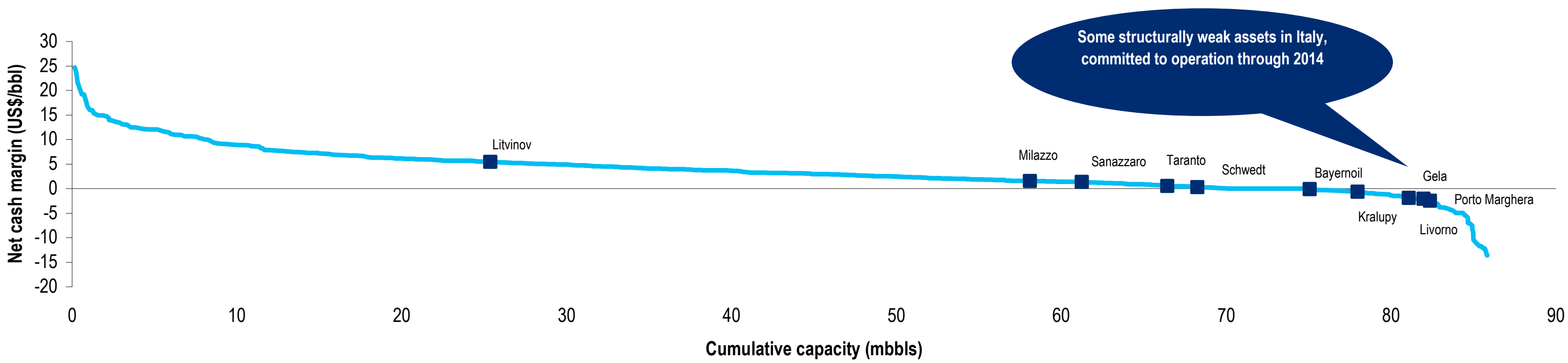
Source: Citi Research

Figure 81. 2016E cash flow by region



Source: Citi Research

Figure 82. Eni refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Exxon – Buy, US$97.0/share price target

Diversified and Discipline Investment Strategy Continues to Pay Dividends

XOM continues to demonstrate that its integrated strategy of upstream, refining and chemicals continues to work despite all the corporate restructuring we have seen of late in the integrated oil arena. While upstream still makes up the bulk of XOM's profits, Chemicals and US refining are delivering stellar returns on capital. Furthermore, the company's consistent and patient asset divestiture program continues to prune underperforming assets at relatively attractive prices. The acquisition of XTO continues to remain a question mark for the market however. Low US natural gas prices are a drag on XOM's returns and profitability and the XTO assets are the primary contributor to this drag although the overall impact is muted given that US natural gas only makes up 15% of XOM's total production. Overall returns on capital employed for upstream were 27% last year (9% in the US and 39% overseas).

- **Growth –** We estimate XOM can grow production by 1% per annum through the end of the decade. The company's large scale operated projects under construction such as PNG, Kearl and Hadrian have some of the highest IRRs in our decade-ahead analysis while its non-operated assets are trending towards the industry average. Given XOM's size (4.4mmboe/d of net production), it does not make much sense to try to grow the portfolio in the current cost environment unless the company discovers or obtains access to a large resource base with a low cost structure. XOM's deal in Russia with Rosneft and other deals in the Middle East could represent new opportunities to grow the portfolio.

- **Downstream –** XOM is the largest refining company in the world with just under 6.0 mmb/day of capacity. Refining is expected to deliver nearly $11 billion in profits in 2012 including the gains on the sale of its assets in Japan. Last year, the US refining business generated a return on capital of 43%. Our analysis for refining shows that capacity could tighten into the middle part of this decade which could set up a bullish margin environment for those companies that still have refining assets in operations. XOM's overall refining capacity currently sits on the top end of the refining margin. We expect the portfolio to move up with the sale of its assets in Japan and the shutdown of the Dartmouth refinery. We currently expect earnings from refining to remain at around $5.0 billion through the decade but admit these numbers could be much higher depending on the evolution of the fuels market.

- **Chemicals –** The chemicals business continues to be the crown jewel in XOM's portfolio. Low natural gas prices in the US enabled the US chemicals assets to earn a 42% return on capital employed in 2011 with an even higher return projected for 2012. Holding US chemicals assets more than made up for the drag from US natural gas prices within the upstream portfolio. XOM has recently completed major expansions of its chemicals assets in Asia (China and Singapore) and is about to embark on a major expansion of its assets in the US Gulf Coast. We currently estimate chemicals profits to remain at roughly $5.0 billion through the decade but admit these numbers could be much higher.

- **Valuation and 2020 Vision –** XOM stock currently trades at a significant premium to the group. In our decade-ahead analysis, we estimate XOM trades at a 25% premium to the group. While this might appear expensive, we estimate XOM's downstream assets provide some rationale for this premium valuation. Furthermore, a projected free cash flow yield of 11% in 2020 supports a nearly $20 billion share repurchase program and a 2.5% dividend yield with at least 5% annual growth. In simplistic terms, XOM generates a significant amount of free cash flow and has a proven track record of returning this free cash flow to shareholders.

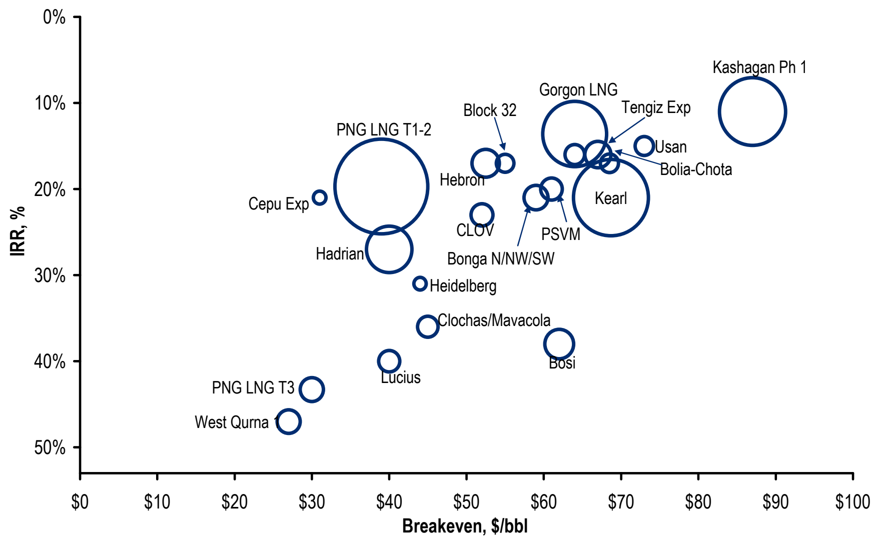
Figure 83. Exxon financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.6	97.7	61.8	79.7	110.6	108.2	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.8%	0.2%
US gas (US$/MMBtu)	7.0	8.9	3.9	4.4	4.0	2.7	3.9	4.5	5.0	5.3	5.3	5.3	5.3	5.3		
Gulf Coast refining margin (US$/bbl)	13.4	10.1	6.7	7.6	9.9	9.7	7.4	7.5	7.6	7.6	7.6	7.6	7.6	7.6		
E&P volumes (mboepd)	4.18	3.93	3.94	4.45	4.51	4.37	4.52	4.57	4.61	4.68	4.72	4.77	4.78	4.78	0.7%	0.7%
YoY growth	1.0%	-6.1%	0.2%	13.0%	1.3%	-3.1%	3.5%	1.1%	0.8%	1.4%	0.9%	1.1%	0.2%	0.1%		
% oil	63%	61%	61%	55%	51%	50%	52%	52%	52%	51%	52%	53%	53%	53%		
E&P cash margins (US$/bbl)	19.6	25.4	17.6	21.9	27.0	25.7	25.1	26.3	27.4	28.6	29.7	30.5	31.3	32.3	1.2%	2.0%
Per share data:																
EPS (US$)	7.28	8.68	3.98	6.23	8.43	7.83	7.48	8.00	8.75	9.68	10.59	11.50	12.44	13.64	2.8%	5.4%
DPS (US$)	1.37	1.55	1.66	1.74	1.85	2.18	2.35	2.44	2.54	2.64	2.75	2.86	2.97	3.09	7.4%	5.9%
Valuation Ratios:																
P/E	12.3x	10.3x	22.5x	14.4x	10.6x	11.3x	12.0x	11.2x	10.2x	9.3x	8.5x	7.8x	7.2x	6.6x		
EV/DACF	6.7x	6.2x	12.4x	8.6x	6.8x	8.3x	8.0x	7.4x	6.8x	6.2x	5.6x	5.1x	4.7x	4.2x		
Dividend yield	1.5%	1.7%	1.9%	1.9%	2.1%	2.4%	2.6%	2.7%	2.8%	2.9%	3.1%	3.2%	3.3%	3.4%		
Free cash yield	7.3%	8.3%	1.3%	4.7%	5.3%	4.3%	5.6%	6.7%	7.0%	7.9%	8.7%	9.6%	10.4%	11.4%		
Cash flow:																
Upstream	29.9	36.4	25.3	35.5	44.4	41.3	41.6	44.2	46.8	49.9	52.3	54.2	55.8	57.6	2.4%	2.9%
Downstream	10.0	6.9	5.0	5.4	6.2	8.1	5.9	5.2	5.2	5.2	5.2	5.2	5.2	5.2	-3.6%	-2.0%
Other and corporate	13.2	13.4	(1.0)	2.7	4.6	(0.5)	2.9	2.9	2.5	2.2	2.0	2.1	2.1	2.1		
Sources of funds	**53.1**	**56.6**	**29.2**	**43.6**	**55.2**	**48.9**	**50.5**	**52.3**	**54.5**	**57.3**	**59.5**	**61.4**	**63.1**	**64.9**	0.7%	1.8%
Changes in working capital	(1.1)	1.4	(1.2)	3.8	(1.0)	0.3	0.6	1.5	0.2	0.0	0.1	0.3	0.2	0.3		
Cash flow from operations	**52.0**	**58.1**	**28.1**	**47.5**	**54.2**	**49.1**	**51.1**	**53.8**	**54.8**	**57.3**	**59.7**	**61.7**	**63.3**	**65.1**		
Capex	(15.4)	(19.3)	(22.5)	(26.9)	(31.0)	(31.4)	(28.9)	(28.6)	(29.5)	(30.4)	(31.4)	(32.4)	(33.4)	(34.5)	-0.4%	1.2%
Free cash flow	**36.6**	**38.8**	**5.6**	**20.6**	**23.2**	**17.8**	**22.2**	**25.2**	**25.3**	**26.9**	**28.3**	**29.3**	**29.9**	**30.7**		
Ordinary dividends	(7.6)	(8.1)	(8.0)	(8.5)	(9.0)	(10.1)	(10.4)	(10.3)	(10.2)	(10.1)	(9.9)	(9.7)	(9.5)	(9.3)	2.2%	0.3%
as % of operating cflow	15%	14%	29%	18%	17%	21%	20%	19%	19%	18%	17%	16%	15%	14%		
Discretionary free cash flow	**29.0**	**30.7**	**(2.5)**	**12.1**	**14.2**	**7.7**	**11.9**	**14.9**	**15.1**	**16.8**	**18.3**	**19.6**	**20.4**	**21.4**		
Disposals/(Acquisitions)	4.2	6.0	1.5	3.3	7.5	6.2	-	-	-	-	-	-	-	-		
Equity change	(30.7)	(35.0)	(19.0)	(12.1)	(21.1)	(21.0)	(17.0)	(17.0)	(17.0)	(17.0)	(17.0)	(17.0)	(17.0)	(17.0)		
Surplus (deficit)	**33.2**	**36.7**	**(0.9)**	**15.4**	**21.8**	**13.9**	**11.9**	**14.9**	**15.1**	**16.8**	**18.3**	**19.6**	**20.4**	**21.4**		
Balance sheet:																
Net debt	(24.9)	(22.6)	(1.3)	6.6	4.0	6.6	11.9	14.2	16.3	16.6	15.5	13.2	10.0	5.9		
Net debt/EBITDA	(0.3x)	(0.2x)	(0.0x)	0.1x	0.0x	0.1x	0.2x	0.2x	0.2x	0.2x	0.2x	0.1x	0.1x	0.1x		
Interest cover	207.8x	140.9x	85.5x	259x	356x	191x	105x	87x	81x	82x	85x	97x	113x	143x		
Net debt/equity	-20%	-20%	-1%	4%	3%	4%	7%	8%	9%	9%	8%	6%	4%	2%		
Capital employed:																
Upstream	63.6	66.1	73.2	103.3	129.8	146.1	158.9	170.5	182.0	193.4	204.8	215.7	227.0	238.3	8.3%	7.0%
Downstream	25.3	25.6	25.1	24.1	23.4	23.3	23.2	23.2	23.1	23.0	23.0	22.9	22.8	22.8	-0.3%	-0.3%
% Upstream	72%	72%	74%	81%	85%	86%	87%	88%	89%	89%	90%	90%	91%	91%		
Return on capital employed:																
Upstream	35.3%	42.8%	23.8%	27.0%	27.3%	20.6%	18.2%	17.8%	17.6%	17.7%	17.4%	17.2%	16.7%	16.2%		
Downstream	31.5%	17.9%	10.3%	12.8%	17.0%	25.3%	16.0%	12.8%	13.0%	13.0%	13.0%	13.0%	13.1%	13.1%		
Aggregate group (Citi definition)	**28.2%**	**30.5%**	**12.3%**	**15.1%**	**17.1%**	**16.7%**	**12.8%**	**12.7%**	**12.7%**	**12.9%**	**13.0%**	**12.8%**	**12.6%**	**12.4%**		

Source: Company reports and Citi Research

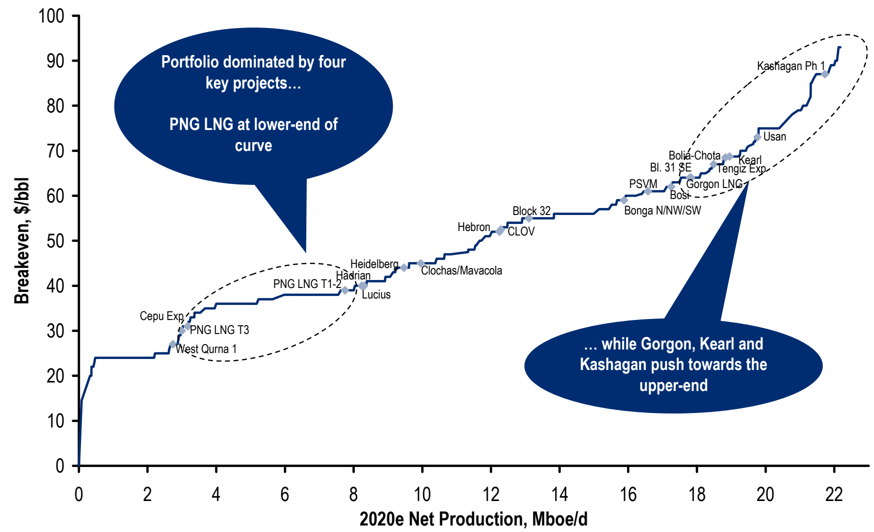
Exxon - Upstream

Figure 84. ExxonMobil project portfolio (2012-2020 start-ups)



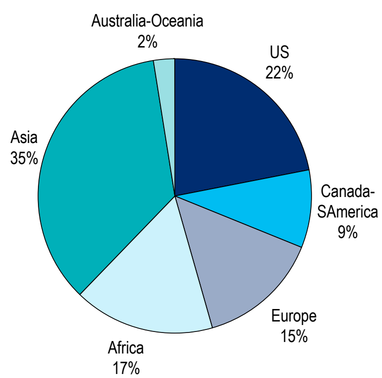
Source: Citi Research

Figure 85. ExxonMobil project portfolio versus the industry cost-curve



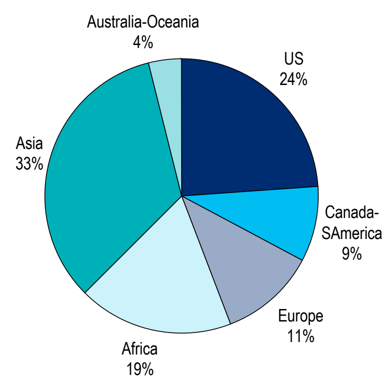
Source: Citi Research

Figure 86. 2012E cash flow by region



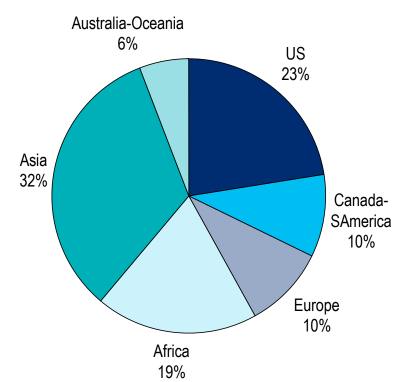
Source: Citi Research

Figure 87. 2016E cash flow by region



Source: Citi Research

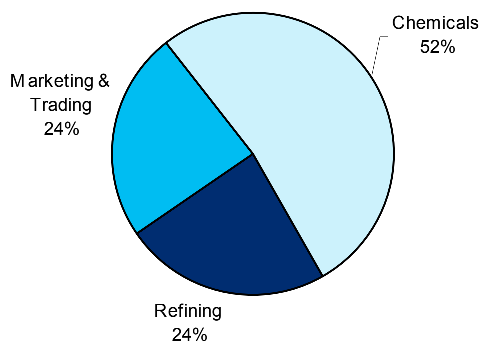
Figure 88. 2020E cash flow by region



Source: Citi Research

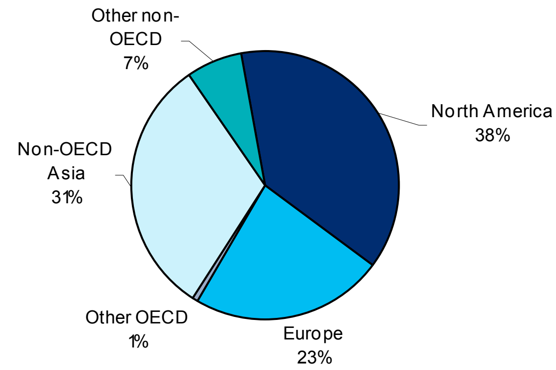
Exxon – Downstream

Figure 89. 2016E cash flow by segment



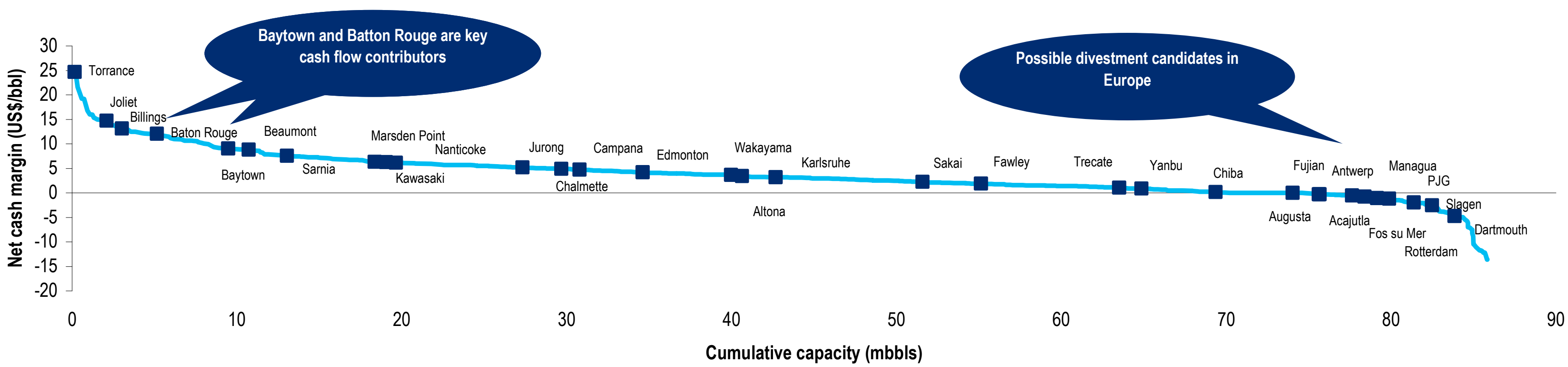
Source: Citi Research

Figure 90. 2016E cash flow by region



Source: Citi Research

Figure 91. Exxon refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

GALP – Neutral (High Risk), €13.1/share price target

Focus on near-term Brazil exploration activity and delivery of upstream growth plans

GALP offers a transformational growth story, driven by the ramp-up of E&P output in Brazil and expected margin benefit from its refinery upgrade project in Portugal. However, we see modest value relative to the peers at current valuation. Funding constraints have been addressed following the completion of the GALP Brazil capital increase. Near-term focus will remain on the exploration and appraisal drilling activity in Brazil (Carcara, Jupiter NE) and Mozambique.

- **Upstream growth driven by Brazil —** Upstream growth from Brazil drives sector-leading upstream growth of 50% CAGR 2011-2016E and 38% CAGR 2011-2020E, admittedly from a low base. This growth is high-margin and should drive a significant uplift in group returns from 5% ROCE in 2011 to 15% in 2020E. While offering sector leading growth, the delivery of its 2020 production target of 300k boe/d looks challenging. While the majority of this growth comes from BM-S-11 (Lula, Cernambi, Iara), we see the need for contribution from BM-S-8 (Carcara) and BM-S-24 (Jupiter) and additional FPSO capacity before 2020 than laid out in the recent Petrobras 2012-16 business plan to deliver this target. We forecast Mozambique LNG achieves first gas in 2019 and makes some contribution (c. 8%) towards GALP's 2020 production target.

- **Upstream portfolio continues to offer leverage to exploration —** While the focus remains the development of the existing pre-salt discoveries, GALP continues to offer leverage to exploration with an active E&A campaign planned over the next 12 months. In Brazil, GALP is currently drilling the Carcara exploration well on BM-S-8 and also plans to commence an important exploration/appraisal programme on the Jupiter structure (BM-S-24) in 4Q12 to better understand the size of the structure and the level of CO_2 content. The first well, Jupiter Northeast, should be completed in late 4Q12/early 1Q13. Outside of Brazil, GALP and Eni plan further appraisal activity in Area 4, offshore Mozambique, in 2012/13.

- **Downstream portfolio re-positioned towards middle distillates —** The Matosinhos/Sines refinery upgrade project should be completed by the end of 3Q12 and will see GALP's refinery yield shift towards middle distillates, provide increased flexibility to process heavier crudes, and deliver operational efficiencies. The upgrade project should establish GALP in the upper second quartile of our global mid-cycle net cash margin curve. We also expect GALP's stronghold over logistical infrastructure for oil products in Iberia and a regional deficit in middle distillates will continue to underpin downstream cash flow over the next decade. We forecast cashflow growth of c. 22% CAGR 2011-20 from the downstream business.

- **Capital structure significantly improved following the completion of the GALP Brazil capital increase —** GALP's gearing has fallen significantly to 18% at the end of 2Q12 (from c. 119% in 4Q11) following the sale of a 30% stake in GALP Brazil. While we expect gearing to rise again (up to 33% in 2016) driven by the investment in Brazil, we now see GALP well funded to deliver on its upstream development plans.

- **Eni plans to divest of its remaining stake in GALP —** Eni and Amorim Energia (GALP's core shareholders) have reached an agreement on how Eni will divest of its 33.3% stake in GALP. Amorim has already acquired a 5% stake from Eni bringing its current stake to 38% and has a call option to buy a further 10.34% stake. Eni plans to sell its remaining 18% stake into the market.

- **Valuation —** Galp offers sector-leading growth and a strong uplift in returns with the ramp-up of its Brazil E&P business. We see this growth and returns uplift as fairly-priced by the market over 5-year and end-decade timeframes, particularly given the back drop of execution risks and the potential overhang from the Eni divestment plan.

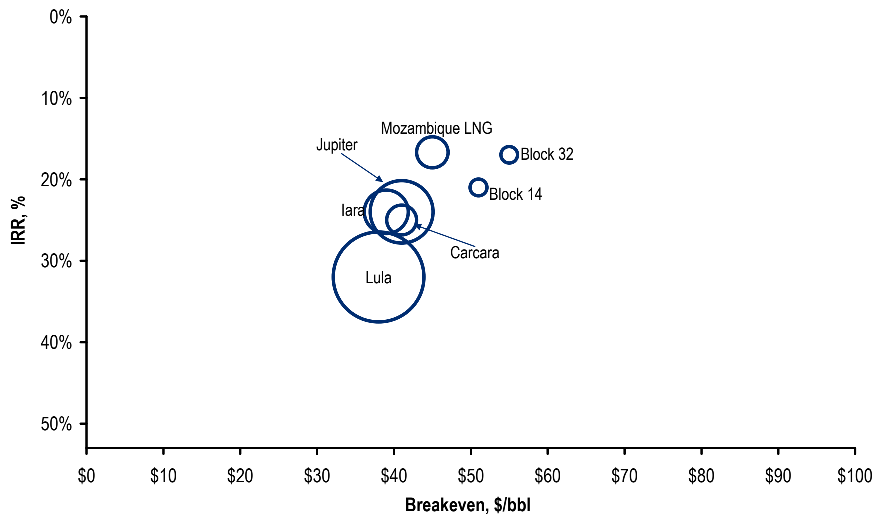
.Figure 92. GALP summary financial model

EUR m, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.3	110.8	109.3	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
EUR/USD	1.37	1.46	1.39	1.32	1.39	1.27	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25		
E&P volumes (kboepd)	13	10	10	12	12	19	23	32	54	91	132	165	214	226	49.7%	38.4%
YoY growth	73.1%	-20.1%	-2.9%	22.2%	2.5%	54.1%	20.2%	42.1%	68.8%	69.0%	44.7%	25.2%	29.3%	5.7%		
% oil	100%	100%	100%	100%	100%	100%	93%	91%	91%	89%	89%	89%	89%	84%		
E&P cash margins (US$/boe)	42.1	61.1	37.7	34.5	65.3	50.9	47.3	46.2	43.0	42.3	41.5	41.7	42.4	41.7	-8.3%	-4.9%
Per share data:																
EPS (EUR)	0.50	0.58	0.26	0.37	0.30	0.49	0.56	0.62	0.75	1.02	1.30	1.60	2.09	2.24	27.7%	24.9%
DPS (EUR)	0.32	0.32	0.20	0.20	0.20	0.24	0.26	0.29	0.32	0.34	0.35	0.37	0.39	0.41	10.9%	8.2%
Valuation ratios:																
P/E	19.7x	22.6x	39.8x	34.4x	42.2x	24.3x	22.7x	20.5x	16.9x	12.4x	9.8x	8.0x	6.1x	5.7x		
EV/DACF	15.1x	17.1x	15.5x	14.4x	32.5x	10.6x	11.7x	10.7x	9.5x	7.3x	5.7x	4.5x	3.2x	2.6x		
Dividend yield	3.2%	2.5%	2.0%	1.6%	1.6%	1.9%	2.1%	2.3%	2.5%	2.6%	2.8%	2.9%	3.0%	3.2%		
Free cash yield	4.8%	-1.9%	1.6%	-6.1%	-7.4%	-5.6%	-2.5%	-0.8%	-3.2%	0.6%	4.1%	9.5%	16.6%	18.4%		
Cash flow:																
Upstream	144	170	132	125	252	272	311	432	678	1,126	1,600	2,011	2,647	2,747	34.9%	30.4%
Downstream	343	334	196	262	82	304	471	527	521	515	508	501	495	487	44.4%	21.9%
Other and corporate	449	(346)	353	171	(35)	448	238	185	152	160	188	267	404	527		
Sources of funds	**935**	**158**	**681**	**558**	**299**	**1,024**	**1,019**	**1,144**	**1,350**	**1,801**	**2,296**	**2,779**	**3,545**	**3,761**	43.2%	32.5%
Changes in working capital	29	446	181	28	33	(652)	-	-	-	-	-	-	-	-		
Cash flow from operations	**964**	**605**	**862**	**586**	**332**	**372**	**1,019**	**1,144**	**1,350**	**1,801**	**2,296**	**2,779**	**3,545**	**3,761**		
Capex	(466)	(807)	(730)	(1,233)	(989)	(921)	(1,258)	(1,220)	(1,660)	(1,740)	(1,900)	(1,860)	(1,932)	(1,970)	12.0%	8.0%
Free cash flow	**498**	**(203)**	**132**	**(647)**	**(657)**	**(549)**	**(239)**	**(76)**	**(310)**	**61**	**396**	**919**	**1,613**	**1,791**		
Ordinary dividends	(326)	(218)	(127)	(107)	(52)	(216)	(216)	(229)	(252)	(277)	(285)	(299)	(314)	(330)	39.7%	22.8%
as % of operating c/flow	34%	36%	15%	18%	16%	58%	21%	20%	19%	15%	12%	11%	9%	9%		
Discretionary free cash flow	**173**	**(420)**	**5**	**(754)**	**(709)**	**(765)**	**(455)**	**(305)**	**(562)**	**(216)**	**111**	**620**	**1,299**	**1,462**		
Acquisitions	-	(752)	(35)	(126)	-	-	-	-	-	-	-	-	-	-		
Disposals	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Equity change	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**173**	**(1,172)**	**(30)**	**(880)**	**(709)**	**(765)**	**(455)**	**(305)**	**(562)**	**(216)**	**111**	**620**	**1,299**	**1,462**		
Balance sheet:																
Net debt	734	1,864	1,927	2,840	3,504	1,353	1,808	2,113	2,674	2,890	2,779	2,159	859	(602)		
Net debt/EBITDA	0.8x	2.0x	3.3x	3.5x	4.7x	1.3x	1.4x	1.4x	1.6x	1.2x	0.8x	0.5x	0.2x	(0.1)		
Cash interest cover	19.2x	9.5x	9.8x	5.2x	2.4x	3.0x	8.5x	8.6x	9.3x	11.4x	14.2x	18.3x	28.0x	44.7x		
Net debt/equity	31%	84%	81%	105%	119%	20%	25%	28%	33%	33%	28%	19%	6%	-4%		
Capital employed:																
Upstream	570	693	914	1,219	1,399	1,952	2,816	3,606	4,809	5,969	7,115	8,071	8,876	9,643		
Downstream	2,231	2,811	2,859	3,885	4,330	4,274	4,140	4,000	3,854	3,702	3,543	3,378	3,206	3,028		
% Upstream	20%	20%	24%	24%	24%	31%	40%	47%	56%	62%	67%	70%	73%	76%		
Return on capital employed:																
Upstream	18.5%	14.1%	6.8%	1.4%	7.6%	7.9%	5.7%	6.9%	10.5%	14.2%	16.3%	17.5%	20.5%	19.1%		
Downstream	7.9%	6.8%	0.2%	1.7%	-2.6%	1.9%	4.3%	5.7%	5.6%	5.5%	5.3%	5.2%	5.1%	4.9%		
Aggregate group	**12.2%**	**17.4%**	**5.5%**	**6.3%**	**4.6%**	**6.1%**	**5.7%**	**6.3%**	**7.4%**	**9.5%**	**11.1%**	**12.6%**	**15.4%**	**15.4%**		

Source: Company reports and Citi Research

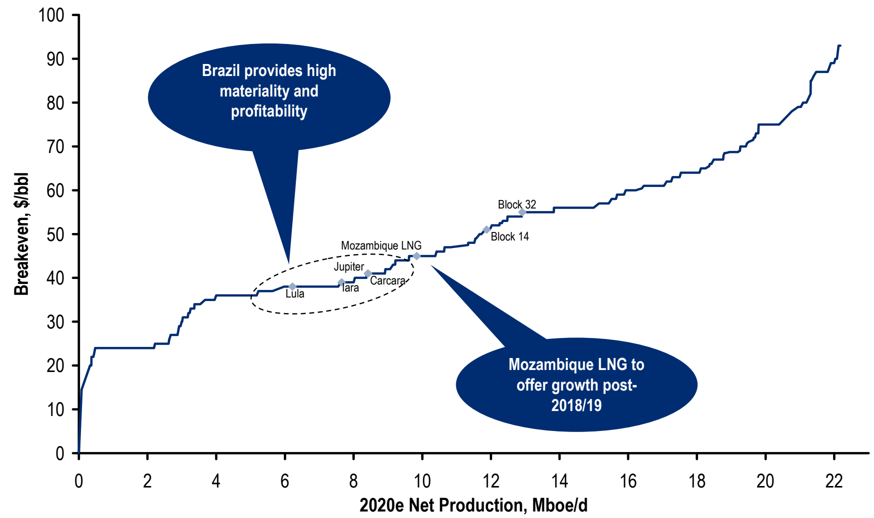
GALP - Upstream

Figure 93. GALP project portfolio (2012-2020 start-ups)



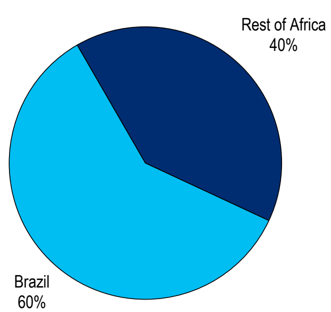
Source: Citi Research

Figure 94. GALP project portfolio versus the industry cost-curve



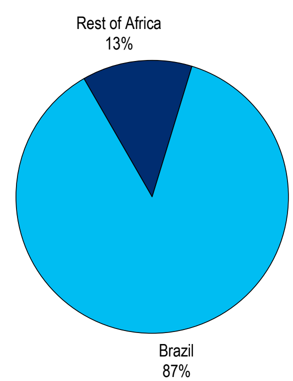
Source: Citi Research

Figure 95. 2012E cash flow by region



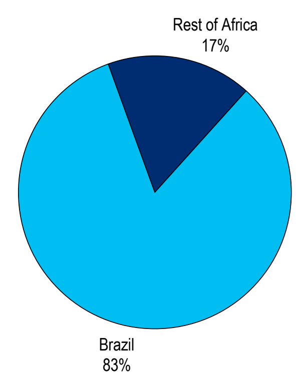
Source: Citi Research

Figure 96. 2016E cash flow by region



Source: Citi Research

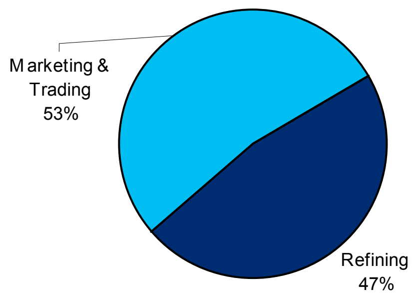
Figure 97. 2020E cash flow by region



Source: Citi Research

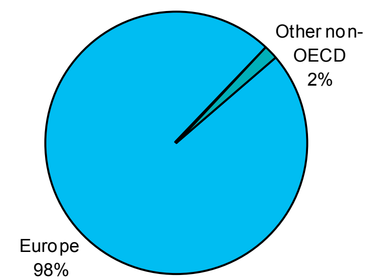
GALP – Downstream

Figure 98. 2016E cash flow by segment



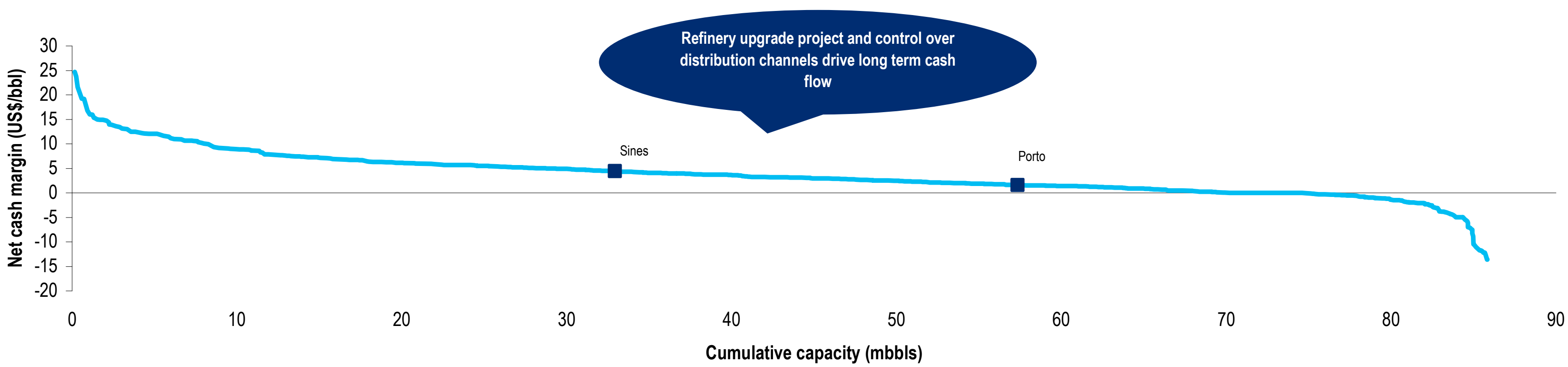
Source: Citi Research

Figure 99. 2016E cash flow by region



Source: Citi Research

Figure 100. GALP refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Hess – Buy (High Risk), US$57/share price target

Capital Intensity Slowly Coming to an End

We upgraded HES in July after what had been a dire stretch of stock price performance. Since the beginning of 2011, HES stock declined 44% through July 2012. The crux of our upgrade is our belief and estimation that Hess's previous two year track record of capital intensity is coming to an end. We believe the company will outline a sensible plan within the next six months to bring capital spending in-line with operating cash flows and will naturally reduce its capital spending in the Bakken with the end of major spending on infrastructure. The stock currently trades at one of the lowest relative values in the group under our decade ahead analysis.

- **Growth –** Since 2000, Hess has spent over $11 billion on unproved and proved acquisitions and $7.7 billion on exploration. During this time, production has gone from 383mboe/d to 371mboe/d. While we recognize the need for upstream companies to replace reserves through acquisitions and exploration, we believe the recent peak level of both exploration and acquisition spending showed lack of capital discipline. Going forward, we expect some of this capital intensity to diminish and exploration spending to be rationalized. We currently estimate HES could grow production nearly 10% next year and reach 473mboe/d in 2014 from 410mboe/d in 2012. The Bakken and the return of many of its assets from unplanned maintenance will make up most of this growth. Our projections do not take into account an active divestiture program, which is now part of HES's restructuring efforts.

- **The Bakken is Key –** A high level of spending in the Bakken on production, land acquisitions and infrastructure over the last two years has left the company with a large capital base producing at far below its potential peak capacity (~60mboe/d vs. 120mboe/d). With the upstream business only earning an 8% return on capital, it remains to be seen if the Bakken, which is a large and integral part of HES's growth plan, can be accretive to returns over the long-run. In theory, HES could find ways to reduce its capital base (selling midstream) while still growing production.

- **Downstream –** The closure of HOVENSA, a 500mb/d refinery in St. Croix, represented a step in the right direction in order for HES to rationalize its portfolio. However, we believe there are additional steps that need to be taken by HES. The company has invested in the power business and has an active trading platform for natural gas and electricity. While the wholesale and retail fuels businesses are profitable, HES has shown little improvement in its trading business.

- **Valuation & 2020 Vision –** The stock currently trades close to its PV-10, which represents the lowest relative valuation in our group. Our matrix valuation approach yields values between $42 and $70 per share including a $6 per share penalty for uneconomic exploration. We believe HES could pull the lever on a number of shareholder friendly initiatives that could unlock some of its asset value. In our 2020 analysis, HES trades at one of the lowest relative values in the group but also has one of the lowest returns.

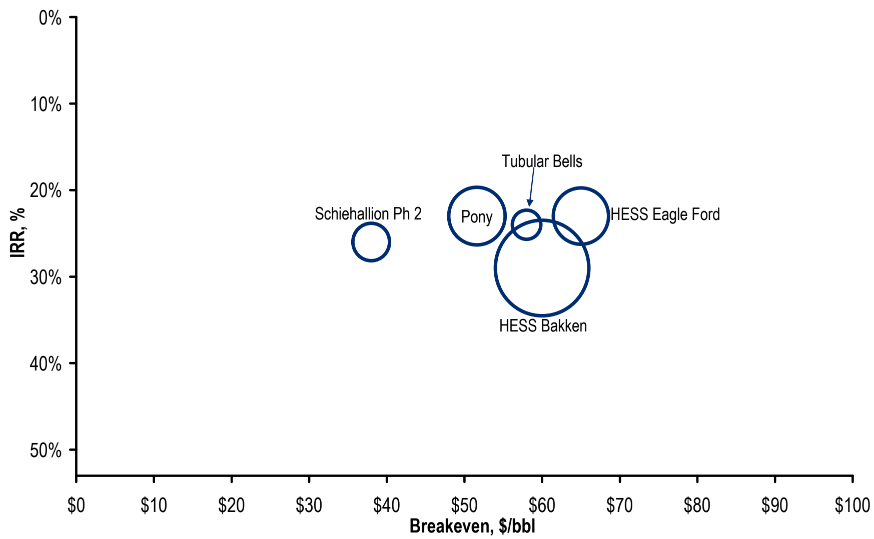
Figure 101. HESS summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.7	61.9	79.7	110.9	108.2	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
E. Coast refining margin (US$/bbl)	10.7	9.4	6.7	8.2	8.8	11.6	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3		
E&P volumes (mboepd)	0.38	0.38	0.41	0.42	0.37	0.41	0.45	0.47	0.48	0.47	0.48	0.48	0.47	0.47	5.0%	2.8%
YoY growth	1.1%	1.0%	7.1%	2.5%	-11.7%	10.7%	9.3%	5.5%	1.0%	-0.9%	0.9%	-0.2%	-0.8%	0.2%		
% oil	73%	70%	72%	73%	72%	75%	77%	78%	78%	78%	78%	78%	78%	78%		
E&P cash margins (US$/bbl)	24.1	31.4	20.0	23.2	33.5	33.6	34.7	34.9	36.0	38.0	39.6	40.8	42.1	43.4	2.6%	2.9%
Per share data:																
EPS (US$)	5.7	7.0	2.4	6.1	4.8	5.6	6.0	6.3	6.4	6.7	7.1	7.2	7.5	8.0	6.8%	5.9%
DPS (US$)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0%	0.0%
Valuation Ratios:																
P/E	11.3x	9.7x	9.1x	8.6x	11.3x	9.6x	9.2x	8.6x	8.5x	8.1x	7.6x	7.6x	7.2x	6.8x		
EV/DACF	4.5x	4.4x	4.5x	4.3x	4.5x	4.7x	4.6x	4.3x	4.2x	3.9x	3.7x	3.5x	3.4x	3.2x		
Dividend yield	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%		
Free cash yield	-13.6%	-16.2%	-2.4%	-0.1%	-13.6%	-16.2%	-2.4%	-0.1%	-0.1%	3.2%	3.7%	3.8%	4.2%	5.3%		
Cash flow:																
Upstream	3.3	4.4	3.0	3.6	4.5	5.0	5.7	6.0	6.3	6.6	6.9	7.1	7.3	7.5	7.7%	5.8%
Downstream	0.6	0.5	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
Other and corporate	(0.1)	(0.1)	0.4	(0.5)	0.1	0.2	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.0)	(0.0)		
Sources of funds	**3.8**	**4.8**	**3.5**	**3.2**	**4.8**	**5.5**	**5.9**	**6.2**	**6.5**	**6.8**	**7.1**	**7.3**	**7.5**	**7.8**	6.9%	5.5%
Changes in working capital	(0.2)	(0.1)	(0.4)	0.1	(0.3)	0.1	0.2	0.1	0.0	0.1	0.0	(0.0)	(0.0)	0.0		
Cash flow from operations	**3.6**	**4.7**	**3.0**	**3.3**	**4.5**	**5.6**	**6.1**	**6.3**	**6.5**	**6.9**	**7.1**	**7.3**	**7.5**	**7.8**		
Capex	(3.6)	(4.4)	(2.9)	(5.5)	(7.0)	(8.5)	(6.5)	(6.3)	(6.5)	(6.3)	(6.4)	(6.6)	(6.7)	(6.9)	-2.1%	-0.2%
Free cash flow	**0.0**	**0.3**	**0.1**	**(2.2)**	**(2.5)**	**(2.9)**	**(0.4)**	**(0.0)**	**(0.0)**	**0.6**	**0.7**	**0.7**	**0.8**	**1.0**		
Ordinary dividends	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	-0.2%	-0.7%
as % of operating c/flow	4%	3%	4%	4%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%		
Discretionary free cash flow	**(0.1)**	**0.1**	**(0.0)**	**(2.3)**	**(2.6)**	**(3.0)**	**(0.6)**	**(0.2)**	**(0.2)**	**0.4**	**0.5**	**0.6**	**0.6**	**0.8**		
Disposals/(Acquisitions)	0.1	-	-	0.2	0.5	0.1	-	-	-	-	-	-	-	-		
Equity change	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(0.0)**	**0.1**	**(0.0)**	**(2.1)**	**(2.1)**	**(2.9)**	**(0.6)**	**(0.2)**	**(0.2)**	**0.4**	**0.5**	**0.6**	**0.6**	**0.8**		
Balance sheet:																
Net debt	3.4	3.0	3.1	4.0	5.7	8.8	9.4	9.6	9.7	9.3	8.7	8.2	7.5	6.7		
Net debt/EBITDA	0.6x	0.4x	0.8x	0.8x	1.2x	1.3x	1.2x	1.2x	1.2x	1.1x	1.0x	0.9x	0.8x	0.7x		
Interest cover	22.0x	26.2x	11.5x	13x	13x	16x	17x	19x	20x	20x	21x	22x	24x	28x		
Net debt/equity	35%	25%	23%	24%	31%	43%	42%	39%	37%	32%	28%	25%	21%	18%		
Capital employed:																
Upstream	11.3	12.9	14.2	19.8	22.7	26.3	27.9	29.0	30.1	30.6	31.1	31.6	31.9	32.2	6.2%	4.0%
Downstream	2.5	3.4	3.8	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1		
% Upstream	82%	79%	79%	88%	92%	93%	93%	94%	94%	94%	94%	94%	94%	94%		
Return on capital employed:																
Upstream	17.7%	20.4%	6.5%	7.9%	10.5%	8.4%	8.3%	8.3%	8.1%	8.1%	8.5%	8.4%	8.3%	8.4%		
Downstream	13.9%	10.9%	-5.2%	-4.1%	-1.0%	2.7%	2.1%	2.2%	1.9%	1.8%	2.2%	2.3%	2.4%	2.5%		
Aggregate group	**13.3%**	**13.9%**	**5.6%**	**5.4%**	**5.7%**	**7.3%**	**6.7%**	**6.6%**	**6.3%**	**6.2%**	**6.3%**	**6.1%**	**5.8%**	**5.8%**		

Source: Company reports and Citi Research

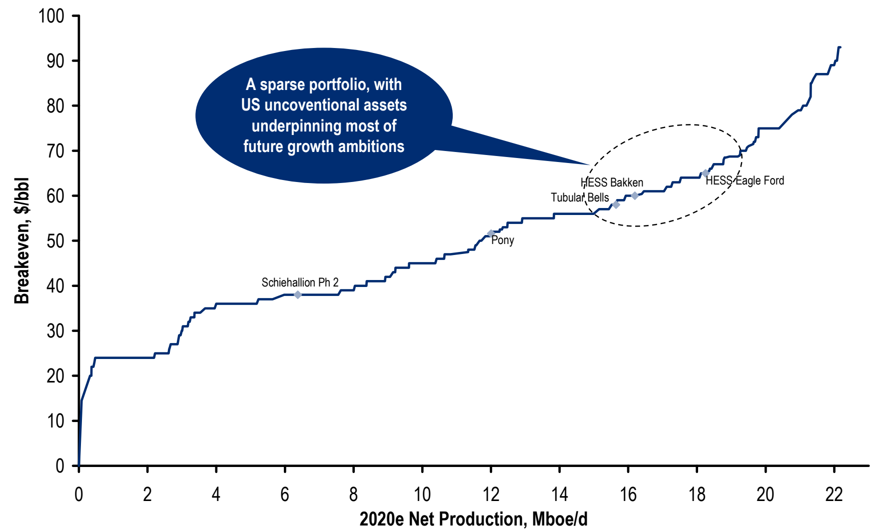
Hess - Upstream

Figure 102. Hess project portfolio (2012-2020 start-ups)



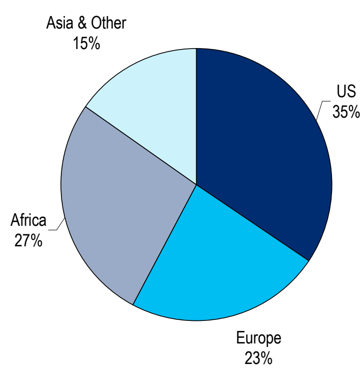
Source: Citi Research

Figure 103. Hess project portfolio versus the industry cost-curve



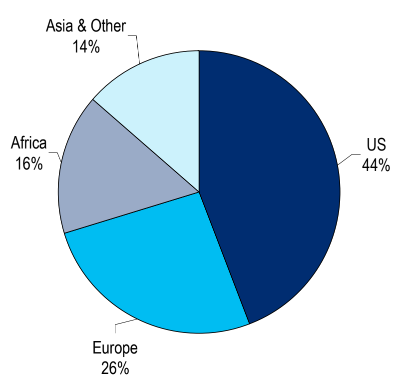
Source: Citi Research

Figure 104. 2012E cash flow by region



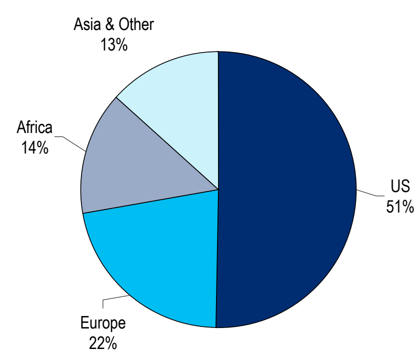
Source: Citi Research

Figure 105. 2016E cash flow by region



Source: Citi Research

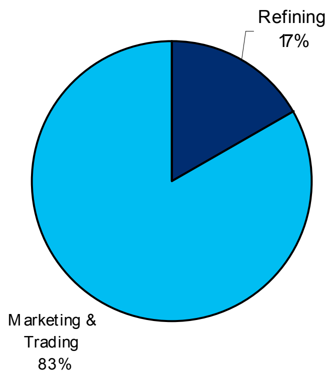
Figure 106. 2020E cash flow by region



Source: Citi Research

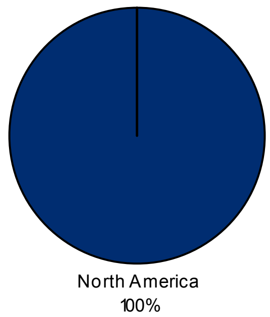
Hess – Downstream

Figure 107. 2016E cash flow by segment



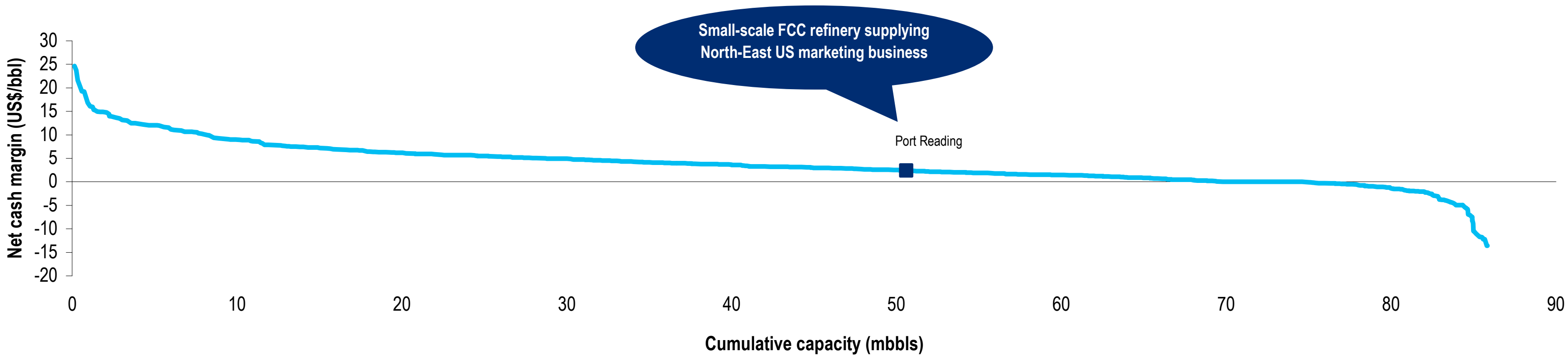
Source: Citi Research

Figure 108. 2016E cash flow by region



Source: Citi Research

Figure 109. Hess refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Imperial Oil – Buy, C$53/share price target

Disciplined Upstream Investment and Integrated Model to Capture Significant Value from Oil Sands Growth

Imperial Oil, 69% owned by ExxonMobil, has the highest production growth rate of our North American integrated oil companies through the end of the decade. IMO is nearing the completion of its Kearl Initial Development (KID), which is one of the largest investments the company has made in its lifetime. The Kearl Phase II and Cold Lake Expansions are future sanctioned projects which will increase IMO's upstream production and generate "high teens" returns on capital in the process. IMO will also benefit throughout this decade with its integrated refining assets. Its three refineries (IMO intends to sell or shut its Dartmouth refinery by 1Q'13) in Edmonton (Strathcona), Sarnia and Nanticoke will have access to discounted feedstocks and ratable sales through its retail and wholesale marketing operations through the decade.

- **Oil Sands Growth –** We currently estimate IMO will grow production from 286 mbls/d in 2012 to 536 mbls/d in 2020. This growth will allow IMO to increase its upstream operating cash flow from ~$2 bn in 2012 to $6.4bn by 2020. Most of this production growth will come from the Kearl project. KID will be completed in 1Q'12. The Phase II development will be complete in 2015 and then the final debottlenecking will eventually take production to 345 mbls/d by 2020 (gross). Kearl remains the only mining project without an associated upgrader. It remains to be seen how effective and reliable IMO's High Temp PFT technology will be. IMO is also on track to complete the Nabiye Expansion of its in-situ operations at Cold Lake by 2015.

- **Downstream Leader –** IMO's downstream assets include roughly 500 mbls/d of refining capacity largely in the advantaged North American Midwest region. We currently estimate that IMO has one of the most profitable refining networks of the integrated oil companies with great access to discounted Western Canadian crudes. IMO will also rationalize its refining assets by selling or closing its light sweet refinery in Dartmouth, Nova Scotia. Its remaining three refineries will have access to its own Western Canadian production at interior North American prices and its wholesale & retail marketing operations will enable IMO to place its refined products into markets. IMO also has an unexercised option to generate value through its Chemicals business with the potential completion of Mariner West Project in 2Q'13. The project will bring additional ethane from the Marcellus region to the Ontario market.

- **Valuation & 2020 Vision –** IMO currently trades in line with its Canadian peers but screens as one of the cheapest stocks among its global peers once the growth projects are taken into account through 2020. In our view, the market is not fully pricing in the upstream growth and value of the downstream business. However, we believe as this growth becomes more transparent, the market will reward IMO. We believe next year (2013) is a critical year for IMO as Kearl ramps up and it becomes more visible how the new technology works.

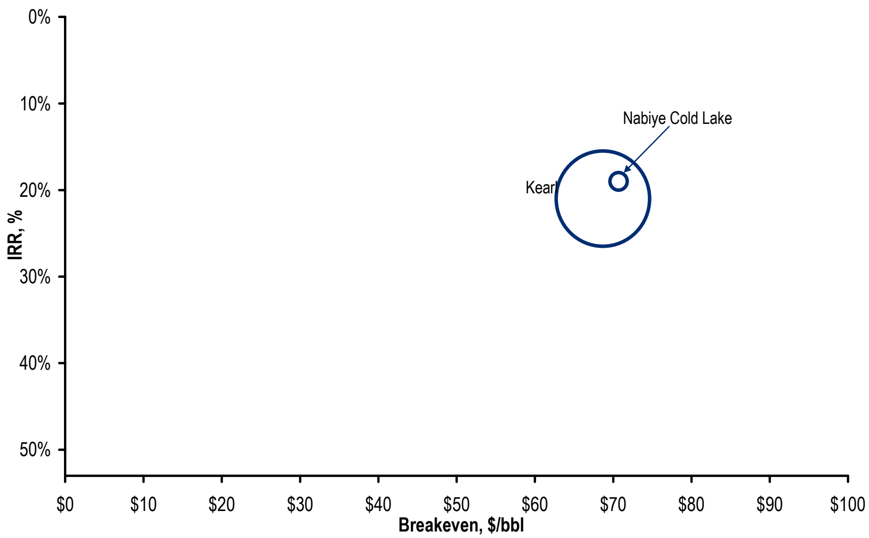
Figure 110. Imperial summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	73.0	96.5	61.3	81.7	109.9	110.3	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.7%	0.3%
AECO gas (US$/MMbtu)	5.8	7.3	3.5	4.0	3.6	2.3	3.4	3.9	4.4	4.6	4.6	4.6	4.6	4.6	5.0%	2.7%
Canadian Sweet Crude (US$/bbl)	80.3	106.5	71.5	82.3	102.9	89.8	86.8	92.2	95.9	99.6	102.6	105.7	108.8	112.0	-0.6%	0.9%
USD/CAD Rate	0.94	0.95	0.88	1.01	0.98	1.00	1.00	0.97	0.96	0.95	0.95	0.95	0.95	0.95		
E&P volumes (mboepd)	0.30	0.25	0.26	0.25	0.24	0.23	0.28	0.28	0.34	0.36	0.36	0.36	0.38	0.39	10.4%	5.7%
YoY growth	1.0%	-13.9%	0.6%	-3.3%	-3.5%	-2.7%	18.2%	1.8%	20.1%	8.4%	0.0%	-0.4%	5.1%	2.8%		
% oil	77%	84%	82%	82%	84%	87%	90%	90%	92%	93%	93%	94%	94%	95%		
E&P cash margins (US$/bbl)	25.0	34.7	17.7	25.1	33.3	28.9	30.3	33.9	36.9	41.0	42.9	44.2	46.0	47.6	7.4%	4.0%
Per share data:																
EPS (US$)	3.26	4.27	1.77	2.56	3.95	4.21	4.15	4.13	5.45	6.62	6.93	7.10	7.74	8.21	15.8%	8.5%
DPS (US$)	0.35	0.38	0.41	0.42	0.44	0.48	0.50	0.55	0.59	0.64	0.69	0.75	0.81	0.88	14.8%	8.0%
Valuation Ratios:																
P/E	14.4x	11.0x	26.5x	18.3x	12.0x	10.8x	11.3x	11.5x	8.7x	7.2x	6.8x	6.7x	6.1x	5.8x		
EV/DACF	10.4x	8.2x	17.6x	13.3x	10.1x	8.9x	9.7x	9.7x	7.4x	6.0x	5.3x	4.8x	4.0x	3.1x		
Dividend yield	0.7%	0.8%	0.9%	0.9%	0.9%	1.0%	1.1%	1.2%	1.2%	1.4%	1.5%	1.6%	1.7%	1.9%		
Free cash yield	5.9%	7.0%	-1.9%	-1.7%	1.4%	-1.8%	-2.3%	1.2%	4.1%	8.0%	8.9%	9.6%	9.6%	10.7%		
Cash flow:																
Upstream	2.4	2.9	1.3	1.7	2.5	2.0	2.6	3.1	4.2	5.1	5.4	5.5	6.0	6.4	21.1%	11.2%
Downstream	0.9	0.7	0.3	0.4	0.9	1.5	0.9	0.3	0.4	0.4	0.4	0.5	0.5	0.5		
Other and corporate	0.4	1.0	0.6	0.8	0.7	1.0	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.2		
Sources of funds	**3.7**	**4.7**	**2.2**	**3.0**	**4.0**	**4.5**	**4.4**	**4.4**	**5.6**	**6.6**	**6.9**	**7.1**	**7.7**	**8.1**	15.2%	8.2%
Changes in working capital	(0.2)	(0.4)	(0.7)	0.2	0.5	(0.1)	(0.2)	0.2	0.0	0.0	0.0	0.1	0.0	0.0		
Cash flow from operations	**3.5**	**4.2**	**1.5**	**3.2**	**4.5**	**4.4**	**4.2**	**4.6**	**5.6**	**6.6**	**6.9**	**7.2**	**7.7**	**8.2**		
Capex	(0.9)	(1.3)	(2.3)	(3.9)	(3.9)	(5.2)	(5.1)	(4.1)	(4.0)	(3.4)	(3.4)	(3.4)	(3.9)	(3.9)	-0.1%	-0.1%
Free cash flow	**2.6**	**2.9**	**(0.8)**	**(0.7)**	**0.6**	**(0.7)**	**(0.9)**	**0.5**	**1.6**	**3.2**	**3.6**	**3.8**	**3.8**	**4.3**		
Ordinary dividends	(0.3)	(0.3)	(0.3)	(0.4)	(0.4)	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.6)	(0.6)	(0.7)	(0.7)	15.0%	8.1%
as % of operating c/flow	9%	8%	22%	11%	8%	9%	10%	10%	9%	8%	9%	9%	9%	9%		
Discretionary free cash flow	**2.3**	**2.6**	**(1.1)**	**(1.0)**	**0.2**	**(1.1)**	**(1.4)**	**(0.0)**	**1.1**	**2.6**	**3.0**	**3.2**	**3.1**	**3.5**		
Disposals/(Acquisitions)	0.3	0.3	0.1	0.1	0.3	0.1	-	-	-	-	-	-	-	-		
Equity change	(2.3)	(2.2)	(0.5)	(0.0)	(0.0)	(0.0)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Surplus (deficit)	**2.5**	**2.9**	**(1.0)**	**(0.9)**	**0.5**	**(1.0)**	**(1.4)**	**(0.0)**	**1.1**	**2.6**	**3.0**	**3.2**	**3.1**	**3.5**		
Balance sheet:																
Net debt	(1.1)	(1.8)	(0.4)	0.5	0.0	1.0	2.3	2.2	1.0	(1.7)	(4.8)	(8.0)	(11.3)	(14.9)		
Net debt/EBITDA	(0.2x)	(0.3x)	(0.1x)	0.1x	0.0x	0.2x	0.4x	0.4x	0.1x	(0.2x)	(0.5x)	(0.9x)	(1.1x)	(1.4x)		
Interest cover	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm		
Net debt/equity	-13%	-20%	-4%	4%	0%	6%	12%	10%	4%	-5%	-13%	-19%	-23%	-27%		
Capital employed:																
Upstream	4.0	4.3	5.1	8.5	11.8	16.4	20.7	24.0	27.0	29.5	31.9	34.2	37.0	39.8	27.4%	14.4%
Downstream	3.3	3.5	3.6	3.4	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3		
% Upstream	55%	55%	59%	72%	78%	83%	86%	88%	89%	90%	91%	91%	92%	92%		
Return on capital employed:																
Upstream	55.6%	64.6%	22.8%	20.9%	24.2%	14.2%	14.0%	13.8%	16.3%	18.1%	17.5%	16.6%	16.9%	16.6%		
Downstream	28.3%	23.0%	7.7%	13.2%	26.5%	44.5%	26.4%	10.8%	12.0%	13.1%	13.6%	14.2%	14.8%	15.4%		
Aggregate group	**32.4%**	**35.7%**	**12.5%**	**15.0%**	**19.5%**	**17.3%**	**14.1%**	**12.2%**	**14.5%**	**16.3%**	**15.9%**	**15.4%**	**15.8%**	**15.7%**		

Source: Company reports and Citi Research

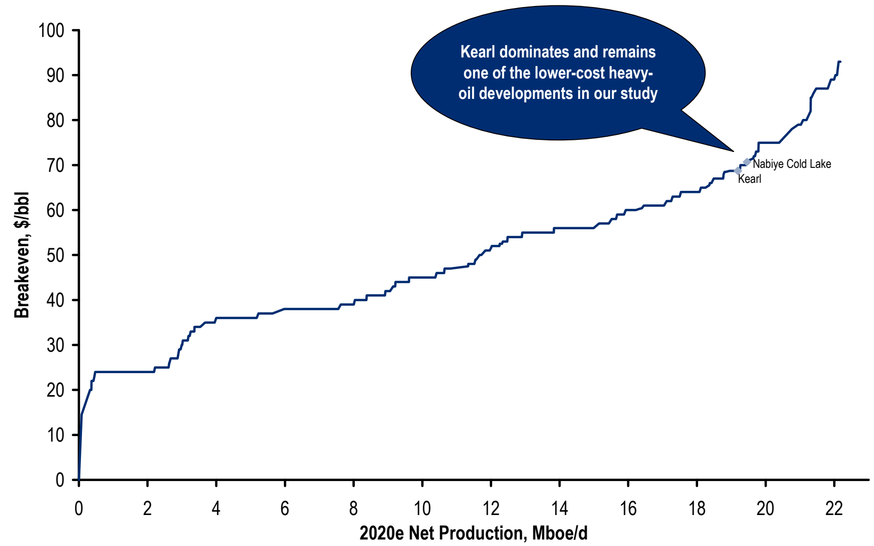
Imperial Oil – Upstream

Figure 111. Imperial Oil project portfolio (2012-2020 start-ups)



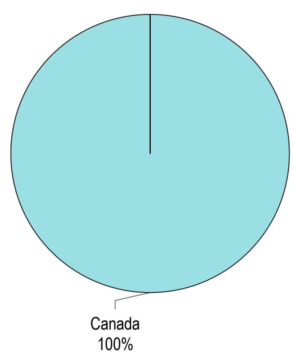
Source: Citi Research

Figure 112. Imperial Oil project portfolio versus the industry cost-curve



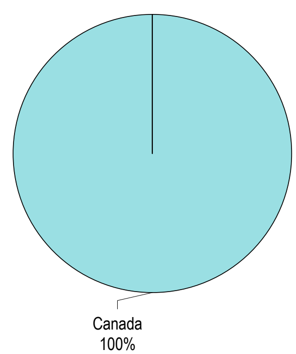
Source: Citi Research

Figure 113. 2012E cash flow by region



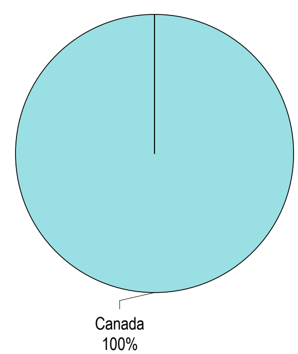
Source: Citi Research

Figure 114. 2016E cash flow by region



Source: Citi Research

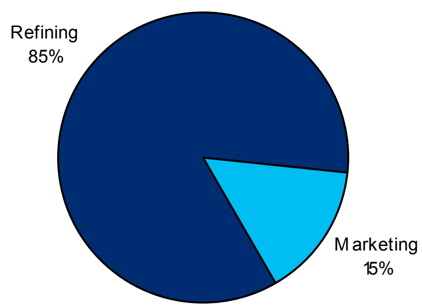
Figure 115. 2020E cash flow by region



Source: Citi Research

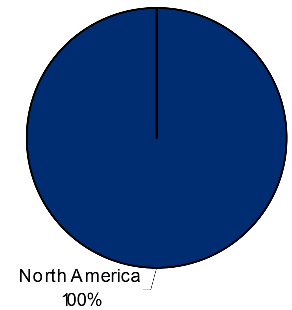
Imperial Oil – Downstream

Figure 116. 2016E cash flow by segment



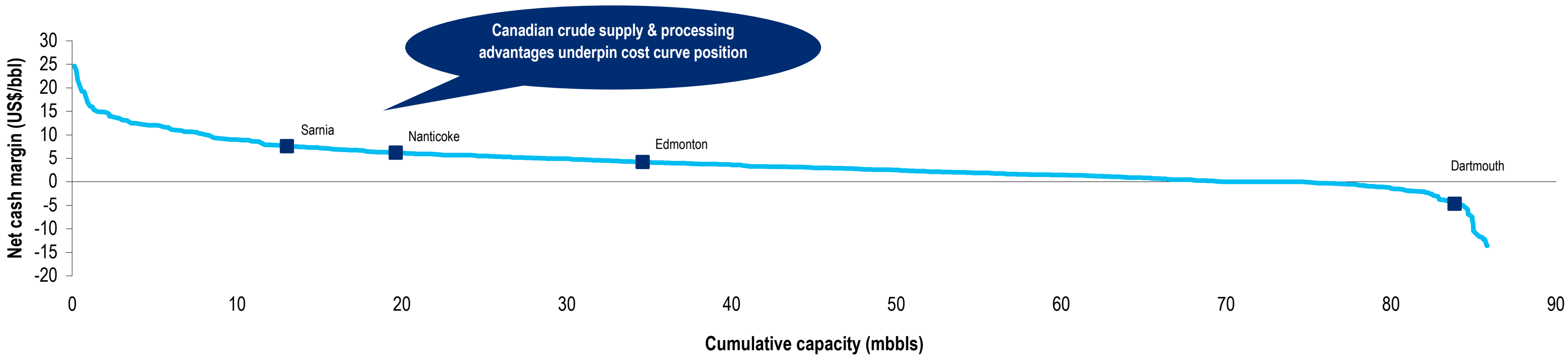
Source: Citi Research

Figure 117. 2016E cash flow by region



Source: Citi Research

Figure 118. GALP refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Inpex – Buy, ¥630000 Yen/share price target

FID assumptions for Ichthys project look conservative; we expect cash flows to double by FY3/21

We expect cash flows at Inpex will more than double by FY3/21 (CAGR of 9.6%), mainly as a result of earnings from the Ichthys project in Australia, although we also anticipate contribution from the Kashagan oil field, where production is slated to begin in 2013. We think the FID for Ichthys was based on conservative assumptions, and that there is little risk from cost overruns, etc. We also take a positive view of the exposure to Japanese utilities customers such as Chubu Electric and Tokyo Gas. We do not believe that future cash flows are adequately reflected in the share price, as current production and profit levels are low compared to their potential. If the company can realize part of future cash flows as current value through measures such as sales of a portion of Ichthys interests, we think the potential would be more widely recognized and the shares would likely appreciate.

- **Ichthys (earnings impact)** — we expect production to start in FY3/18 and use the following assumptions: total development investment of $34bn, LNG output of 8.4mn MT/year, LPG output of 1.6mn MT/year, long-term Brent crude price of $85/bbl, LNG price of $13.1/mmbtu, exchange rate of ¥80/$, and inflation rate of zero. On this basis, we estimate that Inpex's interests (an estimated 62%) will generate operating cash flow of about ¥330bn and NP of about ¥240bn in FY3/21. The scale of the project is underscored by comparison with FY3/11 actual operating cash flow of just over ¥270bn and NP of just under ¥130bn. The FID was reached in January 2012, and with customers set to be lined up on the sales front and lump-sum contracts accounting for three-quarters of capex, we see little risk from cost overruns, etc. Furthermore, at the time of the FID, it was also announced that land sufficient for expansion of up to four additional LNG trains had been set aside. If the presence of gas is confirmed in the surrounding exploration areas where Inpex is involved, the project could be expanded using existing facilities.

- **Ichthys (reserves, sales of interests)** — of more than 1.8bn bbl of estimated reserves, Inpex added about 1.1bn to its proven reserves at FY3/12 results. During FY3/13 Q1 (April–June), the company posted a gain of about ¥12bn (after taxes, based on our estimate) on its sales of interests in the Ichthys projects amounting to 3.195%. We estimate that sales of interests amounting to a total of about 14% will generate after-tax profits of about ¥35bn in FY3/13, ¥11bn in FY3/14, and ¥5bn in FY3/15. These estimates suggest that 100% interest would have an NAV of about ¥540bn, which indicates that industry participants are probably valuing the project close to our assumptions of IRR near to 11% and NAV around ¥580bn (discount rate of 7% for convenience).

- **Abadi (Indonesia)** — the Abadi project is smaller than Ichthys, and profitability is likely to be low, in our view. This is a floating LNG project with expected output of 2.5mn MT per annum. A preFEED study is underway, and production is slated to begin around 2020. Assuming a total investment of $9bn, condensate production around 8,000bbl/day, an LNG price around $12.90/mmbtu, and an inflation rate of zero, we estimate NP of ¥20bn-¥25bn in the late 2020s, annual operating cash flow of more than ¥60bn for a few years once production starts, and close to ¥25bn after that. Our IRR assumption is around 8.5%.

- **Existing projects** — the largest contribution to FY3/12 profits came from interests in the Mahakam project, which accounted for nearly 50% of NP. About 35% of production volume is accounted for by the UAE and other parts of the Middle East. One risk for Inpex is that contracts in both regions are due to expire in 2015–2020, but given the declining production volumes at the Mahakam project we think the impact on Inpex will be limited even if the terms of any new contract are unfavorable. The Middle East does not constitute a large proportion of profits.

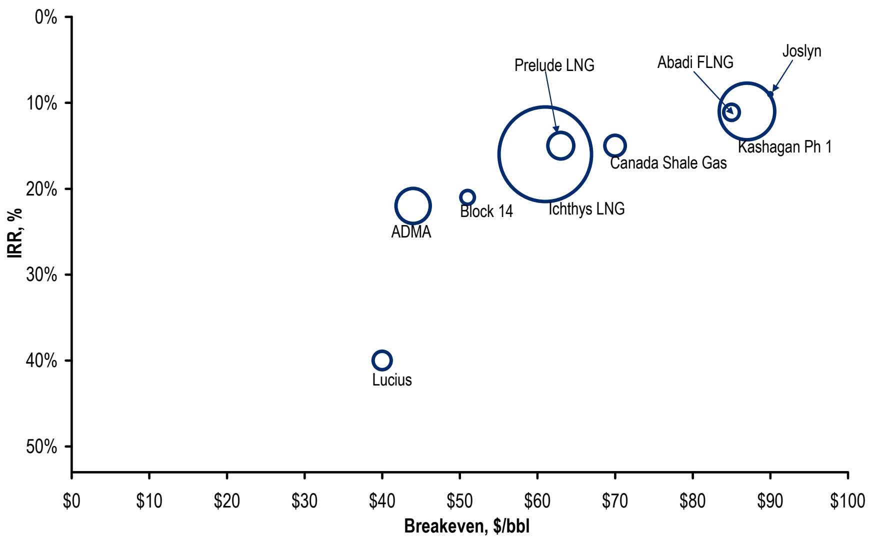
Figure 119. Inpex summary financial model

Yen BN, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	98.1	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
Yen/USD	116.6	113.6	103.2	92.9	86.0	79.1	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0		
E&P volumes (kboepd)	418	423	406	405	430	425	430	445	470	479	504	683	696	704	2.2%	5.6%
YoY growth		1.2%	-4.0%	-0.2%	6.2%	-1.2%	1.2%	3.5%	5.6%	1.9%	5.2%	35.4%	1.9%	1.2%		
% oil	51%	49%	46%	46%	51%	53%	56%	57%	61%	62%	59%	44%	45%	45%		
E&P cash margins (US$/bbl)	15.8	14.3	12.8	12.4	15.9	22.4	20.0	17.2	17.6	18.7	16.2	26.7	40.1	36.5	3.4%	9.7%
Per share data:																
EPS (JPY)	69,909	73,522	61,637	45,555	35,252	53,138	53,412	37,799	35,608	35,334	26,843	61,081	98,606	96,141	0.0%	11.8%
DPS (JPY)	7,000	7,500	8,000	5,500	6,000	7,000	7,000	7,000	7,000	7,000	7,000	8,000	10,000	10,000	3.1%	5.8%
Valuation ratios:																
P/E	6.5x	6.2x	7.4x	10.0x	12.6x	9.0x	8.6x	12.1x	12.8x	12.6x	16.6x	7.3x	4.5x	4.6x		
EV/DACF	nm	2.4x	4.4x	3.2x	7.5x	4.2x	4.5x	5.9x	7.0x	7.7x	8.3x	3.5x	1.7x	1.3x		
Dividend yield	1.5%	1.6%	1.8%	1.2%	1.3%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.8%	2.2%	2.2%		
Free cash yield	3.6%	10.5%	-2.1%	-3.1%	2.0%	4.6%	-21.6%	-34.4%	-27.1%	-17.7%	1.3%	15.0%	31.6%	28.1%		
Cash flow:																
Upstream		31.0	27.0	17.1	19.1	23.3	23.9	21.0	21.9	22.5	20.5	45.4	68.5	66.9	3.3%	14.9%
Other and corporate		15.6	(6.3)	6.4	5.0	3.6	1.4	1.7	1.5	1.5	1.3	0.0	(0.5)	(4.0)		
Sources of funds	**30.8**	**46.6**	**20.7**	**23.5**	**24.1**	**26.9**	**25.3**	**22.7**	**23.4**	**24.0**	**21.8**	**45.4**	**68.0**	**62.9**	-0.1%	11.2%
Changes in working capital	(2.3)	(4.7)	3.8	(0.4)	(0.4)	(1.3)	0.6	0.2	0.1	(0.4)	1.0	(1.6)	(1.8)	(0.4)		
Cash flow from operations	**28.5**	**41.9**	**24.5**	**23.1**	**23.7**	**25.5**	**25.9**	**23.0**	**23.4**	**23.6**	**22.9**	**43.8**	**66.2**	**62.5**		
Capex	(24.0)	(29.2)	(26.7)	(26.2)	(20.7)	(19.5)	(54.2)	(67.7)	(58.7)	(46.6)	(21.2)	(24.4)	(25.2)	(26.0)	17.6%	2.6%
Free cash flow	**4.6**	**12.8**	**(2.3)**	**(3.1)**	**3.0**	**6.0**	**(28.2)**	**(44.7)**	**(35.3)**	**(23.0)**	**1.7**	**19.4**	**41.0**	**36.5**		
Ordinary dividends	(1.3)	(2.8)	(1.9)	(1.4)	(1.5)	(1.7)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.3)	(3.0)	6.1%	7.5%
as % of operating c/flow	4%	7%	8%	6%	7%	7%	8%	9%	9%	9%	9%	5%	4%	5%		
Discretionary free cash flow	**3.3**	**9.9**	**(4.2)**	**(4.5)**	**1.5**	**4.2**	**(30.3)**	**(46.8)**	**(37.4)**	**(25.1)**	**(0.4)**	**17.4**	**38.7**	**33.5**		
Acquisitions	-	7.3	(5.2)	-	(8.7)	(2.0)	-	-	-	-	-	-	-	-		
Disposals	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Equity change	(1.2)	(1.1)	(3.0)	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**3.3**	**17.3**	**(9.4)**	**(4.5)**	**(7.2)**	**2.2**	**(30.3)**	**(46.8)**	**(37.4)**	**(25.1)**	**(0.4)**	**17.4**	**38.7**	**33.5**		
Balance sheet:																
Net debt	(0.9)	(126.2)	(102.7)	(92.5)	(46.4)	(356.5)	(259.0)	(7.0)	384.0	639.0	601.0	337.0	(194.0)	(659.0)		
Net debt/EBITDA	(0.0x)	(0.1x)	(0.1x)	(0.2x)	(0.1x)	(0.4x)	(0.4x)	(0.0x)	0.6x	0.9x	1.0x	0.4x	(0.2x)	(0.5x)		
Net debt/equity	0%	-11%	-8%	-7%	-2%	-16%	-11%	0%	15%	24%	22%	11%	-6%	-18%		
Interest cover	nm	nm	nm	nm	nm	nm	nm	nm	nm	185x	209x	nm	nm	nm		
Capital employed:																
Upstream	62.9	124.5	122.4	112.0	91.2	85.1	117.3	154.6	189.4	224.0	240.0	239.0	228.5	214.7	19.7%	10.0%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
% Upstream	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:																
Upstream	31.9%	17.6%	11.9%	9.4%	13.0%	21.1%	13.6%	7.4%	5.7%	4.9%	3.4%	7.6%	12.6%	13.1%		
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group	**nm**	**19.3%**	**15.5%**	**9.7%**	**9.3%**	**8.7%**	**6.5%**	**5.3%**	**4.1%**	**3.6%**	**2.3%**	**6.4%**	**10.6%**	**11.1%**		

Source: Company reports and Citi Research

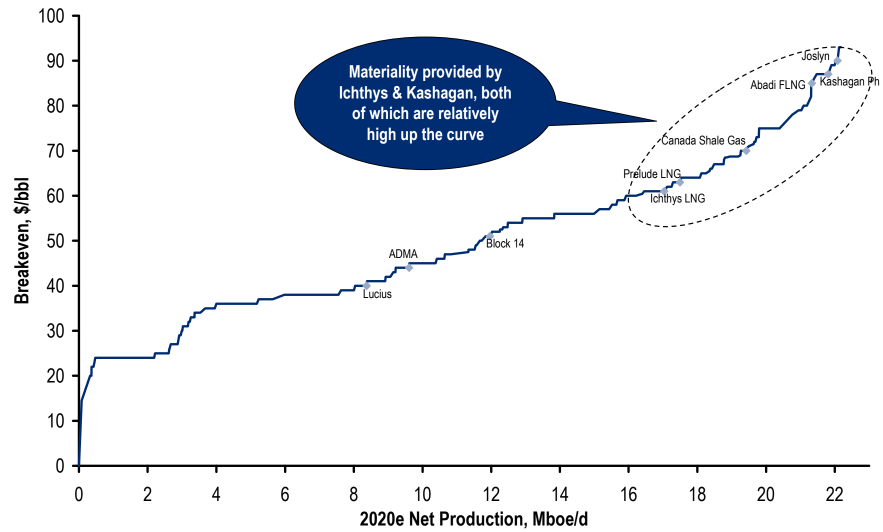
Inpex - Upstream

Figure 120. Inpex project portfolio (2012-2020 start-ups)



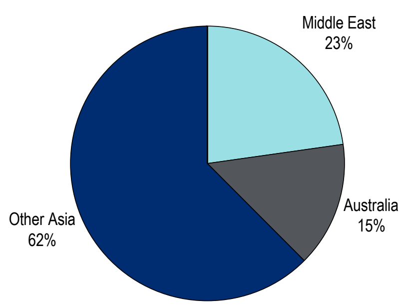
Source: Citi Research

Figure 121. Inpex project portfolio versus the industry cost-curve



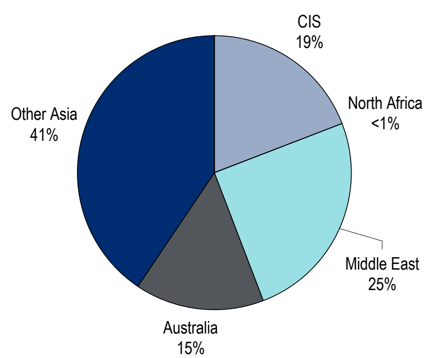
Source: Citi Research

Figure 122. 2012E cash flow by region



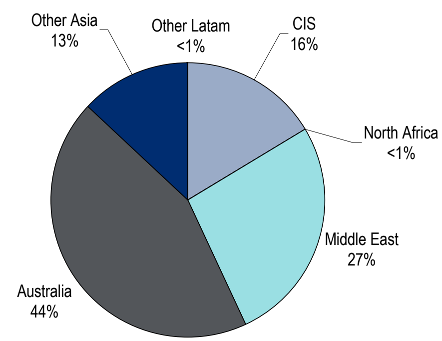
Source: Citi Research

Figure 123. 2016E cash flow by region



Source: Citi Research

Figure 124. 2020E cash flow by region



Source: Citi Research

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Lukoil – Buy, US$66.3/share price target

Stabilizing oil production, gas driving hydrocarbon growth, modernizing the downstream

Lukoil is Russia's second-largest oil producer and refiner. The company has a strong balance sheet and substantial reserves. However, its upstream assets are, by and large, relatively old, meaning that replacement costs are relatively high in the Russian context, limiting returns on capital reinvested to sustain current production levels. Greenfield projects are relatively few, but include two in the Caspian Sea with tax breaks sufficient to ensure adequate returns on investment.

- **Production stabilizing, oil reserves large, but assets are old, greenfields few, replacement costs high** — Lukoil has over 13bn bbl of proved oil reserves and a 20-year reserve life on 1.8mmbpd of production, 93% of which is in Russia. Although now stabilized, production had been falling in recent years under the combined effects of a period of parsimonious capex in legacy West Siberian assets and some misfortune with a key field (Yuzhnaya Khylchuya) in the Timan Pechora region, where production has been declining at c8% per *month* since 2010. In 2011 Lukoil sharply raised upstream investment and stabilized West Siberian production, while production at Yuzhnaya Khylchuya dropped enough that declines there have had an increasingly small impact on overall output. Materially large greenfields are few, but include the Filanovsky and Yuri Korchagin fields in the Caspian Sea and a 25% stake in Bashneft's Trebs & Titov fields. In recent years Lukoil has required $10-11 of capex per produced barrel to keep Russian oil production stable, an unacceptably high level given Russia's heavy oil taxation regime. However, a move to adapt the horizontal drilling revolution to the Russian oilfield – in particularly using the technology to economically develop smaller, marginal fields – may materially reduce that number.

- **Gas opportunities substantial** — Lukoil has over 4bn boe of proved gas reserves, giving it an R/P ratio in excess of 30 years. Much of those reserves are resident in the company's main dry gas asset, the Bolshetaskaya depression. Fully utilizing those reserves is dependent upon gaining market share in the oversupplied Russian gas market, something complicated by Gazprom's ownership of the transport pipeline system. Nonetheless, we see Russian dry gas production more than doubling over the next 5 years to 17.5bcm, although still short of the capacity of the company's assets. A move into Central Asia in the middle of the last decade is now paying dividends for Lukoil, as it is effectively selling gas to China via the recently opened pipeline in the region (albeit through its local government partners). Although C. Asian gas only accounted for c4.5bcm of the 18.6bcm the company sold in 2011, we think the margins earned were substantially higher than those earned on gas produced in Russia, and the growth potential in that region is equal to or greater than that in Russia.

- **Downstream a valuable asset, attracting substantial investment** — Due to the nature of the Russian export duty regime, which provides an implicit subsidy for refiners, Lukoil earns substantial margins on its Russian refining assets, over 1/3 of its total cash flow generation, we calculate. As with other Russian integrated oil companies, and motivated by the carrot implicit in the current export duty regime and the stick implicit in the sharp increases in export duties on fuel oil scheduled for 2015, Lukoil is dedicating a substantial portion of its capex budget to upgrading its Russian refineries to complexities comparable with international refineries.

- **Dividend policy may improve, but timetable not certain** — Over the last decade Lukoil has paid a steady 15-20% of net income as dividends. However, with the state-owned companies now being required to move to 25% payouts on Russian accounts, and with Rosneft making a voluntary move to paying 25% of IFRS, Lukoil's dividend policy is looking a bit tired. Lukoil's management and key shareholders have indicated that dividends will be pushed to first 30% and then 40% of net income in the medium term, but we think the market is unlikely to give the company credit for this until a concrete move is made in that direction.

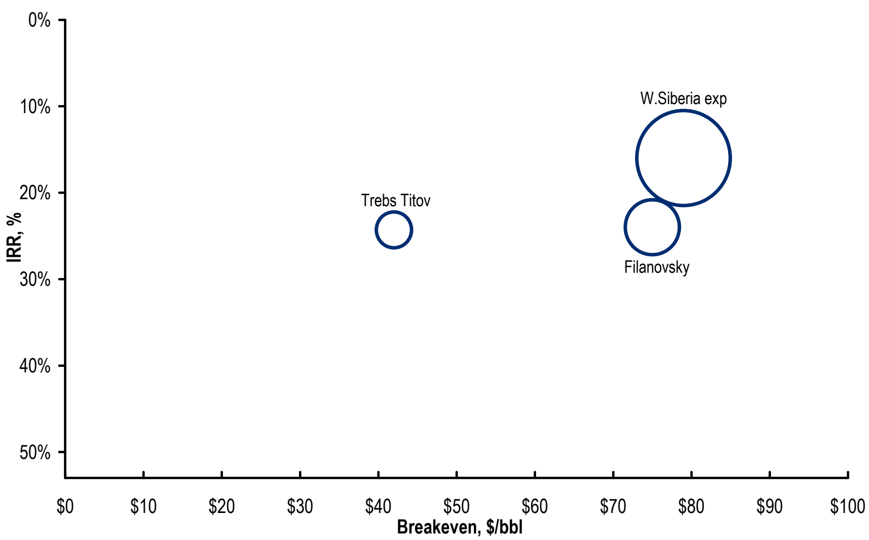
Figure 125. Lukoil summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	98.1	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
E&P volumes (mboepd)	2.22	2.25	2.22	2.25	2.14	2.15	2.28	2.37	2.49	2.58	2.66	2.66	2.66	2.67	4.5%	2.5%
YoY growth	1.0%	1.1%	-1.3%	1.4%	-4.5%	0.5%	5.9%	3.8%	5.3%	3.3%	3.2%	0.1%	0.1%	0.2%		
% oil	87%	85%	88%	86%	85%	86%	82%	79%	77%	75%	72%	72%	72%	73%		
E&P cash margins (US$/bbl)	16.4	7.9	12.8	11.7	15.2	14.9	12.2	11.6	11.2	10.7	10.3	10.6	10.8	11.1	-6.2%	-3.5%
Per share data:																
EPS (US$)	11.47	10.88	8.28	11.63	13.37	14.93	13.10	12.47	11.24	8.95	8.85	9.06	9.29	9.52	-6.6%	-3.7%
DPS (US$)	1.64	2.01	1.63	1.94	2.55	2.84	2.50	2.84	2.56	2.04	2.01	2.06	2.11	2.17	-3.2%	-1.8%
Valuation Ratios:																
P/E	5.3x	5.6x	7.4x	5.3x	4.6x	4.0x	4.6x	4.9x	5.5x	6.8x	6.9x	6.7x	6.5x	6.4x		
EV/DACF	4.7x	4.3x	4.5x	3.8x	3.0x	2.8x	3.0x	3.0x	2.7x	2.7x	2.4x	1.9x	1.4x	1.0x		
Dividend yield	2.7%	3.3%	2.6%	3.1%	4.2%	4.7%	4.2%	4.7%	4.2%	3.3%	3.3%	3.4%	3.5%	3.6%		
Free cash yield	3.3%	3.1%	7.2%	11.0%	8.4%	4.0%	-1.5%	14.5%	14.3%	9.1%	12.8%	14.7%	14.4%	14.3%		
Cash flow:																
Upstream	7.7	6.8	7.2	7.2	8.9	11.1	10.5	10.4	10.2	9.3	8.8	9.5	9.5	9.6	1.6%	0.9%
Downstream	2.4	9.3	2.3	4.4	6.2	5.6	5.8	5.9	6.0	5.6	5.5	5.9	5.9	6.0	-0.8%	-0.4%
Other and corporate	1.7	(3.2)	2.3	2.2	1.6	0.6	0.2	0.1	(0.3)	(0.4)	0.6	(0.2)	0.2	0.4		
Sources of funds	**11.8**	**12.9**	**11.8**	**13.9**	**16.7**	**17.3**	**16.4**	**16.3**	**15.9**	**14.6**	**14.9**	**15.3**	**15.6**	**16.0**	-0.8%	-0.5%
Changes in working capital	(1.7)	3.2	(2.3)	(2.2)	(1.6)	(0.6)	(0.2)	(0.1)	0.3	0.4	(0.6)	0.2	(0.2)	(0.4)		
Cash flow from operations	**10.1**	**16.1**	**9.5**	**11.7**	**15.1**	**16.6**	**16.2**	**16.3**	**16.2**	**15.0**	**14.3**	**15.4**	**15.5**	**15.6**		
Capex	(8.4)	(14.5)	(5.7)	(6.4)	(10.8)	(14.7)	(17.1)	(8.8)	(8.8)	(10.3)	(7.7)	(7.9)	(8.1)	(8.3)	-5.2%	-2.9%
Free cash flow	**1.7**	**1.6**	**3.8**	**5.2**	**4.3**	**1.9**	**(0.9)**	**7.5**	**7.4**	**4.7**	**6.6**	**7.6**	**7.4**	**7.3**		
Ordinary dividends	(1.3)	(1.6)	(1.4)	(1.6)	(1.8)	(2.4)	(2.1)	(2.4)	(2.2)	(1.7)	(1.7)	(1.8)	(1.8)	(1.8)	0.1%	0.1%
as % of operating c/flow	13%	10%	15%	13%	12%	15%	13%	15%	13%	12%	12%	11%	12%	12%		
Discretionary free cash flow	**0.4**	**0.0**	**2.4**	**3.7**	**2.5**	**(0.5)**	**(3.0)**	**5.0**	**5.3**	**3.0**	**4.9**	**5.8**	**5.6**	**5.5**		
Disposals/(Acquisitions)	-	290.3	41.3	62.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2		
Equity change	(0.6)	(0.2)	-	(3.7)	(0.4)	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**0.4**	**290.3**	**43.7**	**65.7**	**9.7**	**6.7**	**4.2**	**12.2**	**12.4**	**10.1**	**12.1**	**13.0**	**12.8**	**12.7**		
Balance sheet:																
Net debt	6.2	7.6	9.0	8.8	6.3	8.4	10.9	5.4	(0.4)	(3.9)	(9.0)	(15.6)	(21.2)	(26.9)		
Net debt/EBITDA	0.4x	0.5x	0.7x	0.6x	0.4x	0.4x	0.6x	0.3x	(0.0x)	(0.3x)	(0.6x)	(1.0x)	(1.3x)	(1.6x)		
Interest cover	77.0x	73.1x	25.7x	29x	36x	45x	33x	38x	117x	nm	nm	nm	nm	nm		
Net debt/equity	15%	15%	16%	14%	9%	10%	12%	6%	0%	-4%	-8%	-13%	-17%	-21%		
Capital employed:																
Upstream	36.4	43.4	49.2	51.9	58.7	63.6	67.9	71.0	75.2	78.8	83.6	88.1	92.5	97.2	10.6%	5.8%
Downstream	12.7	17.4	19.3	20.3	22.3	26.7	32.7	31.2	30.4	32.0	32.7	33.2	33.6	34.2	8.9%	4.8%
% Upstream	74%	71%	72%	72%	72%	70%	67%	69%	71%	71%	72%	73%	73%	74%		
Return on capital employed:																
Upstream	19.9%	8.9%	10.8%	10.8%	10.4%	12.1%	9.6%	8.7%	7.3%	5.5%	5.0%	4.9%	4.8%	4.7%		
Downstream	17.8%	30.2%	8.7%	16.9%	19.1%	14.5%	11.0%	11.2%	10.6%	8.1%	8.1%	8.1%	8.2%	8.3%		
Aggregate group	**21.4%**	**18.8%**	**12.4%**	**13.6%**	**13.7%**	**13.6%**	**10.7%**	**9.5%**	**8.1%**	**6.1%**	**5.8%**	**6.0%**	**6.1%**	**6.3%**		

Source: Company Reports and Citi Research Estimates

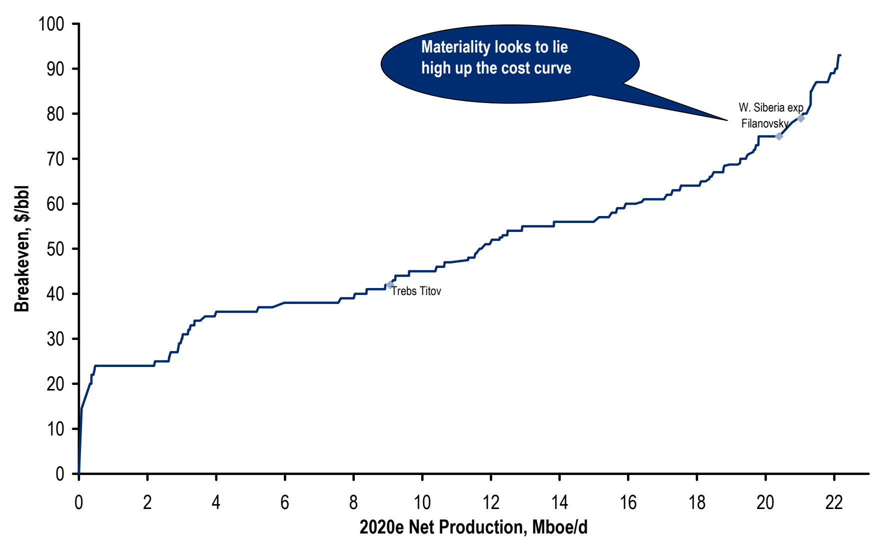
Lukoil - Upstream

Figure 126. Lukoil project portfolio (2012-2020 start-ups)



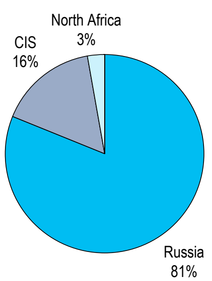
Source: Citi Research

Figure 127. Lukoil project portfolio versus the industry cost-curve



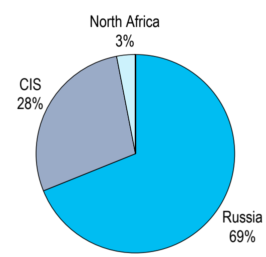
Source: Citi Research

Figure 128. 2012E cash flow by region



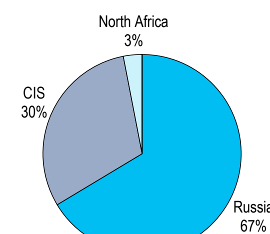
Source: Citi Research

Figure 129. 2016E cash flow by region



Source: Citi Research

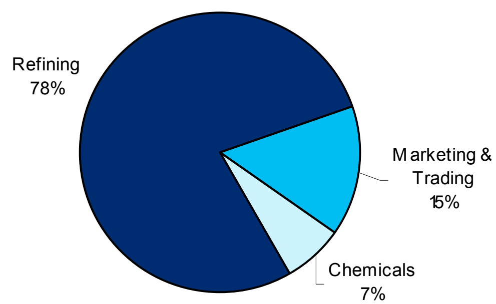
Figure 130. 2020E cash flow by region



Source: Citi Research

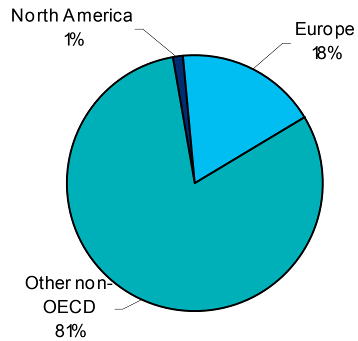
Lukoil – Downstream

Figure 131. 2016E cash flow by segment



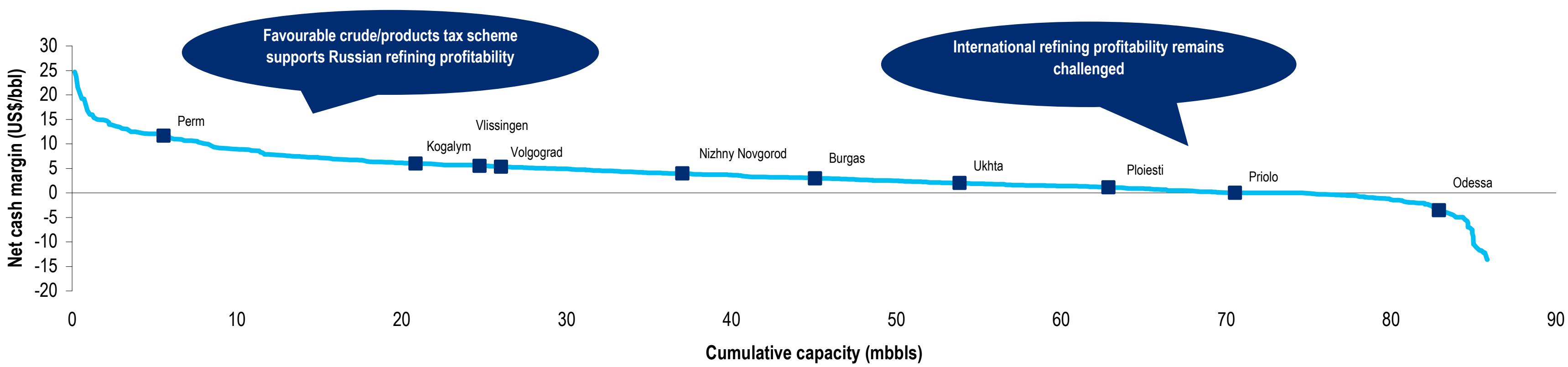
Source: Citi Research

Figure 132. 2016E cash flow by region



Source: Citi Research

Figure 133. Lukoil refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Occidental – Neutral, US$86/share price target

Premium Assets at a Premium Valuation

OXY's legacy positions in the Middle East, Texas and California have consistently generated strong cash margins with little exploration expense and a low degree of capital intensity. Furthermore, OXY's downstream chemicals business has generated high returns on capital employed. With over $16 billion of acquisitions since 2008, OXY has substantially increased its land positions in unconventional oil and gas assets across North America. We believe many of these acquisitions are a drag on the company's returns because many of the assets have not reached peak production levels or the drilling intensity in some of these areas has increased to point where we now see returns being diluted. California and to some degree the Permian continue to be the growth opportunities in OXY's portfolio.

- **Growth –** We currently estimate OXY will grow production by 8.5% through 2015. We then see growth tapering off after the company reaches a steady state production profile in California. We currently estimate OXY will more than double oil and gas production in California from 151mboe/d in 2012 to 327mboe/d through 2018. This growth is largely based on OXY's stated production curves and drilling plans that it has previously provided to the financial community. We currently estimate finding and development costs in California for OXY at just below $8 per barrel. However, given the lack of homogeneity in OXY's drilling program and the large amount of rigs that have recently been put to work in California, we believe there is risk of these costs moving up. In the Permian, OXY has a large land position that we believe could contribute more growth than what we have modeled. Overall, North American cash flows and capex appear balanced for now. In the Middle East, OXY continues to generate a significant amount of free cash flow while still growing production modestly. We actually view the Middle East as having some of OXY's best returns on invested capital.

- **Strategy** – OXY's focus on its domestic portfolio over the last few years calls into question the long-term strategy for OXY's portfolio in the Middle East. A number of key production contracts that are in the hands of OXY's competitors are coming up for renewal in the Middle East and it remains to be seen if OXY still has the ability to capture some of these contracts with OXY's former CEO, Dr. Ray Irani (still executive chairman), moving into retirement.

- **Downstream** – OXY's chemicals business has been generating consistent returns on invested capital and the chemicals segment returns look as if they may surpass the overall returns of the upstream business. So far OXY has no immediate plans to grow this business, however, we do believe any investment would be accretive to the company's valuation. We estimate OXY has a large and nebulous amount of capital invested at its midstream, trading and corporate entities ($18 billion). This capital is an overall drag on the company's returns.

- **Valuation & 2020 Vision** – OXY currently trades at a premium to the group and continues to trade at a premium through 2020. Its cash flow yield at 9% in 2020 is competitive in the group but no longer the best. We estimate OXY's upstream per unit margins will remains relatively flat through 2020 despite the growth of its unconventional production in North America.

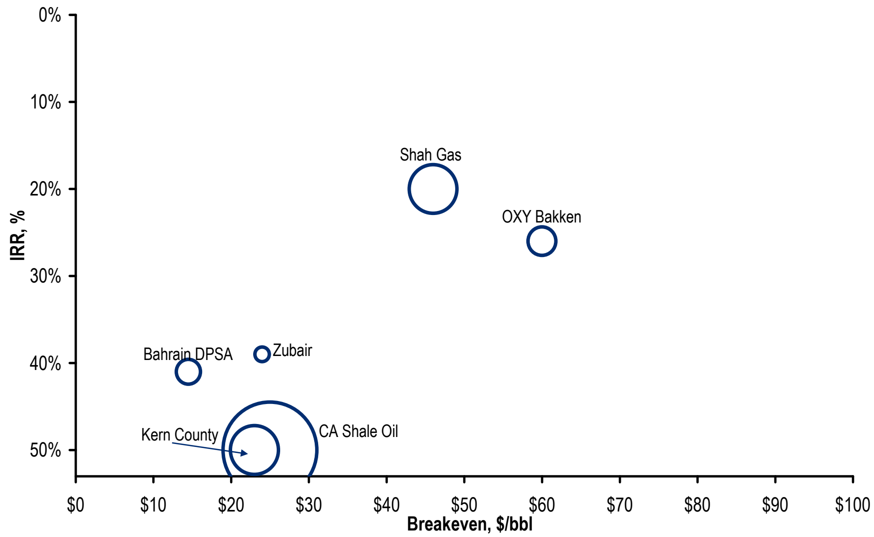
Figure 134. Occidental summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.6	97.7	61.9	79.7	110.9	108.2	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	0.3%	0.2%
WTI oil (US$/bbl)	72.2	99.7	61.8	79.5	95.1	90.7	85.8	92.4	95.1	97.8	100.6	103.5	106.5	109.6	0.6%	1.6%
US gas (US$/MMBtu)	7.0	8.9	3.9	4.4	4.0	2.6	3.9	4.5	5.0	5.3	5.3	5.3	5.3	5.3	5.6%	3.1%
E&P volumes (mboepd)	0.57	0.60	0.72	0.70	0.72	0.79	0.84	0.93	1.00	1.03	1.05	1.07	1.08	1.08	8.3%	4.5%
YoY growth	1.0%	5.4%	20.6%	-2.7%	2.9%	8.7%	7.0%	10.6%	7.5%	2.7%	2.4%	1.8%	0.3%	0.4%		
% oil	79%	77%	76%	72%	72%	72%	73%	72%	71%	71%	72%	72%	72%	72%		
E&P cash margins (US$/bbl)	37.3	50.2	21.6	29.5	35.8	31.4	30.1	30.2	31.4	32.4	33.2	34.2	35.3	36.6	0.4%	0.2%
Per share data:																
EPS (US$)	5.55	8.33	3.78	5.63	8.39	6.68	7.02	8.07	9.37	10.03	10.60	11.15	11.48	11.94	7.3%	4.0%
DPS (US$)	0.94	1.14	1.31	1.47	1.76	2.08	2.32	2.51	2.65	2.78	2.92	3.07	3.16	3.21	12.7%	6.9%
Valuation Ratios:																
P/E	15.6x	10.4x	22.9x	15.4x	10.4x	13.5x	12.4x	10.8x	9.3x	8.7x	8.2x	7.8x	7.6x	7.3x		
EV/DACF	9.0x	6.2x	9.6x	7.8x	5.8x	7.3x	6.9x	6.2x	5.4x	4.9x	4.5x	4.1x	3.8x	3.4x		
Dividend yield	1.1%	1.3%	1.5%	1.7%	2.0%	2.4%	2.7%	2.9%	3.0%	3.2%	3.4%	3.5%	3.6%	3.7%		
Free cash yield	4.7%	8.4%	3.2%	7.3%	6.8%	2.0%	3.3%	4.6%	6.0%	6.8%	7.4%	8.0%	8.4%	8.9%		
Cash flow:																
Upstream	7.8	11.0	5.7	7.6	9.5	9.0	9.3	10.3	11.5	12.2	12.8	13.4	13.9	14.4	8.8%	4.8%
Downstream	1.1	1.1	0.8	0.8	1.7	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	-0.3%	-0.2%
Other and corporate	(1.3)	(1.1)	0.7	0.6	0.8	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)		
Sources of funds	**7.6**	**11.0**	**7.2**	**8.9**	**11.9**	**10.2**	**10.3**	**11.4**	**12.7**	**13.4**	**14.1**	**14.7**	**15.2**	**15.8**	5.7%	3.1%
Changes in working capital	(0.7)	(0.4)	(1.4)	0.5	0.3	(0.3)	-	-	-	-	-	-	-	-		
Cash flow from operations	**6.9**	**10.7**	**5.8**	**9.4**	**12.3**	**9.9**	**10.3**	**11.4**	**12.7**	**13.4**	**14.1**	**14.7**	**15.2**	**15.8**		
Capex	(3.5)	(4.7)	(3.6)	(4.2)	(7.5)	(8.4)	(8.0)	(8.2)	(8.4)	(8.7)	(8.9)	(9.1)	(9.3)	(9.6)	5.0%	2.7%
Free cash flow	**3.4**	**6.0**	**2.2**	**5.2**	**4.8**	**1.4**	**2.3**	**3.2**	**4.2**	**4.8**	**5.2**	**5.6**	**5.9**	**6.2**		
Ordinary dividends	(0.8)	(0.9)	(1.1)	(1.2)	(1.4)	(1.7)	(1.9)	(2.0)	(2.1)	(2.3)	(2.4)	(2.5)	(2.6)	(2.6)	12.6%	6.8%
as % of operating cflow	11%	9%	18%	12%	12%	17%	18%	18%	17%	17%	17%	17%	17%	16%		
Discretionary free cash flow	**2.7**	**5.0**	**1.2**	**4.0**	**3.3**	**(0.3)**	**0.4**	**1.1**	**2.1**	**2.5**	**2.8**	**3.1**	**3.3**	**3.6**		
Disposals/(Acquisitions)	(1.4)	(4.7)	(1.8)	(4.9)	(4.9)	(0.1)	-	-	-	-	-	-	-	-		
Equity change	(1.2)	(1.5)	(0.0)	(0.1)	(0.3)	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**1.3**	**0.3**	**(0.6)**	**(0.9)**	**(1.6)**	**(0.4)**	**0.4**	**1.1**	**2.1**	**2.5**	**2.8**	**3.1**	**3.3**	**3.6**		
Balance sheet:																
Net debt	(0.2)	1.0	1.6	2.5	2.1	2.2	1.8	0.7	(1.4)	(3.9)	(6.7)	(9.8)	(13.1)	(16.7)		
Net debt/EBITDA	(0.0x)	0.1x	0.2x	0.2x	0.1x	0.2x	0.1x	0.0x	(0.1x)	(0.2x)	(0.4x)	(0.5x)	(0.6x)	(0.8x)		
Interest cover	33.5x	115.2x	56.6x	92x	49x	97x	80x	93x	109x	135x	202x	329x	461x	759x		
Net debt/equity	-1%	4%	5%	8%	6%	5%	4%	1%	-3%	-6%	-10%	-13%	-16%	-19%		
Capital employed:																
Upstream	23.4	25.5	26.9	31.9	39.0	41.6	43.7	45.8	47.9	50.0	52.2	54.4	56.6	58.8	8.6%	4.7%
Downstream	6.6	6.4	8.8	10.4	12.0	12.9	13.8	14.7	15.5	16.3	17.1	17.9	18.6	19.4		
% Upstream	78%	80%	75%	75%	77%	76%	76%	76%	76%	75%	75%	75%	75%	75%		
Return on capital employed:																
Upstream	25.4%	35.5%	11.5%	16.7%	18.1%	12.8%	12.2%	13.5%	15.1%	15.5%	15.7%	15.9%	15.7%	15.8%		
Downstream	4.2%	4.8%	1.8%	0.0%	3.1%	3.0%	2.6%	2.6%	2.5%	2.4%	2.3%	2.2%	2.1%	2.0%		
Aggregate group	**20.2%**	**24.2%**	**8.7%**	**11.5%**	**15.4%**	**11.0%**	**10.8%**	**11.7%**	**12.7%**	**12.9%**	**12.8%**	**12.8%**	**12.6%**	**12.4%**		

Source: Company Reports and Citi Research Estimates

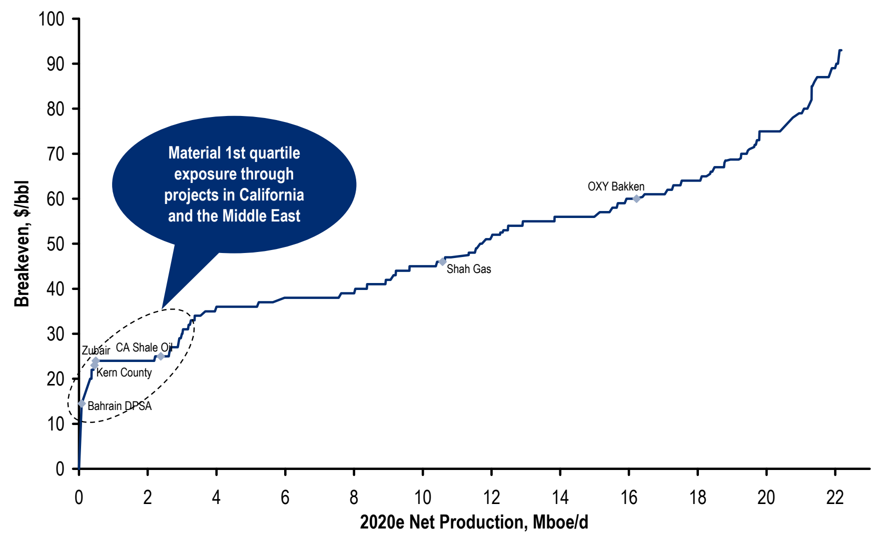
Occidental – Upstream

Figure 135. Occidental project portfolio (2012-2020 start-ups)



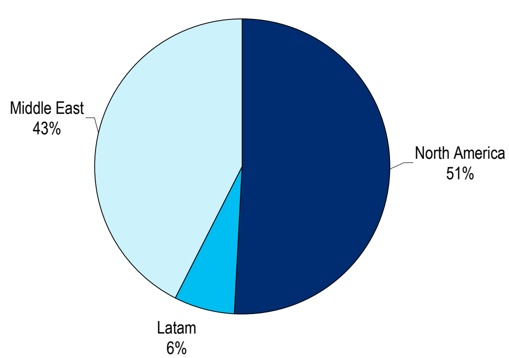
Source: Citi Research

Figure 136. Occidental project portfolio versus the industry cost-curve



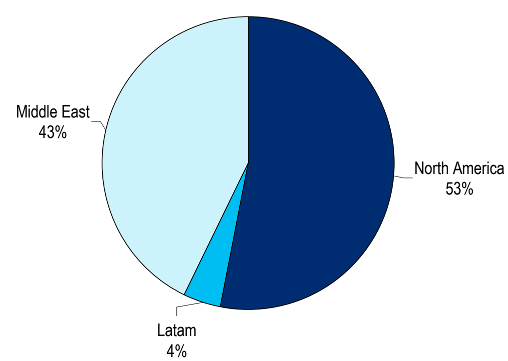
Source: Citi Research

Figure 137. 2012E cash flow by region



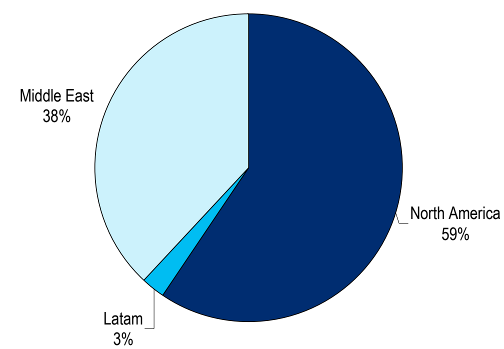
Source: Citi Research

Figure 138. 2016E cash flow by region



Source: Citi Research

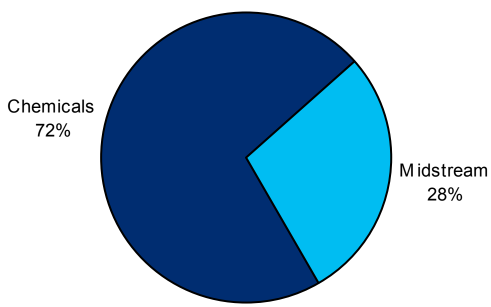
Figure 139. 2020E cash flow by region



Source: Citi Research

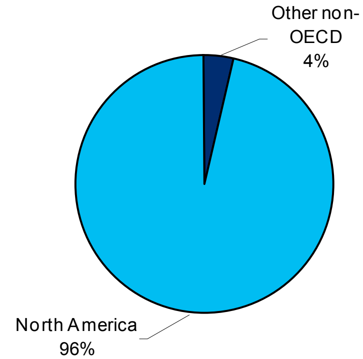
Occidental – Downstream

Figure 140. 2016E cash flow by segment



Source: Citi Research

Figure 141. 2016E cash flow by region



Source: Citi Research

OGX – Neutral (High Risk), R$7.7/share price target

Short-term development value conundrum and balance sheet concerns

OGX's qualities, in our view, are easy to understand in strong markets. The company was structured as a Brazilian exploration powerhouse, offering a promising diversified portfolio with more than 76 wells drilled successfully, a strong cash position, oil price leverage and an experienced management team with an impressive track record that led Petrobras' exploration campaign. More recently, however, the story has turned around after a series of disappointments reduced production expectations, raising concerns on the strength of its balance sheet and leading to management turnover. Although we like the company's superior production growth outlook, our analysis suggests that medium-term growth/profitability does not allow it yet to trade at a compelling valuation discount versus peers. Meanwhile we also see downside to current consensus expectations. We believe that positive stock performance will be strongly predicated on either asset sales that prove the value of its portfolio or from strong results on the rest of its exploration campaign which would justify new reserve developments.

- **Profitable growth from Brazil's shallow waters oil… —** OGX has three production projects on track amounting to nearly 260kbd of oil production capacity installed until the end of 2013, and two other projects in progress with another 200kbd of capacity expected in less than five years time. OGX's average oil field offers a compelling cost and taxation structure based on its shallower water development setting.

- **… but with some geological challenges —** However, in spite of the positive cost structure, most of OGX's oil fields are located in heterogeneous carbonates that do not have a production track record long enough to sustain its productivity case yet. We expect that management's, and ultimately our own, production and cash flow assumptions could be at risk depending on reservoir performance, particularly on average peak well flow rates and decline rates over time. We currently assume our economic model is well balanced to long-run performance risks, but we could still see downside to sustainable peak flow rates.

- **Stock already pricing upcoming projects OSX4 and OSX5 already —** We see the current stock valuation pricing fair value for a backlog scenario of production units OSX-1 to OSX-5 under our $85/b oil price assumption. At the heart of our Neutral rating is our belief that there is a low upside equation relative to the underlying risks for investors to pay for exploration value in the next 12-months. In fact, in order to confirm final commerciality for OSX4 and OSX5 production platforms, the company will need to drill at least another 6 exploration wells in the Campos basin until 2H13.

- **Thin margin for error on balance sheet —** Assuming a stable 5kboed flow rate for its Campos basin oil carbonates development, we see OGX's cash position reaching a low level of nearly $250-300m, though growing relatively fast post 2014 depending on the speed of any new development and exploration project. While we do not see any relevant cash flow challenge at OGX, we believe the low cash position combined with bond covenants restricting raising of new standard debt could become a risk.

- **A resource and M&A play —** In spite of its massive production increase, in our opinion, currently playing OGX stock should be mainly a call to exploration and underlying value of its resources and/or M&A opportunities. We are not keen to assign value to exploratory results that are not yet slated for development despite the company successfully drilling more than 21 wells in 3 basins (finds ranging from gas in Santos/Parnaíba basins to oil in Campos basin's pre-salt and sandstone reservoirs). We believe that OGX can still offer significant value potential from its resource base depending on its ability to prove its commerciality and to fund its development. Yet, OGX will also start drilling wildcats in Colombia and offshore Brazil that could offer additional value growth potential.

- **Valuation discount to some global peers but unclear risk level comparison —** While we see OGX only trading at reasonable earnings multiples around 2015-16, we believe its discount to some of its exploration peers does not offer yet a compelling relative valuation call. However, if the company is able to confirm OSX-4 and OSX-5 units as we expect, we believe there will be significant relative value for OGX from current levels until 2020.

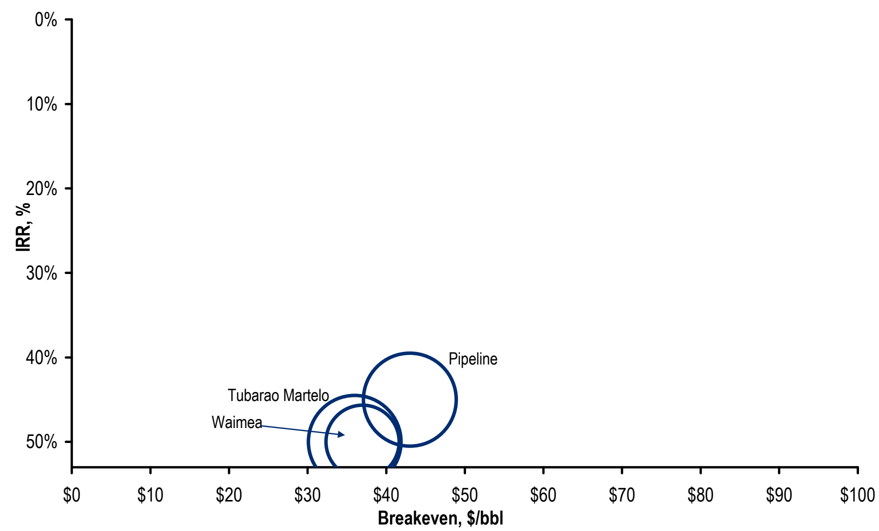
Figure 142. OGX summary financial model

BRL Bn, unless stated	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:															
Brent oil (US$/bbl)	97.4	62.1	80.1	111.1	108.1	99.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	-5.2%	-2.9%
E&P volumes (mboepd)	-	-	-	-	0.01	0.02	0.06	0.11	0.14	0.16	0.17	0.17	0.16		
YoY growth	-	-	-	-	0.0%	109.7%	237.8%	78.6%	26.0%	13.1%	6.3%	-0.4%	-1.9%		
% oil	-	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%	100%		
E&P cash margins (US$/bbl)	-	-	-	-	(121.0)	(6.6)	20.2	28.3	29.4	31.7	33.1	33.3	33.6		
Per share data:															
EPS (US$)	11.1	0.0	(0.2)	(0.2)	(0.2)	(0.0)	0.3	0.7	1.0	1.2	1.4	1.4	1.4		
DPS (US$)	-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Valuation Ratios:															
P/E	na	na	na	na	na	na	21.9x	8.7x	6.5x	5.2x	4.6x	4.5x	4.5x		
EV/DACF		na	na	na	na	96.9x	27.7x	9.8x	6.7x	4.6x	3.2x	2.2x	1.2x		
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Free cash yield	-560.2%	1.8%	-3.1%	-5.1%	-11.1%	-13.6%	-1.0%	8.0%	13.7%	18.3%	21.1%	22.9%	23.4%		
Cash flow:															
Upstream	-	-	(2.6)	(3.6)	(3.3)	(2.3)	1.0	3.6	4.8	6.0	6.9	7.0	7.0		
Other and corporate	(1.1)	0.3	1.8	2.9	2.6	2.6	(0.0)	(1.0)	(1.3)	(1.7)	(2.0)	(2.0)	(2.0)		
Sources of funds	**(1.1)**	**0.3**	**(0.8)**	**(0.7)**	**(0.7)**	**0.2**	**0.9**	**2.6**	**3.5**	**4.3**	**4.9**	**5.0**	**5.1**		
Changes in working capital	(0.0)	0.0	0.2	(0.2)	(0.1)	(0.1)	(0.2)	(0.2)	(0.0)	(0.1)	(0.1)	(0.0)	(0.0)		
Cash flow from operations	**(1.2)**	**0.4**	**(0.6)**	**(0.8)**	**(0.8)**	**0.1**	**0.7**	**2.4**	**3.5**	**4.2**	**4.8**	**5.0**	**5.1**		
Capex	(0.0)	(0.0)	(0.0)	(0.2)	(1.5)	(3.0)	(0.9)	(0.7)	(0.6)	(0.4)	(0.4)	(0.2)	(0.2)	-6.5%	-3.6%
Free cash flow	**(1.2)**	**0.4**	**(0.7)**	**(1.1)**	**(2.3)**	**(2.8)**	**(0.2)**	**1.7**	**2.9**	**3.8**	**4.4**	**4.8**	**4.9**		
Ordinary dividends	-	-	-	-	-	-	-	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)		
as % of operating c/flow	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Discretionary free cash flow	**(1.2)**	**0.4**	**(0.7)**	**(1.1)**	**(2.3)**	**(2.8)**	**(0.2)**	**1.7**	**2.9**	**3.8**	**4.4**	**4.8**	**4.9**		
Disposals/(Acquisitions)	-	(0.0)	-	-	-	-	-	-	-	-	-	-	-		
Equity change	6.5	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(1.2)**	**0.4**	**(0.7)**	**(1.1)**	**(2.3)**	**(2.8)**	**(0.2)**	**1.7**	**2.9**	**3.8**	**4.4**	**4.8**	**4.9**		
Balance sheet:															
Net debt	(7.7)	(7.3)	(4.8)	(0.7)	4.1	7.0	7.2	5.5	2.6	(1.2)	(5.7)	(10.5)	(15.5)		
Net debt/EBITDA	39.1x	34.6x	11.6x	0.9x	(8.4x)	79.2x	4.4x	1.3x	0.5x	(0.2x)	(0.8x)	(1.5x)	(2.1x)		
Interest cover	nm	nm	(3x)	nm	(2x)	2x	13x	26x	58x	nm	nm	nm	nm		
Net debt/equity	-84%	-80%	-52%	-8%	51%	88%	81%	49%	18%	-6%	-25%	-38%	-48%		
Capital employed:															
Upstream	1.5	1.8	4.5	20.8	27.0	28.3	31.5	33.2	33.9	34.1	34.2	34.0	33.6	10.1%	5.5%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-		
% Upstream	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:															
Upstream	0.0%	-9.0%	-13.8%	-4.3%	-1.1%	0.2%	3.5%	8.0%	10.0%	11.9%	13.1%	13.3%	13.4%		
Other	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group	**0.0%**	**-9.0%**	**-13.8%**	**-4.3%**	**-1.1%**	**0.2%**	**3.5%**	**8.0%**	**10.0%**	**11.9%**	**13.1%**	**13.3%**	**13.4%**		

Source: Company Reports and Citi Research Estimates

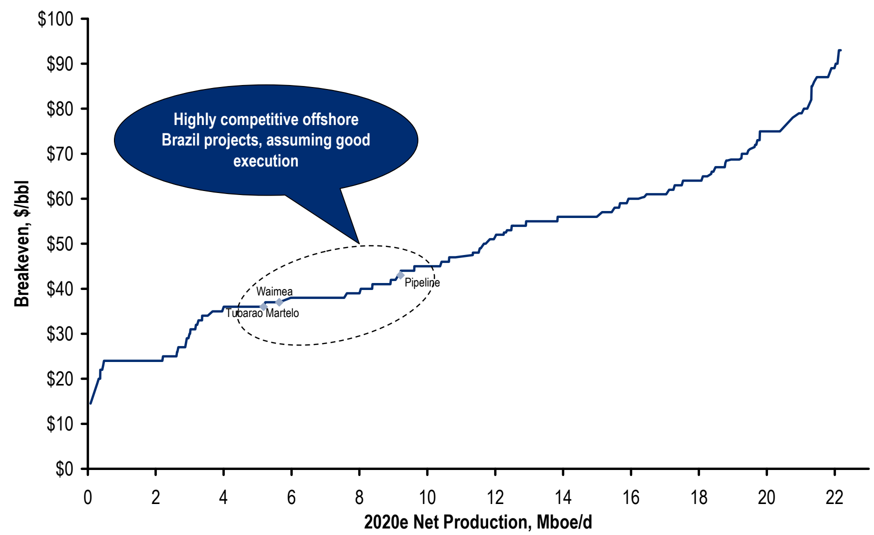
OGX - Upstream

Figure 143. OGX project portfolio (2012-2020 start-ups)



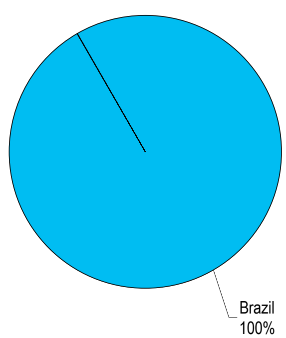
Source: Citi Research

Figure 144. OGX project portfolio versus the industry cost-curve



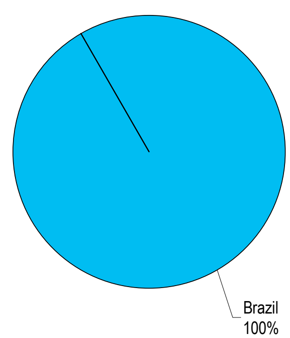
Source: Citi Research

Figure 145. 2012E cash flow by region



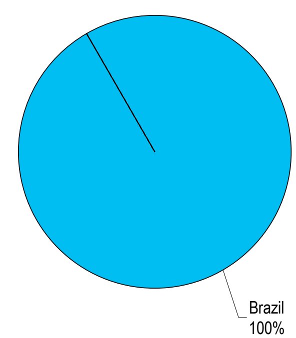
Source: Citi Research

Figure 146. 2016E cash flow by region



Source: Citi Research

Figure 147. 2020E cash flow by region



Source: Citi Research

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OMV – Neutral, €26/share price target

Revitalized strategy, but long-term delivery

OMV is a company in transition. A revitalized strategy sees Upstream as the growth engine for the company, with acquisitions and exploration used to try and re-invent the portfolio; although little moves the dial until 2016, there is now growing visibility around longer-term growth objectives. A focus on European gas is also an element, but a difficult proposition in a market where current demand and margins are weak. Finally, selling the importance of Turkey (and to some extent Romania) as an energy hub that bridges Middle East and Europe is perhaps a reasonable concept, but is also one that is going to require long term patience from investors. Even under our 2020 view of the industry we feel the OMV strategy is quite long-dated in nature, bias towards second half of decade and beyond delivery, perhaps reflecting that the core strategic owners (IPIC/OIAG) can afford to be patient. There is some valuation support around our financial screens, but we think that needs to be balanced against the risks on delivering on a long-term strategic renewal.

- **Upstream rebuild –** Acquisitions (Tunisia, Norway) and exploration success (Bina Bawi - Kurdistan, Domino – offshore Romania) have transformed the OMV Upstream portfolio from what it was barely two years ago. Growth looks somewhat anaemic to 2015, but should start to trend higher from 2016 reflecting principally oil development West of Shetlands, gas in Norway and oil in Kurdistan. The company continues to highlight the desire to add still more through acquisitions, although at the same time there is limited financial capacity for anything too material – we suspect acreage and sub US$100 M stake-builds will be the focus. The overall growth portfolio looks to have profitability/breakeven metrics towards the middle of the peer group average, and a materiality presence that looks more consistent with the large-cap oils versus some of the smaller ‘growth’ names.

- **Romania renegotiation –** Although the growth assets look to offer good profitability characteristics, we see the profitability of the upstream portfolio as a whole depending heavily on the construct of the Romanian business over the coming years. On the one hand Romania has now signed up to gas price reform (wholesale from 2014, domestic from 2018), on the other is the expectation that E&P taxes will rise from 1 January 2015 when the current 10-year fiscal stability clause ends. The Government will need to balance OMV’s promise of investment potential, against the desire to stop the company benefitting too greatly from pricing reform.

- **Downstream refocus –** OMV’s downstream business has also been transformed over the last two years, principally through the acquisition of Petrol Ofisi in Turkey and the continued expansion of the Borouge petrochemical joint venture in Abu Dhabi. The core European downstream business continues to struggle in difficult markets reflecting the poor competitive position of the assets. There are attempts to restructure around the edges of the portfolio, although we think the planned material disposal of Bayernoil might provide more problematic than hoped. Petrol Ofisi has enjoyed a better 2012 than it did in 2011 (when margins were severely squeezed), although we think this asset needs to deliver on considerable growth if it is to prove anything other than an expensive acquisition. Overall returns for the Downstream remain below cost of capital (given the poor competitive position of the core European portfolio) and we think the +2% ROACE by 2014 will likely prove a fairly challenging target for this asset base.

- **Financial framework –** Downstream uncertainties and continued pressure in wholesale gas trading act as key near-term issues around OMV’s financial management. We expect a continued conservative approach to the balance sheet, with capex matching available cash flow and a goal to reduce gearing down from the c. 39% that it currently sits around. We see the business as relatively low growth to 2016, but perhaps offering more through the back-end of the decade as the E&P portfolio starts to deliver. Valuation metrics do not price in that delivery, although given the long-term profile, a somewhat sketchy track record and the uncertainties around Romania renegotiation it is perhaps hardly a surprise.

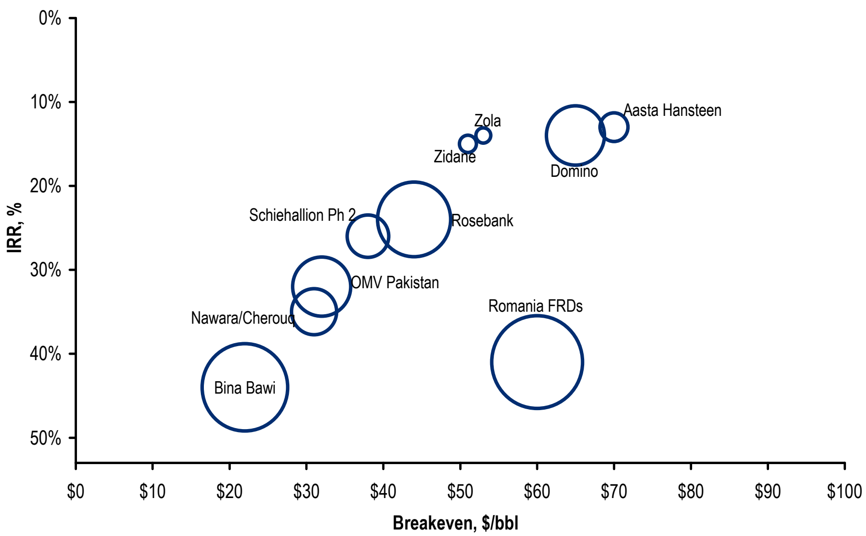
Figure 148. OMV summary financial model

€ M, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
NW Europe refining margin (US$/bbl)	3.1	4.9	2.7	3.0	3.5	4.4	4.1	4.5	4.4	4.2	4.1	3.9	3.8	3.6	4.0%	0.5%
EUR/US$ rate	1.37	1.46	1.39	1.32	1.39	1.28	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25		
E&P volumes (kboepd)	321	317	317	318	288	310	324	325	335	366	398	396	384	370	4.9%	2.8%
YoY growth	-1.1%	-1.4%	0.1%	0.3%	-9.4%	7.6%	4.6%	0.3%	3.1%	9.3%	8.7%	-0.5%	-3.0%	-3.6%		
% oil	49%	47%	46%	45%	50%	47%	46%	47%	46%	44%	42%	42%	42%	44%		
% Romania	60%	60%	57%	55%	60%	56%	53%	52%	51%	47%	43%	42%	43%	44%		
E&P cash margins (US$/boe)	24.3	33.0	21.8	26.3	35.5	34.3	29.3	28.3	27.3	29.3	30.9	31.6	32.6	33.0	-3.8%	-0.8%
Per share data:																
EPS	5.31	6.39	1.99	3.72	3.33	4.77	4.25	3.99	3.91	4.54	5.31	5.39	5.43	5.30	6.4%	5.3%
DPS	1.25	1.00	1.00	1.00	1.10	1.12	1.14	1.17	1.19	1.21	1.24	1.26	1.29	1.31	2.0%	2.0%
Valuation ratios:																
P/E	4.9x	4.1x	13.2x	7.1x	8.4x	5.4x	6.3x	6.6x	6.7x	5.8x	5.0x	4.9x	4.8x	5.0x		
EV/DACF	4.0x	3.5x	5.3x	4.4x	3.8x	3.6x	3.7x	3.8x	3.8x	3.4x	2.9x	2.8x	2.7x	2.6x		
Dividend yield	4.8%	3.8%	3.8%	3.8%	4.2%	4.3%	4.4%	4.4%	4.5%	4.6%	4.7%	4.8%	4.9%	5.0%		
Free cash yield	-11.0%	5.4%	-3.3%	7.2%	4.8%	15.3%	10.6%	6.4%	4.0%	7.8%	12.4%	13.3%	14.1%	13.0%		
Cash flow:																
Upstream	2.1	2.6	1.8	2.3	2.7	3.0	2.8	2.7	2.7	3.1	3.6	3.7	3.7	3.6	3%	3%
Downstream	0.5	0.8	0.4	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	5%	3%
Natural Gas	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	13%	10%
Other	0.1	(0.6)	(0.1)	0.1	(0.2)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)		
Sources of funds	**2.9**	**3.1**	**2.2**	**3.2**	**3.4**	**3.6**	**3.5**	**3.5**	**3.5**	**4.0**	**4.5**	**4.6**	**4.7**	**4.6**		
Change in working capital	(0.6)	0.5	(0.2)	(0.1)	(0.2)	0.3	0.4	(0.0)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)		
Operating cash flow	**2.3**	**3.5**	**2.1**	**3.1**	**3.2**	**3.9**	**3.9**	**3.4**	**3.4**	**3.8**	**4.4**	**4.5**	**4.5**	**4.5**	**3%**	**4%**
Capex	(3.1)	(3.1)	(2.3)	(2.6)	(2.8)	(2.6)	(3.0)	(2.9)	(3.0)	(3.2)	(3.3)	(3.3)	(3.3)	(3.3)	**2%**	**2%**
Operational free c/flow	**(0.9)**	**0.4**	**(0.3)**	**0.6**	**0.4**	**1.3**	**0.9**	**0.5**	**0.3**	**0.7**	**1.1**	**1.1**	**1.2**	**1.1**		
Ordinary dividends	(0.3)	(0.4)	(0.3)	(0.3)	(0.3)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	**4%**	**3%**
as % of operating c/flow	14%	11%	14%	10%	10%	9%	9%	11%	11%	10%	9%	9%	9%	9%		
Minority dividends	(0.2)	(0.2)	(0.0)	(0.0)	(0.1)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)	(0.4)		
Discretionary free c/flow	**(1.3)**	**(0.1)**	**(0.6)**	**0.2**	**(0.0)**	**0.7**	**0.3**	**(0.1)**	**(0.3)**	**(0.0)**	**0.3**	**0.4**	**0.4**	**0.3**		
Acquisitions	(1.3)	(0.8)	(0.3)	(1.0)	(0.8)	(0.1)	-	-	-	-	-	-	-	-		
Divestments	0.1	0.3	1.5	0.1	0.2	0.0	-	-	-	-	-	-	-	-		
Other	(0.1)	-	-	-	0.7	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(2.6)**	**(0.7)**	**0.7**	**(0.7)**	**0.1**	**0.7**	**0.3**	**(0.1)**	**(0.3)**	**(0.0)**	**0.3**	**0.4**	**0.4**	**0.3**		
Balance sheet:																
Net debt	2.5	3.4	3.3	5.2	5.3	4.8	4.5	4.6	5.0	5.0	4.7	4.3	3.8	3.5		
Net debt/EBITDA	0.7x	0.9x	1.1x	1.4x	1.2x	0.9x	0.9x	0.9x	0.9x	0.8x	0.6x	0.6x	0.5x	0.5x		
Cash interest cover	22.5x	16.6x	7.0x	9.3x	9.2x	11.1x	11.6x	10.3x	9.7x	10.5x	12.2x	13.4x	14.7x	15.9x		
Net debt/equity	24%	37%	33%	46%	40%	32%	29%	28%	28%	27%	23%	20%	17%	15%		
Capital employed:																
Upstream	3.7	6.1	6.7	7.1	8.2	9.1	10.0	10.9	11.9	12.9	13.9	14.8	15.7	16.7	9%	8%
Downstream	9.8	7.9	7.1	9.5	9.8	9.2	8.7	8.6	9.1	9.0	9.1	9.1	9.2	9.3	-2%	0%
% Upstream	27%	44%	49%	43%	46%	50%	53%	56%	57%	59%	60%	62%	63%	64%		
Return on capital employed:																
Upstream	27.5%	26.9%	11.6%	15.0%	16.2%	18.6%	14.3%	12.0%	10.8%	12.5%	13.6%	12.9%	12.2%	11.1%		
Downstream	2.0%	5.1%	-1.1%	2.8%	3.5%	3.9%	4.9%	5.5%	5.3%	5.1%	5.0%	4.8%	4.7%	4.5%		
Aggregate group	**13.9%**	**16.9%**	**6.2%**	**9.9%**	**9.9%**	**10.7%**	**9.3%**	**8.4%**	**7.9%**	**8.5%**	**9.2%**	**8.7%**	**8.2%**	**7.6%**		

Source: Company Reports and Citi Research Estimates

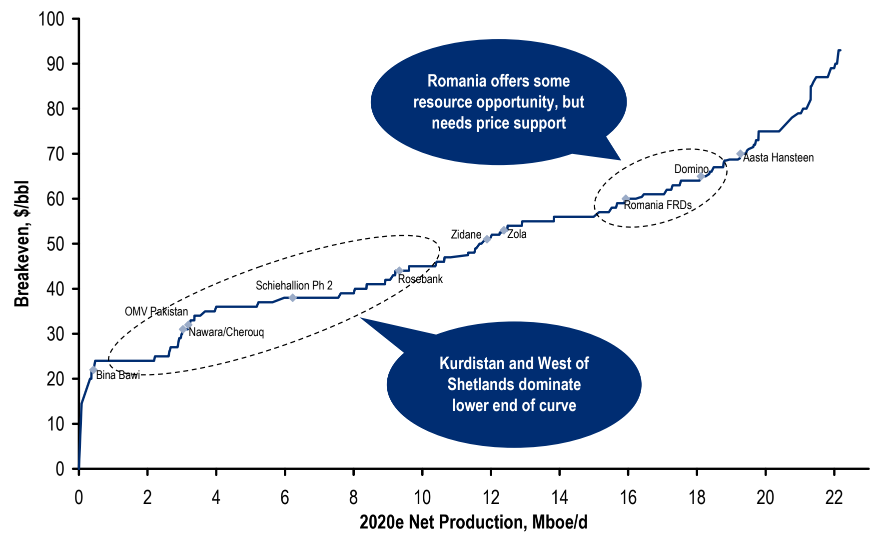
OMV - Upstream

Figure 149. OMV project portfolio (2012-2020 start-ups)



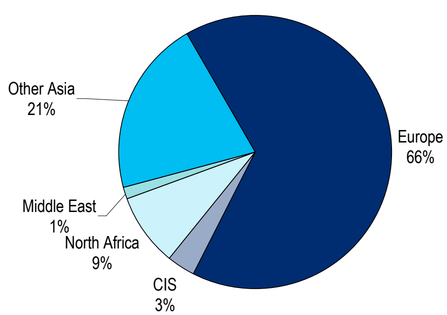
Source: Citi Research

Figure 150. OMV project portfolio versus the industry cost-curve



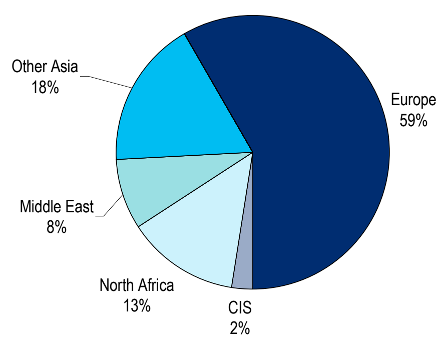
Source: Citi Research

Figure 151. 2012E cash flow by region



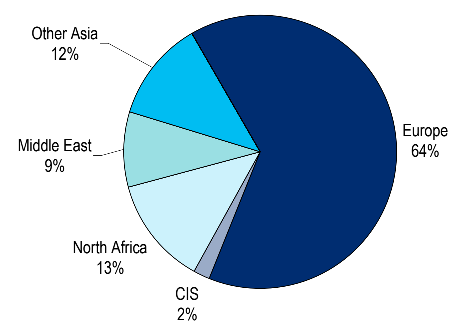
Source: Citi Research

Figure 152. 2016E cash flow by region



Source: Citi Research

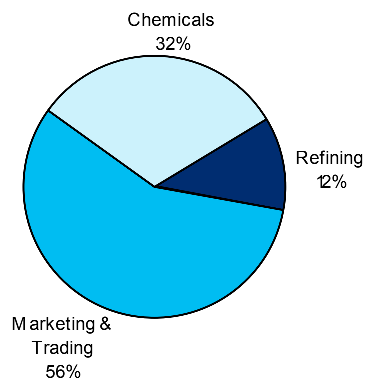
Figure 153. 2020E cash flow by region



Source: Citi Research

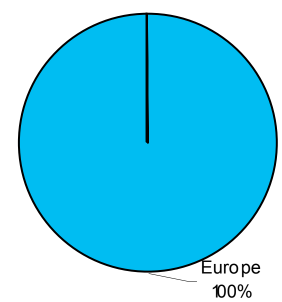
OMV – Downstream

Figure 154. 2016E cash flow by segment



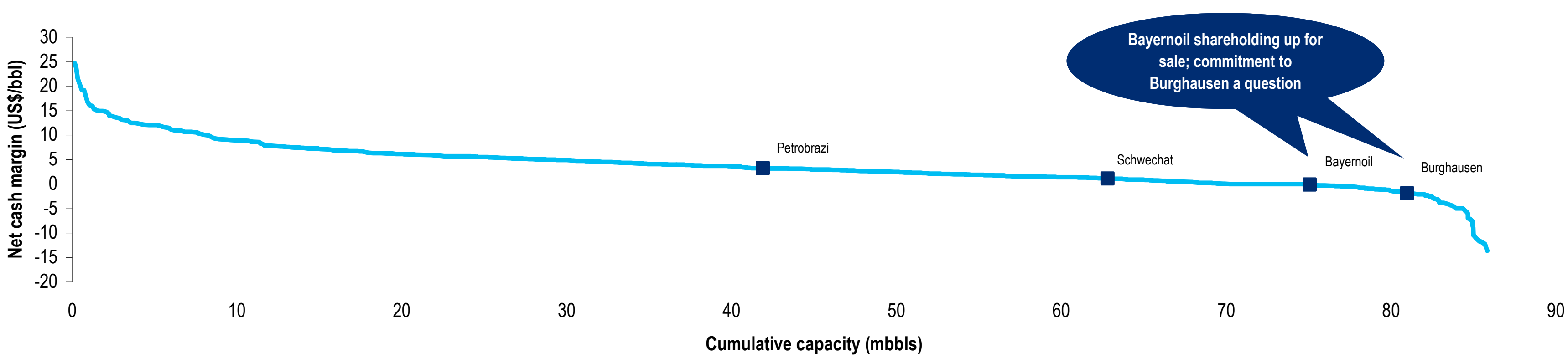
Source: Citi Research

Figure 155. 2016E cash flow by region



Source: Citi Research

Figure 156. OMV refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Petrobras – Buy, $28/ADR price target

Strong long-term portfolio asset value but short-term leveraged call to fuel pricing policy

The investment case on Petrobras at first glance looks strong offering transformational long-term growth and margin expansion. This growth means that by 2020 the company may become one of the world's largest operating cash flow in the Integrated Oils group. However, balanced against that growth opportunity is a short-term concerns over the balance sheet, potentially reaching a point in the next 12-months where investment in and execution of its ambitious investment plan ability may be crippled by the fuel price caps in Brazil over the last 2 years. We see PBR now trading at a level where investors discount a low probability of fuel price adjustments and not only do we see strong room for changes soon but believe that those changes could likely bring significant upside potential in PBR stock.

- **Transformational growth delivery through the decade —** Petrobras is, in our view, a stand-out growth story, particularly relative to companies of this size. Production growth of 6.5% CAGR 2011-20E outstrips peers and is profitability-enhancing given the returns on offer from the existing pre-salt Brazil portfolio. Although not slated as an important growth year per se, 2013 will be relevant to set the stage for results from (1) the Sapinhoá (ex-Guará) commercial production, (2) the flow rates of many of the Petrobras' Campos basin finds located below existing infrastructure (the company estimates nearly 2.1bn boe), and lastly (3) the final results from new technologies being tested, namely subsea separation and subsea water injection that are key for Petrobras to speed up production in most of its Campos basin post-salt fields.

- **But, still mainly a call to fuel pricing story in 12-months… —** Since oil started to trade above US$100/bbl Petrobras has kept gasoline and diesel prices at a loss in spite of minor price adjustments and fast growing imports. But now, we believe there is large room in the short-term to see material changes to its fuel pricing policy in light of current benign macro conditions in Brazil for the 2H13 (namely inflation and GDP growth forecasts) and the fact that we are closer to a point where Petrobras may become constrained by its credit ratios if no change is made. Our Buy recommendation is ultimately predicated on that call and we believe Petrobras could present a very attractive investment opportunity if fuel prices come back to parity in 12-months. While we believe an improvement to the policy may be more relevant to see sustained recovery, if the minimum upgrade to prices that we see is awarded, the cashflow and earnings impact will be, in our view, too material to be ignored.

- **… otherwise balance sheet concerns may come back to the stage —** However, on the other hand, we would be more cautious on the stock if no relevant upgrades to fuel prices become effective in the next 6-9 months (assuming stable oil prices and FX) as credit ratios would deteriorate to a level that could either restrict the current investment programme or renew concerns of another capital increase at the company.

- **2013-14: Value call will remain in the shadow of new pre-salt legislation?** We believe that one of the key risks in the Petrobras long-term case stems from the new legislation for the pre-salt exploration and development. In the next two years, we are yet to see the conclusion of Brazil's new legislation and its impact on Petrobras. We see room for bidding rounds to resume in Brazil in 2013, with first PSC contracts at auction, while in 2014 Petrobras expects to negotiate the final price review of the 5bn boe production rights acquired from Brazil's government in 2010. Whist we see material value upside to its current portfolio set up, we argue that there could still be some risks to the stock performance depending on the track the company/government takes.

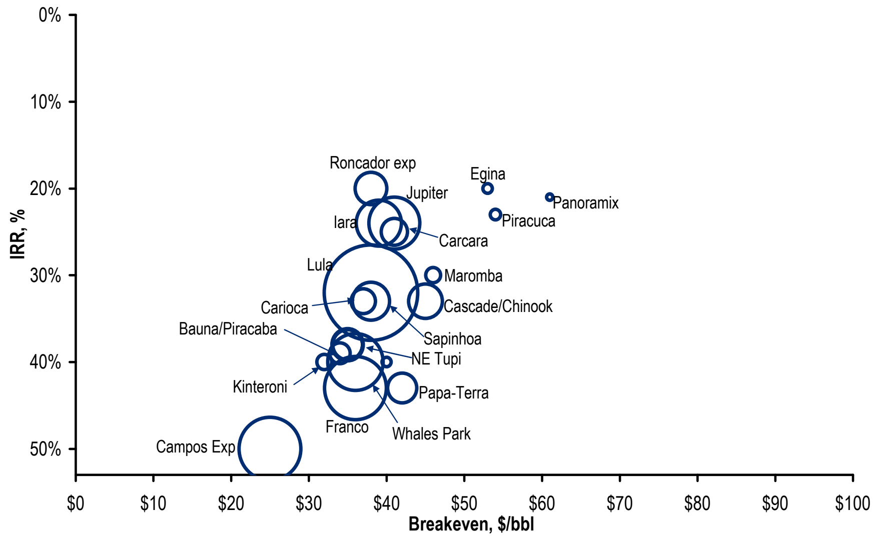
Figure 157. Petrobras summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
E&P volumes (mboepd)	2.28	2.33	2.37	2.52	2.56	2.59	2.65	2.66	2.70	2.70	2.67	2.80	2.70	2.80	1.1%	1.0%
YoY growth	1.0%	2.2%	1.9%	6.3%	1.6%	1.2%	2.3%	0.4%	1.5%	0.0%	-1.2%	4.9%	-3.7%	3.7%		
% oil	83%	82%	83%	83%	82%	82%	82%	81%	81%	79%	79%	78%	80%	79%		
E&P cash margins (US$/bbl)	60.5	79.1	52.7	70.6	96.3	94.9	86.2	85.3	85.4	73.0	73.3	73.3	75.2	74.6	-5.4%	-2.8%
Per share data:																
EPS (US$)	2.99	4.30	3.53	2.94	3.07	1.91	2.33	2.21	2.30	2.17	2.53	3.28	4.32	5.09	-6.7%	5.8%
DPS (US$)	0.81	0.68	1.09	1.06	1.05	1.30	0.89	0.94	0.97	0.99	1.01	1.05	1.10	1.19	-1.2%	1.4%
Valuation Ratios:																
P/E	7.5x	5.2x	6.4x	7.6x	7.3x	11.8x	9.6x	10.0x	9.6x	10.2x	8.7x	6.8x	5.1x	4.3x		
EV/DACF	7.0x	6.1x	6.5x	5.7x	4.7x	5.1x	6.5x	7.0x	7.3xx	7.6x	7.3x	6.2x	5.2x	4.5x		
Dividend yield	3.6%	3.1%	4.9%	4.7%	4.8%	5.9%	4.0%	4.2%	4.4%	4.5%	4.6%	4.7%	5.0%	5.4%		
Free cash yield	1.7%	-1.7%	-10.4%	-11.4%	-5.4%	-11.6%	-10.5%	-10.7%	-7.9%	-5.8%	-4.2%	0.4%	5.8%	9.9%		
Cash flow:																
Upstream	27.3	38.4	22.5	34.6	47.5	49.0	41.7	43.1	43.9	39.5	41.6	50.0	60.9	68.4	-3.6%	4.1%
Downstream	4.9	(0.5)	9.6	0.1	(13.1)	(11.2)	(4.3)	(5.3)	(6.0)	2.1	0.5	0.8	1.0	1.2		
Other and corporate	(9.0)	(11.3)	(5.8)	(3.1)	5.2	(7.6)	(11.2)	(10.9)	(9.8)	(13.3)	(11.0)	(13.3)	(16.8)	(18.8)		
Sources of funds	**23.2**	**26.6**	**26.2**	**31.6**	**39.7**	**30.3**	**26.2**	**26.9**	**28.0**	**28.3**	**31.2**	**37.5**	**45.1**	**50.8**	-6.5%	2.8%
Changes in working capital	(0.5)	1.6	(1.3)	(3.2)	(6.0)	(4.6)	0.3	(0.6)	(0.6)	1.0	(0.6)	(0.6)	(0.6)	(0.6)		
Cash flow from operations	**22.7**	**28.2**	**24.9**	**28.5**	**33.7**	**25.7**	**26.5**	**26.3**	**27.4**	**29.3**	**30.5**	**36.9**	**44.4**	**50.2**		
Capex	(21.0)	(29.9)	(35.1)	(45.1)	(41.3)	(41.9)	(41.2)	(41.2)	(38.6)	(37.4)	(36.4)	(36.4)	(36.4)	(36.4)	-2.0%	-1.4%
Free cash flow	**1.7**	**(1.7)**	**(10.2)**	**(16.6)**	**(7.6)**	**(16.3)**	**(14.6)**	**(14.9)**	**(11.1)**	**(8.1)**	**(5.8)**	**0.5**	**8.1**	**13.8**		
Ordinary dividends	(3.9)	(4.7)	(7.7)	(5.3)	(6.4)	(4.2)	(8.4)	(5.8)	(6.1)	(6.2)	(6.4)	(6.5)	(6.7)	(7.1)	-0.7%	1.1%
as % of operating c/flow	17%	17%	31%	19%	19%	16%	32%	22%	22%	21%	21%	18%	15%	14%		
Discretionary free cash flow	**(2.2)**	**(6.4)**	**(17.9)**	**(21.9)**	**(14.0)**	**(20.4)**	**(23.1)**	**(20.7)**	**(17.2)**	**(14.3)**	**(12.2)**	**(6.0)**	**1.4**	**6.7**		
Disposals/(Acquisitions)	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Equity change	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(2.2)**	**(6.4)**	**(17.9)**	**(21.9)**	**(14.0)**	**(20.4)**	**(23.1)**	**(20.7)**	**(17.2)**	**(14.3)**	**(12.2)**	**(6.0)**	**1.4**	**6.7**		
Balance sheet:																
Net debt	12.7	19.0	38.2	33.3	51.8	75.0	98.0	118.3	134.9	148.7	160.5	166.0	164.1	156.8		
Net debt/EBITDA	0.5x	0.6x	1.3x	1.0x	1.4x	2.4x	3.2x	3.7x	4.0x	4.4x	4.2x	3.6x	2.9x	2.5x		
Interest cover	nm	nm	nm	nm	nm	nm	203x	45x	30x	25x	26x	32x	42x	49x		
Net debt/equity	20%	31%	41%	18%	29%	44%	55%	65%	72%	78%	81%	80%	73%	64%		
Capital employed:																
Upstream	49.9	50.0	72.1	121.2	126.3	162.7	180.2	198.4	216.6	233.9	251.0	266.9	282.0	296.5	13.1%	10.0%
Downstream	32.3	28.6	48.7	65.8	78.3	103.2	114.1	123.9	131.6	138.2	143.8	149.3	154.8	160.2	12.0%	8.3%
% Upstream	61%	64%	60%	65%	62%	61%	61%	62%	62%	63%	64%	64%	65%	65%		
Return on capital employed:																
Upstream	36.4%	41.9%	19.4%	19.9%	24.0%	25.8%	14.0%	13.5%	12.7%	10.0%	9.8%	11.3%	13.3%	14.4%		
Downstream	13.2%	-5.1%	21.0%	4.3%	-7.7%	-12.7%	-3.1%	-2.9%	-3.4%	0.5%	0.4%	0.5%	0.5%	0.5%		
Aggregate group	**18.4%**	**16.8%**	**13.5%**	**9.3%**	**8.1%**	**5.8%**	**5.8%**	**5.6%**	**5.6%**	**5.2%**	**5.7%**	**6.7%**	**8.1%**	**9.0%**		

Source: Company Reports and Citi Research

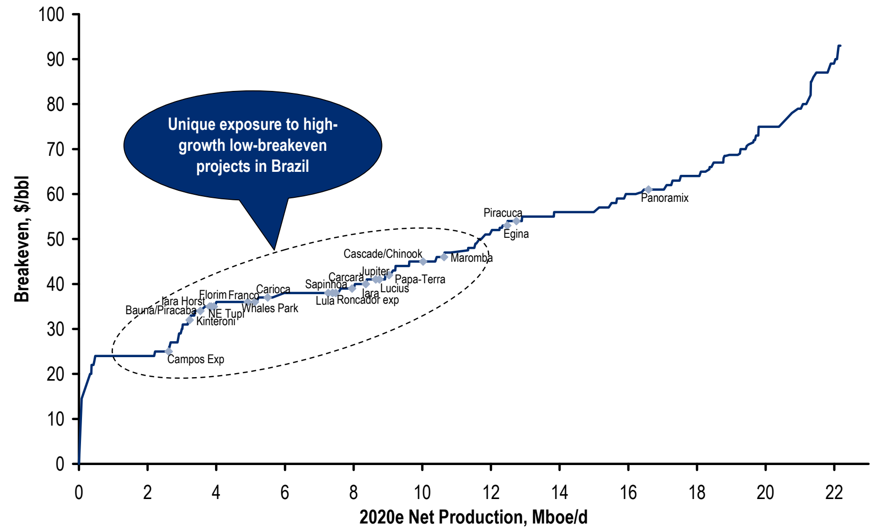
Petrobras - Upstream

Figure 158. Petrobras project portfolio (2012-2020 start-ups)



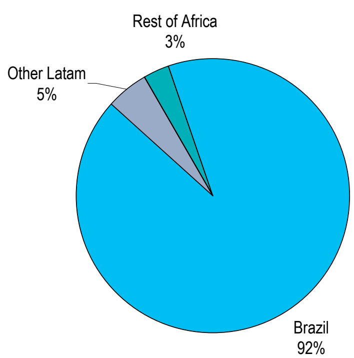
Source: Citi Research

Figure 159. Petrobras project portfolio versus the industry cost-curve



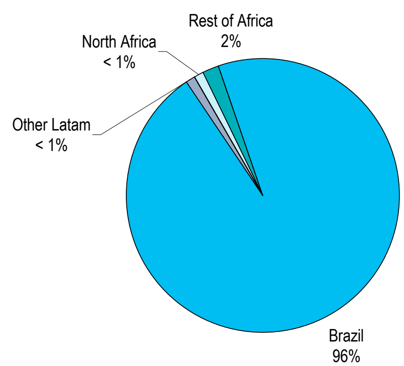
Source: Citi Research

Figure 160. 2012E cash flow by region



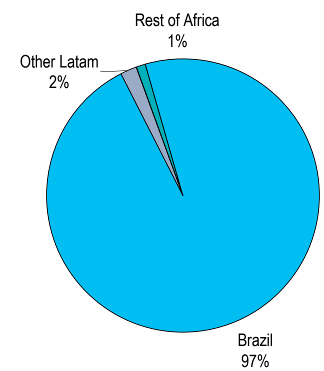
Source: Citi Research

Figure 161. 2016E cash flow by region



Source: Citi Research

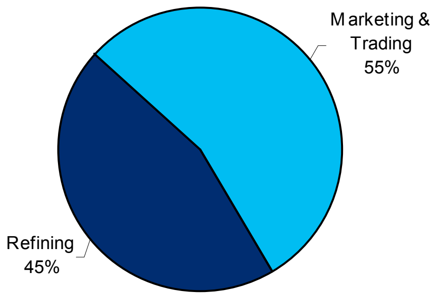
Figure 162. 2020E cash flow by region



Source: Citi Research

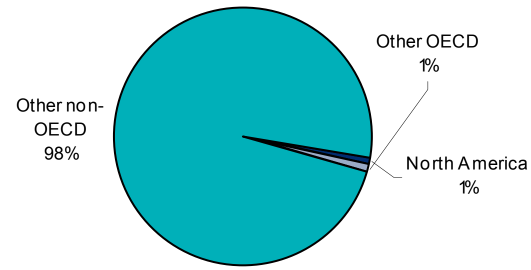
Petrobras – Downstream

Figure 163. 2016E cash flow by segment



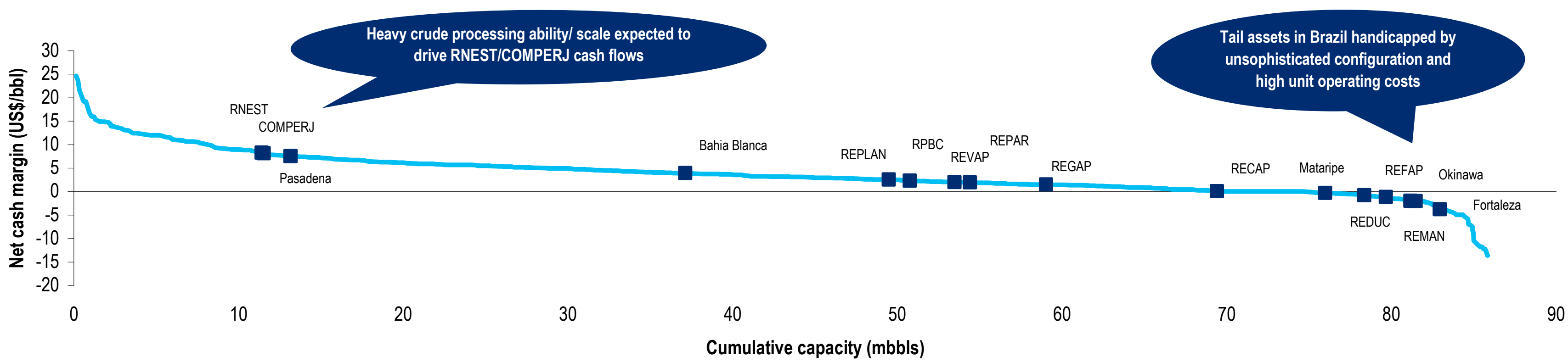
Source: Citi Research

Figure 164. 2015E cash flow by region



Source: Citi Research

Figure 165. Petrobras refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Petrochina – Neutral, HK$10.7/share price target

Hoping for relief from price controls

Regulatory issues in China will likely be the single most important driver of PetroChina's earnings. This year we expect a US$8.0b loss on refining and a US$6.2b loss on natural gas imports, reducing earnings by ~33% due to government price controls on oil products and city gate natural gas prices. With PetroChina continuing to commit capital to business segments which are important for the nation's energy supply but dilutive to returns regulatory action to improve to improve profitability in these areas are key.

- **Gas import losses are rising** — We expect losses on natural gas imports to roughly double this year as volume is ramped up both from the Central Asia pipeline and LNG. We estimate LNG imports from Qatar Gas 4 are coming in at a cost of ~US$15/mcf and are being sold for around half this price. Our estimates, which call for a decline in import losses in the years ahead, are predicated on more aggressive government action to raise prices.

- **Gas prices may rise** — In December 2011 the government rolled out a new mechanism for setting city gate natural gas prices in two Southern provinces, Guangdong and Guangxi. The new mechanism links gas prices to imported LPG and fuel oil prices, with a discount, and harmonizes prices in each province, replacing the current patch-work system of regulated prices based on an IRR calculation. While gas volumes in S. China are small, if implemented nation-wide, PetroChina's gas price would rise substantially. If implemented in Shanghai for example, we estimate the city gate price will rise from US$9/mcf to US$12/mcf. We expect natural gas prices to rise gradually in China, but believe full implementation of the new mechanism will be multi-year process.

- **Refining** — PetroChina's refining business has posted losses in 6 of the past 8 years on government price controls on gasoline and diesel fuel. A new mechanism for setting oil product prices, which is more market oriented and would significantly reduce losses we believe, has been proposed by the NDRC (National Reform and Development Commission).

- **Government transition is reducing hopes for reform this year** — After implementing other important energy sector reforms (windfall profits tax and resources tax reform) expectations were high early this year that the government would move ahead on refining reform and natural gas pricing reform. However with the government now in a state of transition, we believe both reforms have been shelved for the next government and movement on either issue is unlikely before 2012.

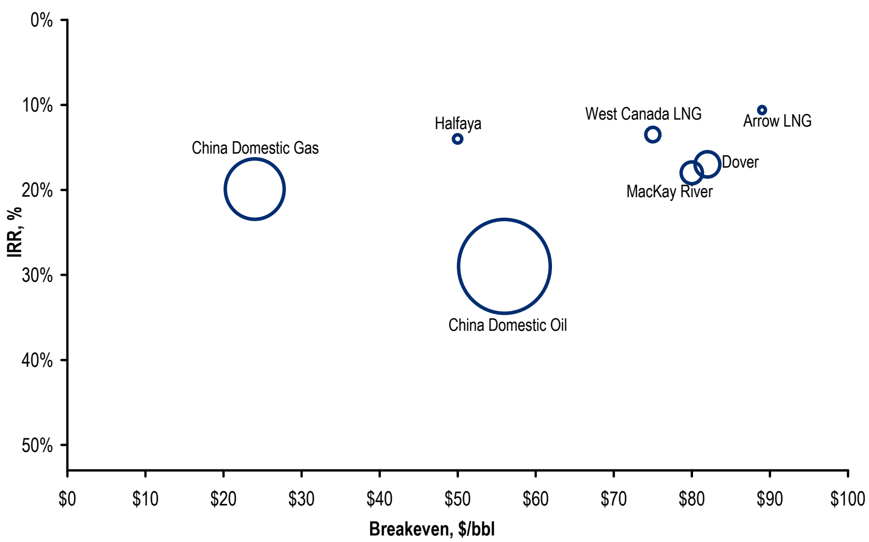
Figure 166. Petrochina summary financial model

CNY B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
PTR Refining margin (US$/bbl)	(5.0)	(15.6)	2.2	0.7	(9.4)	(7.0)	(1.0)	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
CNY/USD	7.61	6.95	6.83	6.77	6.46	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37		
E&P volumes (mboepd)	3.04	3.23	3.28	3.36	3.52	3.64	3.85	4.09	4.37	4.52	4.66	4.80	4.96	5.13	5.1%	4.3%
YoY growth	4.8%	6.1%	1.5%	2.7%	4.7%	3.2%	5.8%	6.3%	6.8%	3.5%	3.0%	3.1%	3.3%	3.4%		
% oil	76%	74%	71%	70%	69%	68%	65%	61%	58%	57%	55%	53%	52%	50%		
E&P cash margins (US$/bbl)	28.8	35.5	19.8	26.8	36.1	37.0	31.2	27.6	28.9	29.9	30.4	30.8	31.1	31.4	-3.7%	-1.5%
Per share data:																
EPS (CNY)	0.81	0.63	0.56	0.76	0.73	0.73	0.79	0.75	0.85	0.94	1.01	1.08	1.11	1.18	5.3%	4.4%
EPS (US$)	0.11	0.09	0.08	0.11	0.11	0.11	0.12	0.12	0.13	0.15	0.16	0.17	0.17	0.17	5.6%	4.6%
DPS (CNY)	0.36	0.28	0.25	0.34	0.33	0.33	0.35	0.34	0.59	0.66	0.70	0.74	0.75	0.60	15.0%	6.9%
DPS (US$)	0.05	0.04	0.04	0.05	0.05	0.05	0.06	0.05	0.09	0.10	0.11	0.12	0.12	0.09	15.3%	7.1%
Valuation ratios:																
P/E	11.6x	13.7x	14.9x	10.9x	11.0x	12.0x	10.3x	10.4x	9.3x	8.4x	7.9x	7.4x	7.3x	7.0x		
EV/DACF	6.5x	6.6x	6.8x	5.5x	5.3x	6.0x	5.2x	5.0x	4.5x	4.2x	4.0x	3.8x	3.6x	3.3x		
Dividend yield	4.7%	3.6%	3.2%	4.4%	4.2%	4.2%	4.5%	4.3%	7.6%	8.4%	9.0%	9.5%	9.6%	7.6%		
Free cash yield	2.6%	-2.7%	0.6%	4.1%	2.1%	1.3%	4.1%	5.9%	9.5%	6.6%	11.7%	11.8%	12.7%	13.7%		
Cash flow:																
Upstream	193.3	238.8	136.9	191.1	254.4	265.0	240.7	228.5	251.7	270.2	283.9	298.0	312.4	341.6	1.2%	3.3%
Downstream	(6.5)	(59.9)	24.7	21.1	(32.9)	(23.2)	21.1	35.4	37.9	40.8	44.6	47.0	49.2	51.4		
Other and corporate	29.2	40.6	63.3	73.7	74.8	56.1	67.0	77.6	79.1	87.8	98.2	107.4	109.7	115.1		
Sources of funds	**216.0**	**219.4**	**224.9**	**286.0**	**296.3**	**297.9**	**328.8**	**341.5**	**368.8**	**398.9**	**426.7**	**452.3**	**471.3**	**508.2**	6.1%	6.2%
Changes in working capital	(8.6)	(43.2)	37.8	31.7	1.4	0.5	(2.2)	0.4	(3.5)	(2.6)	(1.9)	(1.6)	(0.2)	7.7		
Cash flow from operations	**207.4**	**176.2**	**262.8**	**317.8**	**297.7**	**298.4**	**326.6**	**341.9**	**365.3**	**396.2**	**424.8**	**450.7**	**471.1**	**515.8**		
Capex	(171.5)	(215.0)	(253.5)	(258.4)	(267.2)	(280.4)	(267.2)	(257.9)	(229.5)	(301.3)	(257.2)	(281.1)	(289.1)	(319.8)	2.4%	2.0%
Free cash flow	**35.9**	**(38.8)**	**9.2**	**59.4**	**30.5**	**18.0**	**59.4**	**84.0**	**135.8**	**95.0**	**167.5**	**169.6**	**182.0**	**196.0**		
Ordinary dividends	(64.5)	(52.8)	(50.1)	(53.2)	(63.3)	(58.1)	(62.3)	(63.6)	(87.3)	(114.3)	(124.3)	(132.2)	(137.1)	(123.6)	12.6%	7.7%
as % of operating c/flow	31%	30%	19%	17%	21%	19%	19%	19%	24%	29%	29%	29%	29%	24%		
Discretionary free cash flow	**(28.6)**	**(91.6)**	**(40.8)**	**6.2**	**(32.8)**	**(40.1)**	**(2.8)**	**20.5**	**48.5**	**(19.4)**	**43.2**	**37.4**	**44.9**	**72.5**		
Acquisitions	(4.4)	(3.4)	(3.6)	(3.0)	(5.2)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)		
Disposals	1.0	0.1	0.1	0.1	0.0	-	-	-	-	-	-	-	-	-		
Equity change	66.2	-	-	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**34.3**	**(94.9)**	**(44.3)**	**3.3**	**(38.0)**	**(40.6)**	**(3.3)**	**20.0**	**48.0**	**(19.9)**	**42.7**	**36.9**	**44.4**	**72.0**		
Balance sheet:																
Net debt	(12.9)	82.2	147.4	184.9	256.8	314.6	337.8	338.6	318.8	367.6	356.7	352.1	340.2	296.6		
Net debt/EBITDA	(0.0x)	0.3x	0.6x	0.6x	0.8x	1.0x	1.0x	0.9x	0.8x	0.8x	0.7x	0.7x	0.6x	0.5x		
Interest cover	166.0x	368.5x	61.8x	69.4x	39.0x	31.0x	28.0x	27.0x	30.5x	35.1x	32.6x	35.5x	37.3x	39.9x		
Net debt/equity	-2%	10%	17%	20%	26%	29%	30%	28%	25%	28%	27%	25%	24%	20%		
Capital employed:																
Upstream	366.7	414.2	487.5	550.8	578.5	646.8	707.8	750.4	784.4	828.4	887.7	932.9	976.6	978.5	7.4%	6.0%
Downstream	296.8	382.6	446.4	508.4	613.2	673.7	720.4	756.2	771.3	790.3	793.0	784.5	777.0	778.4	5.2%	2.7%
% Upstream	55%	52%	52%	52%	49%	49%	50%	50%	50%	51%	53%	54%	56%	56%		
Return on capital employed:																
Upstream	41.0%	41.7%	15.5%	20.8%	27.7%	25.7%	18.7%	14.6%	15.1%	15.3%	14.5%	14.1%	13.6%	9.4%		
Downstream	-1.7%	-15.2%	6.2%	5.0%	-4.4%	-4.9%	1.6%	3.8%	4.7%	5.7%	6.9%	8.0%	8.3%	8.2%		
Aggregate group	**21.2%**	**14.4%**	**10.6%**	**13.0%**	**11.4%**	**10.2%**	**10.3%**	**9.5%**	**10.2%**	**10.9%**	**11.3%**	**11.6%**	**11.6%**	**9.2%**		

Source: Company Reports and Citi Research Estimates

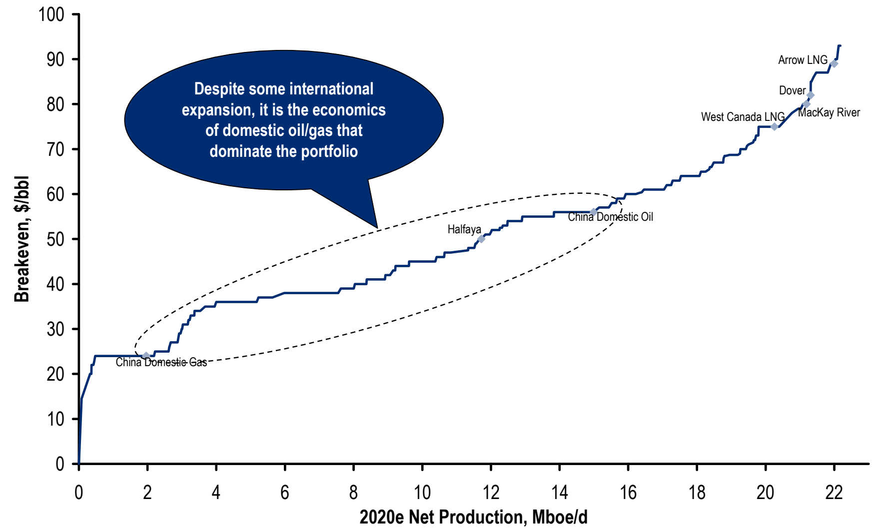
Petrochina - Upstream

Figure 167. Petrochina project portfolio (2012-2020 start-ups)



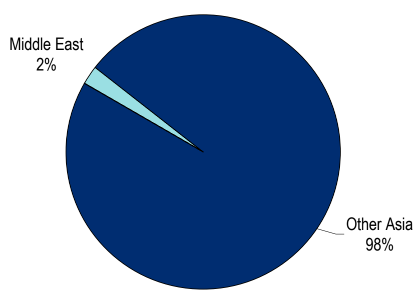
Source: Citi Research

Figure 168. Petrochina project portfolio versus the industry cost-curve



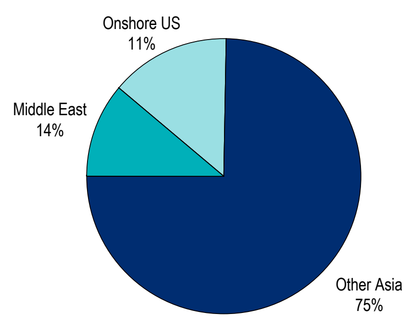
Source: Citi Research

Figure 169. 2012E cash flow by region



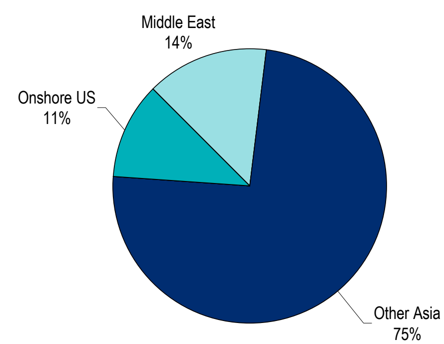
Source: Citi Research

Figure 170. 2016E cash flow by region



Source: Citi Research

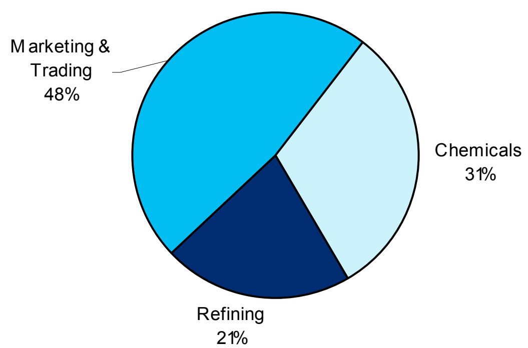
Figure 171. 2020E cash flow by region



Source: Citi Research

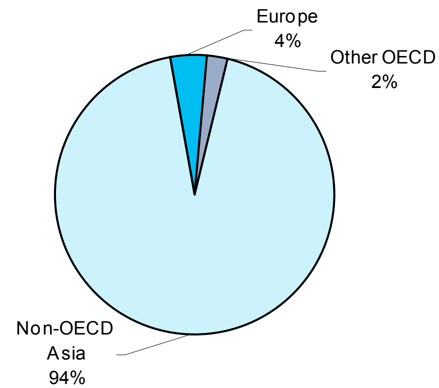
Petrochina – Downstream

Figure 172. 2016E cash flow by segment



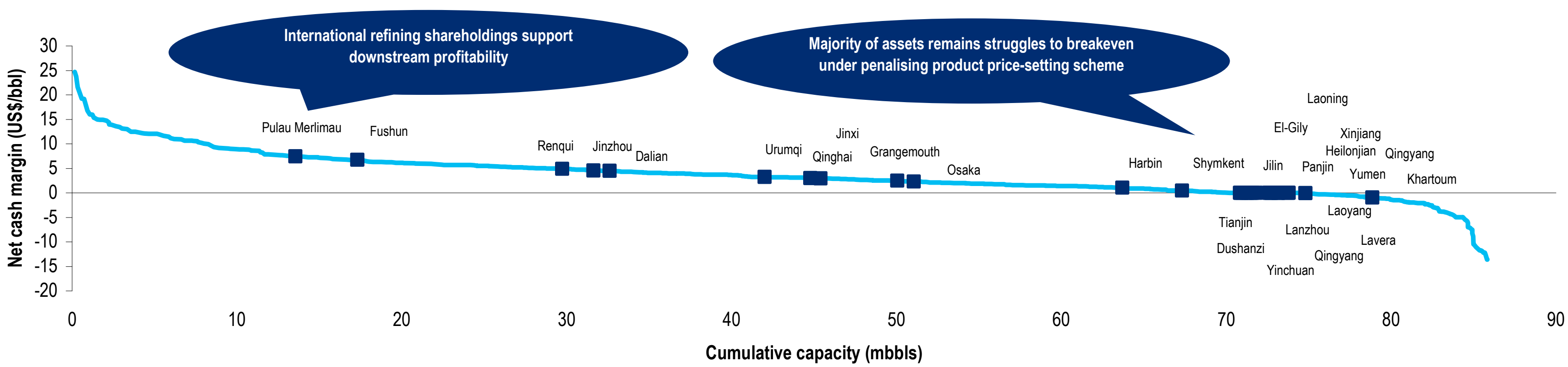
Source: Citi Research

Figure 173. 2016E cash flow by region



Source: Citi Research

Figure 174. Petrochina refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

RD Shell – Neutral, 2200p/share price target

Defensive growth to 2013, less differentiated beyond

RD Shell's defensive qualities, in our view, have been easy to understand in uncertain markets. The company offers low borrowing costs, a strong balance sheet, good dividend payout and finally, after many years, a dividend that is beginning to be fully covered. But we think there are now questions to answer around the next phase of the company's development. Although RDS looks to promise superior growth, our analysis suggests the medium-term growth/profitability characteristics do not look that differentiated versus peers, while a high relative exposure to the North American market may even put some of the company's much lauded target framework at risk. Without superior growth what is left to deliver outperformance? Management seek to argue that the portfolio offers greater visibility versus peers, although what look to us high cost M&A moves in 2012 (the Cove bid) do little, in our view, to give the market confidence in that view.

- **Upstream is the poster child —** Investment in E&P is the growth engine for RDS in the near-term. Upstream cash flow is expected to expand 10% p.a. in 2012 and another 7% in 2-13, one-fifth from top-line growth and four-fifths from margin gains. In particular, new output from Qatar (gas-to-liquids and LNG), which we estimate will be almost 10% of the company's cash flows by 2013, has a significant window of cost recovery under the PSC mechanism, a period in which profitability should remain high.

- **Medium-term growth ambitions are now defined —** The building blocks of the next wave of upstream growth are now largely defined; many of the key elements (e.g. Gorgon and Prelude LNG) are already firmly committed projects. Overall the portfolio looks balanced. Although there are some material high cost-curve investments, mainly in LNG and FLNG, there are also many projects towards the lower-end of the curve, the most important of which are the brownfield expansions Mars B (Gulf of Mexico) and Gbarian Ubie Phase II (Nigeria). The average portfolio breakeven at US$62/bbl, the average portfolio profitability and the materiality of the portfolio all look similar to that of other large-cap sector peers. We expect overall upstream profitability to remain protected to 2016 before declining, the transition reflecting the way in which Qatar and Kashagan step out of cost-recovery towards the back end of the decade. Management are keen to argue the portfolio offers superior visibility to peers through this decade, we are not entirely convinced of the claim; the move to acquire Cove (at a 6% IRR on out view) suggests to us that the company feels a need to build options for the future.

- **Downstream still a problem child —** Despite US$3.5 billion of pre-tax cost savings, downstream cash flow of <US$8 billion in 2012E still looks US$3-4 billion below the run-rate needed to deliver 2012 targets. Like peers the problem looks to lie in the weight of OECD capital in the portfolio. The focus looks to be on continued portfolio revamping — less marginal refining (particularly in Europe), more focused marketing and new investments (Cosan JV, Port Arthur upgrade).

- **Financial structure and North American pricing –** A glance at cash flow through 1H12 confirms RDS's defensive characteristics with the dividend covered, albeit with c. US$3 B of cash payout saved through the scrip programme. Guidance through the 2012-15 period is that this business can deliver US$50 B/year of cash flow in a US$100/bbl oil world, although we think that continued low US gas prices (targets are set at US$5/MMBtu gas), prolonged discounts on WTI and Canadian crude and poor downstream performance could start to put those targets at risk to the tune of perhaps a 5-10% downward revision. Nevertheless, dividends should remain covered and there is some capacity for nominal growth. In defensive-geared markets that might be enough, but we fail to see a sector-relative valuation anomaly that can argue there is much re-rating to go from here.

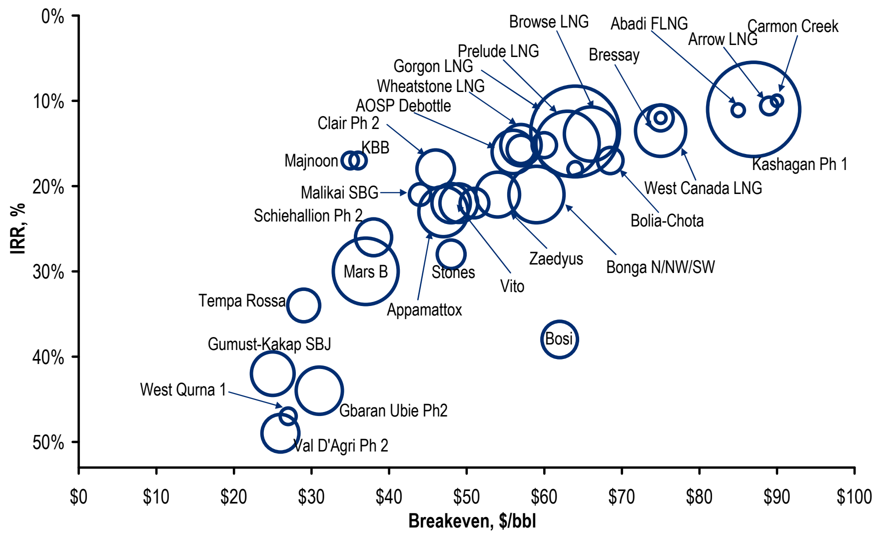
Figure 175. RD Shell summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	98.1	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
RDS Refining margin (US$/bbl)	7.7	5.7	3.6	3.8	3.6	5.8	5.8	6.0	5.9	5.8	5.6	5.5	5.4	5.3	9.9%	4.3%
GBP/USD	2.00	1.85	1.56	1.54	1.60	1.57	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56		
E&P volumes (mboepd)	3.32	3.25	3.16	3.31	3.22	3.24	3.49	3.59	3.73	3.81	3.97	3.99	4.01	4.03	3.4%	2.5%
YoY growth	2%	-2%	-3%	5%	-3%	1%	8%	3%	4%	2%	4%	0%	1%	0%		
% oil	57%	55%	53%	52%	52%	50%	54%	55%	55%	54%	52%	52%	51%	51%		
E&P cash margins (US$/bbl)	23.4	29.4	17.1	21.6	27.0	29.8	27.0	28.0	29.5	30.6	31.0	31.8	32.2	33.1	2.5%	2.3%
Per share data:																
EPS (US$)	3.96	4.57	1.88	2.94	3.97	4.21	4.10	4.34	4.72	4.94	5.16	5.27	5.33	5.46	4.5%	3.6%
EPS (p)	198.1	246.8	120.1	190.5	247.3	268.6	262.8	278.0	302.3	316.5	330.9	338.0	341.7	349.8	5.1%	3.9%
DPS (US$)	1.44	1.60	1.68	1.68	1.68	1.72	1.80	1.84	1.88	1.92	1.96	2.00	2.04	2.08	2.7%	2.4%
DPS (p)	72.0	86.3	107.4	108.8	104.7	109.7	115.4	117.9	120.5	123.1	125.6	128.2	130.8	133.3	3.3%	2.7%
Valuation ratios (B shares):																
P/E	11.6x	9.3x	19.2x	12.1x	9.0x	8.3x	8.8x	8.3x	7.6x	7.2x	6.9x	6.8x	6.7x	6.6x		
EV/DACF	5.3x	5.9x	9.4x	6.9x	5.8x	5.4x	5.2x	5.3x	4.9x	4.6x	4.2x	4.0x	3.8x	3.7x		
Dividend yield	3.9%	4.3%	4.5%	4.5%	4.7%	4.8%	5.0%	5.1%	5.3%	5.4%	5.5%	5.6%	5.7%	5.8%		
Free cash yield	3.2%	4.7%	-4.7%	0.7%	2.4%	6.9%	5.4%	4.8%	6.0%	6.5%	7.1%	7.5%	7.7%	8.4%		
Cash flow:																
Upstream	28.4	34.9	19.7	26.2	31.7	35.2	34.4	36.7	40.1	42.6	44.9	46.3	47.2	48.6	6.1%	4.9%
Downstream	11.5	9.1	6.3	7.3	8.5	8.4	8.1	8.3	8.3	8.1	8.2	8.2	8.2	8.1	-1.0%	-0.5%
Other and corporate	0.8	(8.4)	(2.7)	(1.3)	1.6	0.1	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)		
Sources of funds	**40.7**	**35.6**	**23.3**	**32.1**	**41.8**	**43.8**	**42.4**	**44.8**	**48.2**	**50.5**	**52.9**	**54.3**	**55.1**	**56.6**	3.9%	3.4%
Changes in working capital	(6.2)	7.9	(2.3)	(5.9)	(6.5)	4.6	-	-	-	-	-	-	-	-		
Cash flow from operations	**34.5**	**43.6**	**21.0**	**26.2**	**35.3**	**48.4**	**42.4**	**44.8**	**48.2**	**50.5**	**52.9**	**54.3**	**55.1**	**56.6**		
Capex	(27.1)	(32.9)	(31.7)	(24.7)	(29.9)	(32.0)	(33.1)	(33.9)	(34.4)	(35.7)	(36.8)	(37.1)	(37.5)	(37.4)	3.6%	2.5%
Free cash flow	**7.4**	**10.6**	**(10.8)**	**1.5**	**5.4**	**16.4**	**9.3**	**10.9**	**13.8**	**14.9**	**16.2**	**17.2**	**17.7**	**19.2**		
Ordinary dividends	(9.2)	(9.8)	(10.7)	(10.0)	(7.3)	(9.4)	(11.2)	(11.6)	(11.8)	(12.1)	(12.3)	(12.6)	(12.8)	(13.1)	10.6%	6.7%
as % of operating c/flow	27%	23%	51%	38%	21%	19%	26%	26%	25%	24%	23%	23%	23%	23%		
Discretionary free cash flow	**(1.8)**	**0.8**	**(21.5)**	**(8.5)**	**(1.9)**	**7.0**	**(1.9)**	**(0.7)**	**2.0**	**2.8**	**3.8**	**4.6**	**4.8**	**6.1**		
Acquisitions	(7.1)	8.2	1.2	7.3	3.7	-	-	-	-	-	-	-	-	-		
Disposals	5.4	3.6	-	4.5	4.3	4.1	-	-	-	-	-	-	-	-		
Equity change	(0.0)	(0.0)	-	-	(0.0)	(0.0)	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(3.5)**	**12.6**	**(20.2)**	**3.3**	**6.0**	**11.1**	**(1.9)**	**(0.7)**	**2.0**	**2.8**	**3.8**	**4.6**	**4.8**	**6.1**		
Balance sheet:																
Net debt	8.4	8.1	25.3	30.9	25.9	16.1	19.5	20.8	17.3	12.3	5.4	(2.9)	(11.6)	(13.4)		
Net debt/EBITDA	0.1x	0.1x	0.7x	0.6x	0.4x	0.2x	0.3x	0.3x	0.2x	0.2x	0.1x	(0.0x)	(0.1x)	(0.2x)		
Interest cover	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm		
Net debt/equity	7%	6%	19%	21%	15%	9%	10%	10%	7%	5%	2%	-1%	-4%	-4%		
Capital employed:																
Upstream	71.4	71.7	84.0	98.8	113.6	126.4	134.2	147.8	174.8	188.1	201.8	215.2	228.5	241.4	10.6%	8.7%
Downstream	50.7	65.1	54.1	62.6	67.3	72.0	70.7	73.1	77.2	79.5	81.5	83.4	85.4	87.0	3.4%	2.9%
% Upstream	58%	52%	61%	61%	63%	64%	66%	67%	69%	70%	71%	72%	73%	74%		
Return on capital employed:																
Upstream	23.2%	29.6%	9.3%	13.6%	17.2%	16.5%	15.1%	14.7%	15.1%	14.9%	14.6%	14.0%	13.4%	13.0%		
Downstream	14.6%	9.3%	3.3%	6.0%	6.1%	7.1%	6.0%	5.8%	5.4%	4.9%	4.8%	4.6%	4.4%	4.2%		
Aggregate group	**15.2%**	**16.5%**	**6.0%**	**9.0%**	**11.0%**	**11.1%**	**10.2%**	**10.1%**	**10.4%**	**10.4%**	**10.4%**	**10.1%**	**9.9%**	**9.6%**		

Source: Citi Research

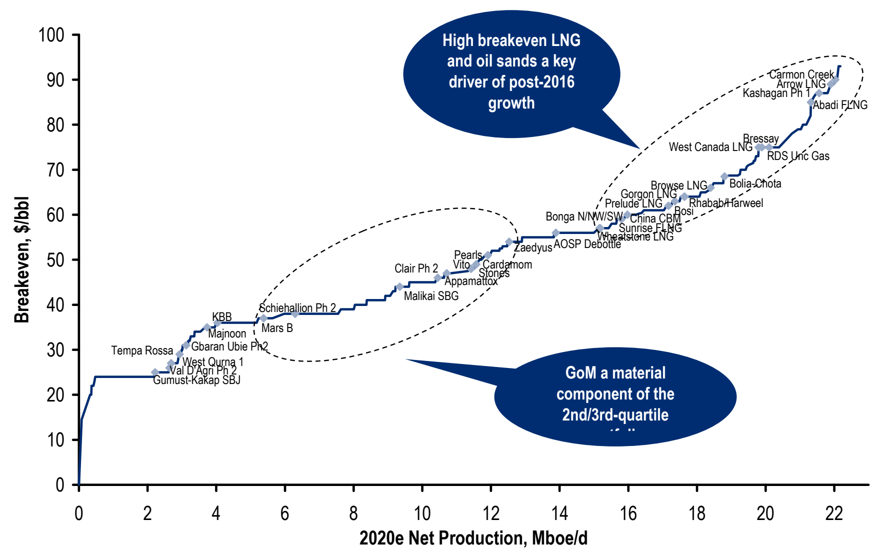
RD Shell – Upstream

Figure 176. RDS project portfolio (2012-2020 start-ups)



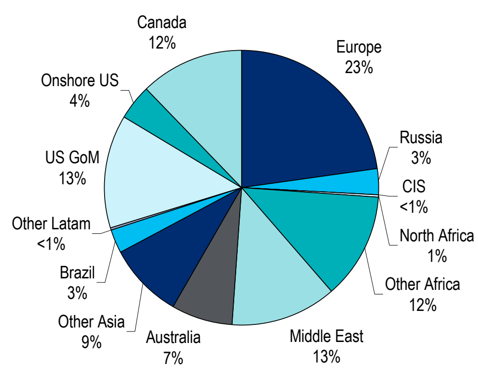
Source: Citi Research

Figure 177. RDS project portfolio versus the industry cost-curve



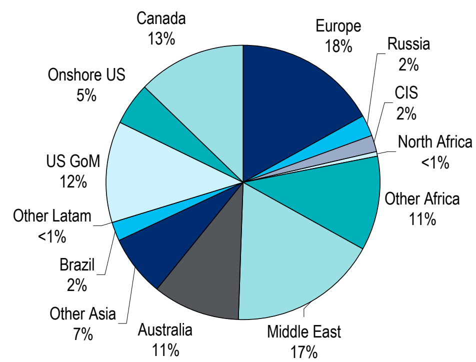
Source: Citi Research

Figure 178. 2012E cash flow by region



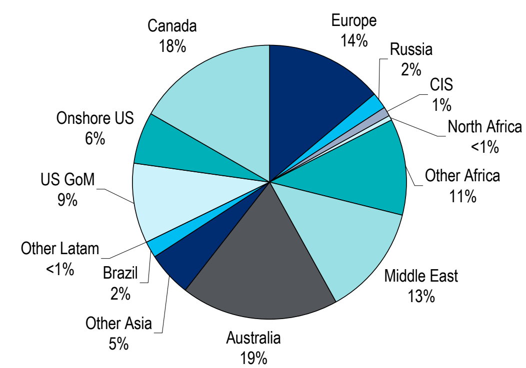
Source: Citi Research

Figure 179. 2016E cash flow by region



Source: Citi Research

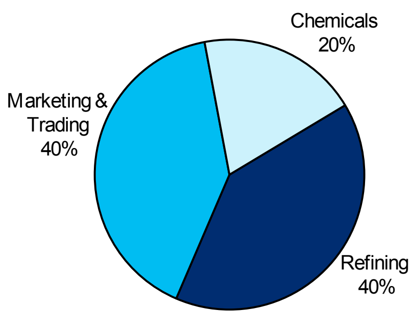
Figure 180. 2020E cash flow by region



Source: Citi Research

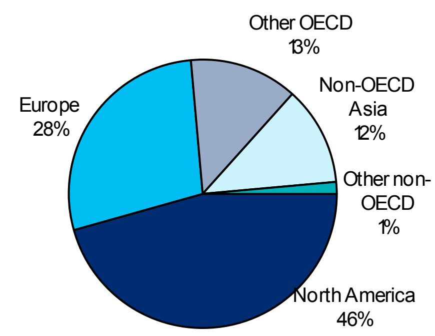
RD Shell - Downstream

Figure 181. 2016E cash flow by segment



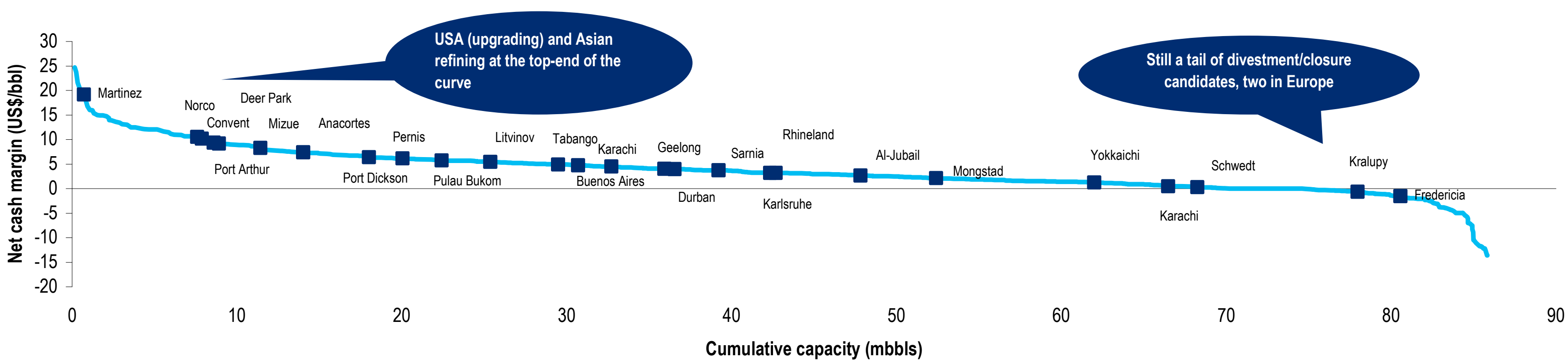
Source: Citi Research

Figure 182. 2016E cash flow by region



Source: Citi Research

Figure 183. RD Shell refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Reliance Industries – Neutral, Rs847/share price target

Whither Growth?

RIL is India's largest integrated oil & gas company with its substantial downstream presence (runs the world's largest refining complex, is amongst the world's largest petrochemical producers), as well as its ownership of India's largest offshore gas block (KG-D6). The latter has faced headwinds in terms of flagging output and reserve downgrades in recent times, while RIL itself has struggled to receive various government approvals, driving a rationalization of its E&P strategy. A macro-led slowdown in the core cyclical businesses and a tendency to invest in capital intensive non-core businesses has not helped either. Given these factors, earnings could stagnate for the next two years. Things could, however, turn around meaningfully by FY16E with an expected gas price hike and the company's planned $12bn investment in its core refining and petrochemicals businesses kicking off.

- **Whither growth** — RIL has been experiencing significant headwinds on all its business segments. On the E&P front, output from its flagship KG-D6 block has been falling (has more than halved from its peak of ~60 mmscmd) on account of reservoir complexities and water/sand ingress issues. The government has refused to reset the gas price which remains artificially low at $4.2/mmbtu, and the company has struggled to get approvals for budgets, development plans, and declarations of commerciality. Even if the recent progress on approvals were to continue, volumes could bottom out at best in the near-term, and any meaningful uptick could be a few years away given the long gestation periods involved. On the petrochemical front, demand remains muted and is unlikely to pick up before 2013. Volume growth in this segment will kick in with capacity expansions in the polyester chain coming onstream in FY14-15E and cracker capacity via the ROGC (refinery off-gas cracker) operational from FY16E. Refining margins, though on a recovery path in the near-term, are likely to remain range-bound over the next 12-18 months before the next major round of global supply additions in 2014-15. Here too, margin improvement and concomitant growth will only materialize post FY16E when the petcoke gasification project comes online. Overall, earnings are therefore, we think, likely to stagnate for the next two years, with meaningful EBITDA growth from its planned investments visible only from FY16E.

- **Buttressing the core** — Notwithstanding many unrelated diversifications, RIL is also showing much needed signs of core business focus with a plan to invest $12bn in its bread-and-butter refining and petrochemicals businesses. Among its ambitious plans include: 1) a $4bn petcoke gasification project that can add ~$2.5-3/bbl to GRMs, and 2) an $8bn petrochemical expansion plan, split between a $4bn ROGC and another $4bn to be invested in polyester capacity expansions. The petcoke gasification and ROGC projects could potentially enhance RIL's annual EBITDA by ~$2.2-2.6bn over the next 3-5 years, driving the bulk of the ~50-60% EBITDA increase over this period. RIL is most levered to the refining part of its business (~45% of overall EBITDA), where it has finally begun to see some traction in GRMs, after a few tough quarters that saw margins slip to a discount to regional benchmarks. Management's claims of having made significant improvements in the refining business in terms of operational efficiencies, optimization of secondary processing capacities, crude procurement capabilities, and product placement strategies are starting to be reflected in margin premia. However, it remains to be seen if these strategies can continue to deliver sustained higher margins in a world where the demand-supply balance may loosen over the next few years. Investments in US shale assets are gradually showing results, with ~$200m in EBITDA last year (~3% of total), which could increase nearly five-fold (~9% of total) in the next 5 years.

- **Many a dalliance** — RIL has, over the past few years, diversified into a number of non-core areas of business – from retail and telecom (~$3bn spent on a wireless broadband licence, further ~$2bn expected to be spent on the back-end infrastructure) to hotels, media, etc., which has depressed return ratios, despite the ongoing buyback. Some of these are capital intensive businesses, and given current market conditions in few of these areas, are also unlikely to see significant value accretion in the near future. RIL's strategy and commitment to these businesses vis-à-vis its investments and focus on core segments and returning cash to shareholders could continue to remain key to its investment thesis going forward.

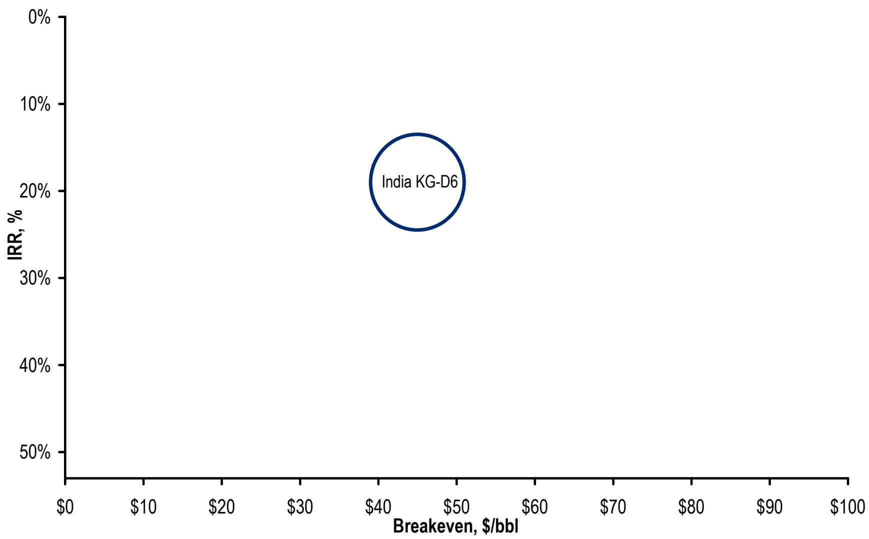
Figure 184. Reliance Industries summary financial model

Rs bn, unless stated	'10	'11	'12	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:													
Brent oil (US$/bbl)	80.0	110.8	110.6	113.1	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
Gross refining margin (US$/bbl)	6.6	8.4	8.6	8.5	8.7	8.2	7.9	7.9	7.9	7.9	7.9		
INR/US$ rate	47.5	45.6	47.9	54.0	53.0	51.0	50.0	49.0	48.0	47.0	46.0		
E&P volumes (kboepd)	263.7	347.4	256.5	190.5	195.4	241.5	302.8	337.0	382.6	429.6	481.2	-2.7%	3.7%
YoY growth		32%	-26%	-26%	3%	24%	25%	11%	14%	12%	12%		
% oil	10%	8%	13%	20%	25%	24%	26%	23%	19%	19%	17%		
E&P cash margins (US$/boe)	20.9	21.8	21.5	22.6	20.4	23.7	21.6	20.7	19.6	18.6	18.5	-0.1%	-1.8%
Per share data:													
EPS (Rs)	49.6	64.5	66.2	70.3	72.4	74.9	95.2	106.9	118.4	126.5	136.8	8.1%	8.7%
DPS (Rs)	7.0	8.0	8.5	9.0	9.5	10.0	13.0	14.6	16.2	17.3	18.7	10.2%	9.9%
Valuation ratios:													
P/E	16.1x	12.2x	10.3x	11.3x	10.9x	10.6x	8.3x	7.4x	6.7x	6.2x	5.8x		
EV/DACF	9.9x	7.9x	6.6x	7.9x	7.7x	7.3x	5.3x	4.2x	3.2x	2.3x	1.4x		
Dividend yield	0.9%	1.0%	1.1%	1.1%	1.2%	1.3%	1.6%	1.8%	2.0%	2.2%	2.4%		
Free cash yield	1.6%	-0.9%	-0.9%	-3.2%	-5.6%	2.3%	11.1%	13.5%	15.3%	16.4%	17.7%		
Cash Flow:													
Upstream	95.4	125.7	96.3	84.8	76.9	106.3	119.1	124.1	131.2	136.2	149.2	-1.1%	1.9%
Downstream	168.2	206.8	198.1	210.3	227.0	222.0	302.6	312.3	315.3	311.6	307.9	7.9%	4.5%
Other	0.0	0.0	0.0	30.6	30.2	19.7	12.3	35.1	60.6	87.6	113.9		
Sources of funds	**351.6**	**427.9**	**380.0**	**403.8**	**424.9**	**445.9**	**577.9**	**626.2**	**665.7**	**693.3**	**571.0**	6.2%	3.3%
Changes in working capital	(132.7)	(84.2)	(186.3)	(53.2)	(92.3)	(20.4)	(70.0)	(72.6)	(74.4)	(74.6)	(76.1)		
Cash flow from operations	**134.6**	**249.8**	**134.9**	**272.6**	**241.7**	**328.4**	**363.5**	**398.5**	**432.2**	**460.3**	**494.4**		
Capex	(93.3)	(268.8)	(153.7)	(354.7)	(384.1)	(270.5)	(79.7)	(53.9)	(41.2)	(42.0)	(41.0)	-21.6%	-18.9%
Operational free c/flow	**41.3**	**(19.0)**	**(18.8)**	**(82.1)**	**(142.4)**	**57.9**	**283.9**	**344.6**	**391.0**	**418.3**	**453.4**		
Ordinary dividends	(49.2)	(27.7)	(29.4)	(33.2)	(35.0)	(36.9)	(47.9)	(53.8)	(59.6)	(63.7)	(68.8)	11.6%	10.6%
as % of operating c/flow	119%	-146%	-156%	-40%	-25%	64%	17%	16%	15%	15%	15%		
Discretionary free c/flow	**(7.9)**	**(46.7)**	**(48.2)**	**(115.3)**	**(177.5)**	**21.0**	**236.0**	**290.8**	**331.4**	**354.7**	**384.5**		
Disposals/(acquisitions)	-	90.0	230.0	-	-	-	-	-	-	-	-		
Equity change	-	-	-	-	(26.0)	-	-	-	-	-	-		
Surplus (deficit)	**(7.9)**	**43.3**	**181.8**	**(115.3)**	**(203.4)**	**21.0**	**236.0**	**290.8**	**331.4**	**354.7**	**384.5**		
Balance sheet:													
Net debt	485	393	245	417	580	547	173	(195)	(606)	(1,038)	(1,463)		
Net debt/EBITDA	1.6x	1.0x	0.7x	1.2x	1.6x	1.4x	0.3x	(0.4)	(1.1)	(1.9)	(2.7)		
Cash interest cover	15.3x	15.8x	11.9x	9.4x	12.1x	9.7x	7.0x	7.4x	7.7x	7.9x	8.2x		
Net debt/equity	35%	26%	14%	23%	29%	25%	7%	-7%	-20%	-32%	-40%		
Capital employed:													
Upstream	589	649	430	456	495	525	532	511	476	437	394	-3.9%	-5.4%
Downstream	1,474	1,512	1,520	1,659	1,824	1,947	1,868	1,788	1,709	1,630	1,550	4.3%	0.3%
% Upstream	29%	31%	20%	19%	18%	18%	19%	19%	18%	18%	17%		
Return on capital employed:													
Upstream	8.3%	8.1%	9.8%	8.0%	5.9%	10.6%	11.9%	12.8%	15.0%	16.7%	20.7%		
Downstream	4.2%	6.8%	6.3%	8.0%	8.1%	6.8%	9.3%	9.6%	10.0%	10.1%	10.3%		
Aggregate group	**8.1%**	**9.3%**	**7.8%**	**7.5%**	**6.8%**	**6.9%**	**9.4%**	**10.0%**	**10.5%**	**10.6%**	**11.1%**		

Source: Company Reports and Citi Research Estimates

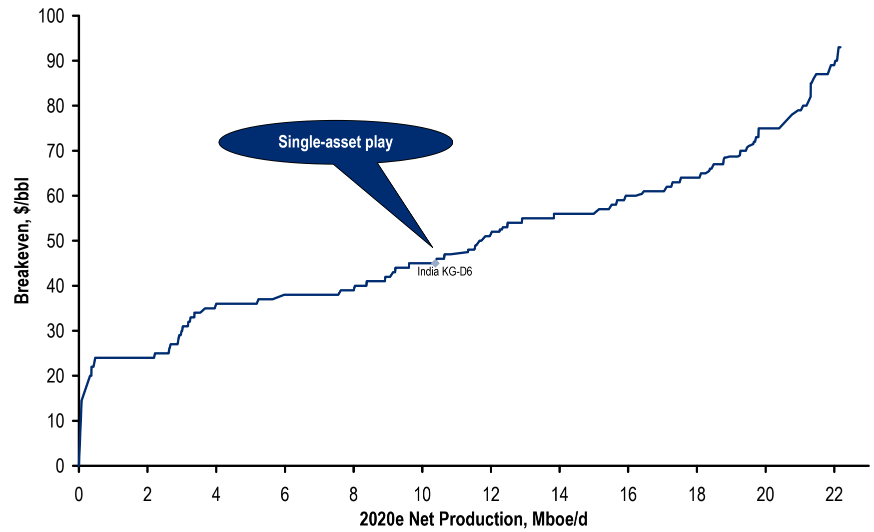
Reliance Industries – Upstream

Figure 185. Reliance Industries project portfolio (2012-2020 start-ups)



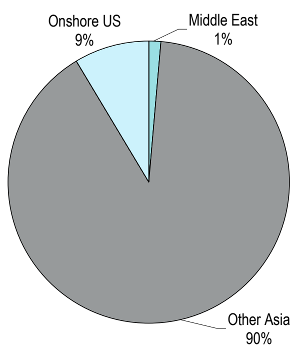
Source: Citi Research

Figure 186. Reliance Industries project portfolio versus the industry cost-curve



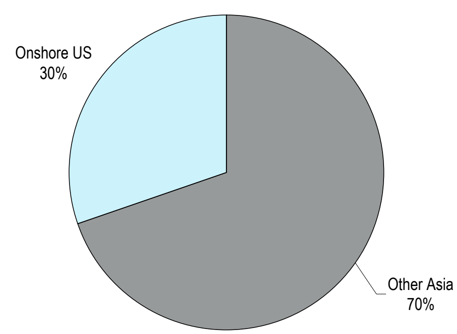
Source: Citi Research

Figure 187. 2012E cash flow by region



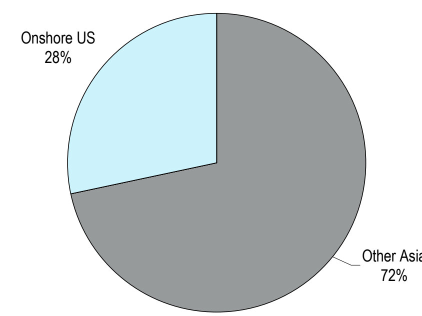
Source: Citi Research

Figure 188. 2016E cash flow by region



Source: Citi Research

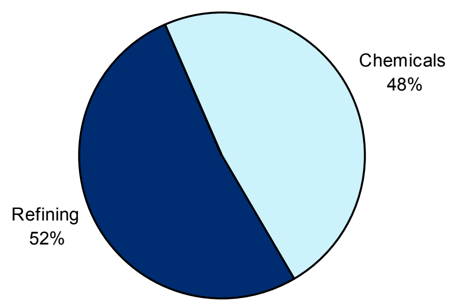
Figure 189. 2020E cash flow by region



Source: Citi Research

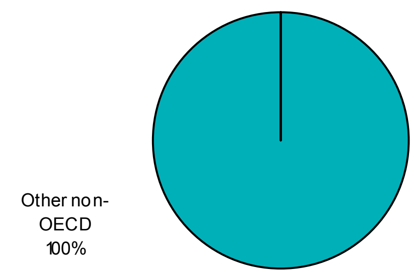
Reliance Industries – Downstream

Figure 190. 2016E cash flow by segment



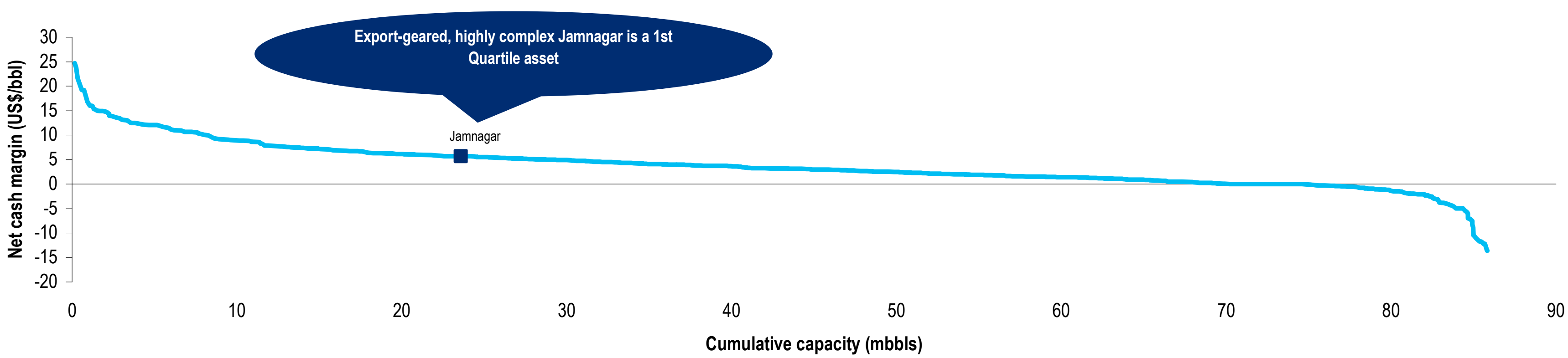
Source: Citi Research

Figure 191. 2016E cash flow by region



Source: Citi Research

Figure 192. Reliance Industries refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Repsol – Buy, €18/share price target

Growth ambitions remain intact, despite YPF wild ride

The nationalisation of YPF has provided Repsol with a tumultuous 1H12 although we would argue that (for a time) the equity market vastly overstated the financial impact of the YPF loss. To be sure the future is not issue-free – management change, core shareholder influence/financing and Spanish reform all remain items of risk – nevertheless, at the heart of the company remains a strong portfolio that comes out well on all our growth/cost-curve screens. The downstream portfolio is set to benefit as a high-quality, diesel-long refiner that can compete well in the global market. The upstream portfolio is well-positioned around growth, margin expansion and long-term portfolio options. The valuation, is not as deeply discounted as it was a few weeks ago, but still remains favourable enough on our metrics.

- **YPF: facts versus fiction –** Given that YPF generated 14% of Repsol CDG's cash flows in 2011 the c. 35% underperformance of the equity was a little difficult to comprehend. Equity markets, we believe, took a view that YPF would pose a balance sheet risk, a view compounded by some rating agency downgrades, although tightening spreads saw credit markets (quite rightly in our view) downplay those risks relatively quickly. We viewed the NAV contribution of YPF as a little lower than the cash flow contribution, given a low growth outlook and higher discount rate associated with those cash flows.

- **Still an emphasis on growth –** As YPF never played a role in delivered Repsol's growth, the growth-offering of the company looks to remain strong at around 5-6% CAGR cash flow growth through to the end of the decade. Progressively over this decade Repsol will leave behind its legacy as a Spanish downstream company; upstream will be a bigger business by 2016/17, driven by new projects in Venezuela and Bolivia, the all-important start of material production from the pre-salt in Brazil and the Mississippi Lime acquisition in the US. Like other Brazilian-exposed companies the Repsol E&P portfolio offers a low breakeven, high profitability and high materiality.

- **Balance sheet supports those growth ambitions –** *Pro forma* net debt, based on at-equity accounting of Gas Natural, standing at €8 B giving a gearing ratio of 30% and net debt/EBITDA of 1.3x. The planned sale of the LNG business will have a strong impact on credit preservation, with book value of €4 B and deconsolidation of another €4B of financial obligations. The LNG sale replaces a planned preference share/convertible swap that would have diluted equity holders by 12-15%.

- **Downstream and Spain –** In a US$100/bbl oil world we see Repsol's Upstream business as self-financing through 2016. In tough market conditions we think the Downstream business will generate around €0.9 B in free cash flow in 2012E, and this can rise to a little over €1.0 B in 2013E as fully operational Cartagena/Bilbao upgrades benefit from wide fuel oil – diesel spreads (Cartagena is one of the most advantaged assets in the European market). The economic/fiscal environment in Spain provides some sensitivity around this free cash forecast. In the marketing business, Repsol's oligopolistic market presence (c. 40% market share) looks to have helped protect margins in the face of economic weakness; in fact we believe cost-efficiency, differentiated fuel offerings and non-oil sales have allowed marketing margins to expand 25% over the last three years. But there is always the threat that government policy could alter towards this business – press reports have suggested tax increases are on the way – perhaps eroding free cash flow by c. 10% from forecast levels.

- **Dividend cut likely needed –** Even without changes to Spanish downstream taxation, we do not think Repsol will be able to generate enough free cash flow to cover current levels of dividend distribution. We think a dividend cut of c 30% (to €0.80-0.85/share) is needed, re-basing the distribution to 20% of operating cash flow versus the 32% level of 2012E. While a lower dividend would likely put pressure on the debt-servicing abilities of core shareholder Sacyr, we think the lower payout looks in-tune with the capabilities of the business, as well as providing a base from which the dividend can grow in-line with the growth in the business.

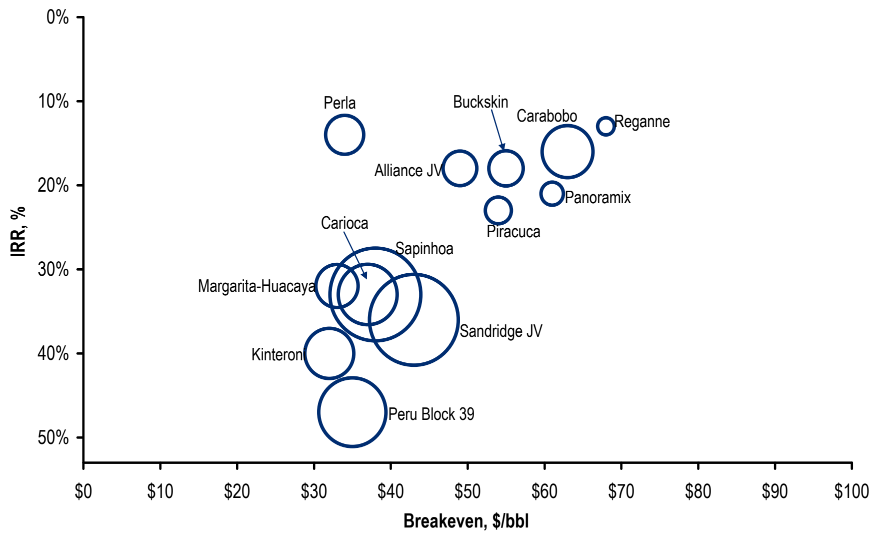
Figure 193. Repsol summary financial model

€ B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	98.1	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
Realised refining margin (US$/bbl)	6.38	7.38	1.34	2.45	1.65	3.91	4.48	4.14	3.62	3.95	4.02	4.10	3.91	3.72	19.1%	9.5%
EUR/US$ rate	1.37	1.46	1.39	1.32	1.39	1.28	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25		
E&P volumes (mboepd)	390	332	333	344	298	330	378	425	447	463	471	495	527	549	9.2%	4.8%
YoY growth	-16.7%	-14.8%	0.1%	3.5%	-13.3%	10.6%	14.5%	12.6%	5.1%	3.6%	1.8%	5.1%	6.5%	4.1%		
% oil	39%	39%	40%	42%	37%	42%	42%	42%	41%	43%	44%	43%	45%	46%		
E&P cash margins (US$/boe)	16.0	18.2	19.4	17.8	27.4	33.0	28.4	26.2	26.5	27.6	28.4	28.6	29.6	30.5	0.1%	1.2%
Per share data:																
EPS as reported (consolidated)	2.46	2.27	1.00	1.66	1.58	1.74	1.68	1.67	1.64	1.82	1.91	2.02	2.24	2.50	2.9%	5.3%
EPS adjusted (GN at-equity)	1.65	1.42	0.46	1.48	1.37	1.21	1.35	1.35	1.36	1.54	1.63	1.73	1.95	2.21	2.3%	5.4%
DPS	1.00	1.05	0.85	1.05	1.16	0.80	0.86	0.92	0.99	1.07	1.12	1.18	1.24	1.30	-1.5%	1.3%
Valuation ratios (at equity):																
P/E	9.5x	11.0x	34.0x	10.6x	9.8x	8.6x	9.4x	8.8x	8.7x	8.6x	8.2x	7.8x	7.0x	6.3x		
EV/DACF	5.2x	4.4x	6.9x	5.6x	5.6x	5.7x	5.3x	5.1x	5.0x	4.7x	4.8x	4.8x	4.6x	4.3x		
Dividend yield	6.4%	6.7%	5.4%	6.7%	7.5%	5.2%	5.5%	6.0%	6.4%	6.9%	7.2%	7.6%	8.0%	8.4%		
Free cash yield	12.1%	11.5%	3.7%	6.3%	3.8%	5.5%	4.4%	5.1%	5.1%	0.5%	2.4%	4.8%	9.9%	10.8%		
Cash flow:																
Upstream	1.7	1.5	1.7	1.7	2.1	3.1	3.1	3.3	3.5	3.7	3.9	4.1	4.6	4.9	12%	10%
Downstream	2.7	2.2	1.2	1.6	1.6	1.6	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	5%	3%
Other	(0.2)	(0.3)	(0.4)	(0.1)	(0.3)	(0.5)	(0.5)	(0.5)	(0.4)	(0.4)	(0.5)	(0.5)	(0.6)	(0.5)		
Core Repsol cash flow	**4.1**	**3.5**	**2.6**	**3.1**	**3.4**	**4.2**	**4.7**	**4.8**	**5.0**	**5.3**	**5.5**	**5.7**	**6.1**	**6.4**	**9%**	**7.5%**
YPF dividend (tax free)	0.5	1.7	0.8	0.7	0.6	-	-	-	-	-	-	-	-	-		
GN dividend (post-tax)	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	28%	16%
Cash flow	**4.7**	**5.2**	**3.6**	**4.0**	**4.1**	**4.4**	**4.9**	**5.1**	**5.3**	**5.6**	**5.8**	**6.0**	**6.4**	**6.7**	**7%**	**6%**
Capex	(2.4)	(3.0)	(2.9)	(2.8)	(3.3)	(3.4)	(4.0)	(4.1)	(4.3)	(5.5)	(5.3)	(5.1)	(4.4)	(4.6)	11%	4%
Free cash flow	**2.3**	**2.2**	**0.7**	**1.2**	**0.7**	**1.1**	**0.8**	**1.0**	**1.0**	**0.1**	**0.5**	**0.9**	**1.9**	**2.1**		
Ordinary dividends	(0.9)	(1.2)	(1.3)	(1.0)	(1.3)	(1.4)	(1.0)	(1.1)	(1.2)	(1.3)	(1.5)	(1.6)	(1.6)	(1.7)	1%	3%
as % of operating c/flow	19%	23%	36%	26%	31%	32%	20%	21%	23%	24%	26%	26%	26%	26%		
Discretionary free cash flow	**1.4**	**1.0**	**(0.6)**	**0.2**	**(0.5)**	**(0.3)**	**(0.1)**	**(0.1)**	**(0.2)**	**(1.3)**	**(1.0)**	**(0.6)**	**0.3**	**0.4**		
Disposals	1.3	1.0	0.2	5.1	4.2	0.6	-	-	-	-	-	-	-	-		
Acquisitions	(0.3)	(0.2)	(1.6)	-	(0.2)	(0.4)	-	-	-	-	-	-	-	-		
Other	-	-	-	-	(2.7)	(0.2)	-	-	-	-	-	-	-	-		
Surplus (deficit)	**2.4**	**1.8**	**(1.9)**	**5.2**	**0.7**	**(0.3)**	**(0.1)**	**(0.1)**	**(0.2)**	**(1.3)**	**(1.0)**	**(0.6)**	**0.3**	**0.4**		
Balance sheet:																
Core Repsol net debt	5.7	4.6	7.4	3.9	7.5	7.9	8.0	8.1	8.3	9.6	10.6	11.2	10.9	10.5		
Net debt/EBITDA	1.1x	0.9x	2.2x	0.9x	1.6x	1.3x	1.2x	1.2x	1.2x	1.3x	1.4x	1.4x	1.2x	1.1x		
Cash interest cover	27.4x	21.1x	9.2x	31.8x	16.8x	11.4x	13.8x	14.0x	17.1x	18.1x	16.3x	15.4x	15.7x	17.1x		
Net debt/equity	50%	32%	52%	21%	38%	30%	30%	30%	30%	35%	38%	41%	40%	38%		
Capital employed:																
Upstream (incl LNG)	7.0	7.7	7.7	8.1	9.3	10.6	12.0	13.2	14.5	16.6	18.1	19.2	20.3	21.5	12%	10%
Downstream	9.0	8.9	9.8	10.8	11.6	11.4	11.3	11.2	11.2	11.6	12.3	12.9	12.9	12.9	0%	1%
Equity stakes (YPF to end-2011, GN)	18.9	16.2	12.2	14.0	8.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6		
% Upstream	20%	24%	26%	25%	31%	42%	45%	47%	49%	52%	53%	54%	55%	57%		
Return on capital employed:																
Upstream	10.4%	11.8%	6.8%	7.7%	10.8%	14.8%	11.6%	10.5%	10.4%	10.5%	10.0%	9.9%	10.7%	11.5%		
Downstream	22.9%	17.3%	6.0%	8.9%	6.0%	6.1%	9.4%	9.7%	9.0%	9.7%	9.4%	9.0%	8.6%	8.5%		
Equity stakes (YPF to end-2011, GN)	3.0%	10.9%	8.3%	6.6%	7.5%	6.0%	6.5%	7.1%	8.0%	8.1%	8.2%	8.3%	8.4%	8.5%		
Aggregate group	**9.6%**	**12.8%**	**7.2%**	**7.6%**	**7.9%**	**9.7%**	**10.0%**	**9.8%**	**9.6%**	**9.9%**	**9.6%**	**9.4%**	**9.7%**	**10.2%**		

Source: Company Reports and Citi Research Estimates

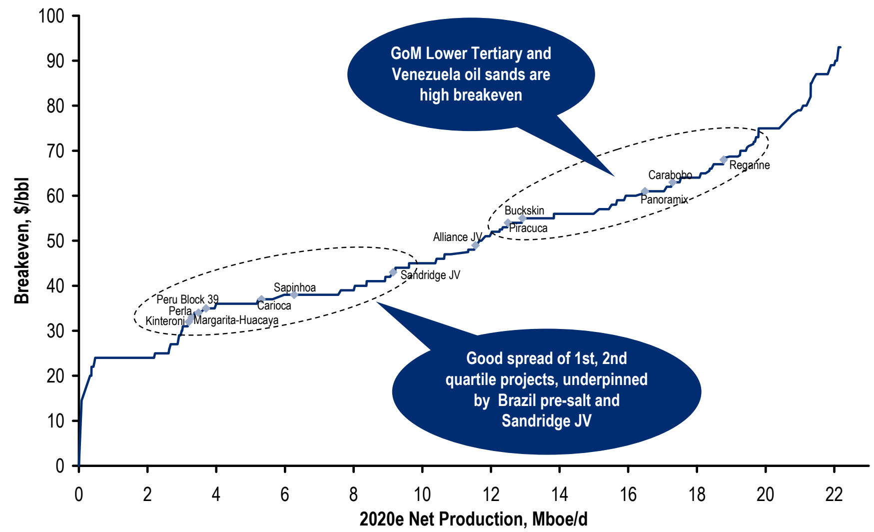
Repsol – Upstream

Figure 194. Repsol project portfolio (2012-2020 start-ups)



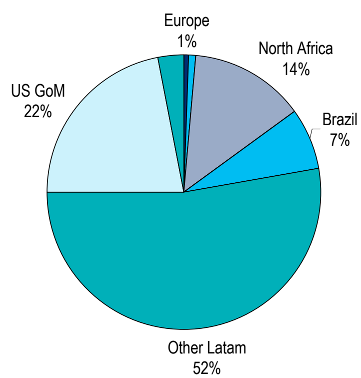
Source: Citi Research

Figure 195. Repsol project portfolio versus the industry cost-curve



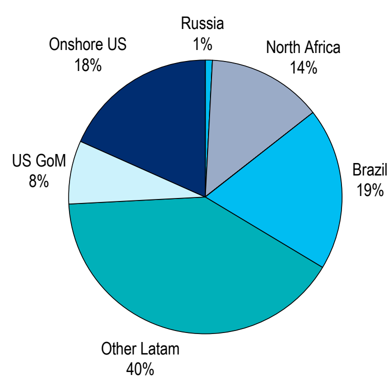
Source: Citi Research

Figure 196. 2012E cash flow by region



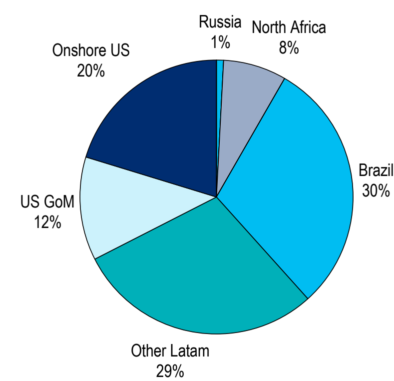
Source: Citi Research

Figure 197. 2016E cash flow by region



Source: Citi Research

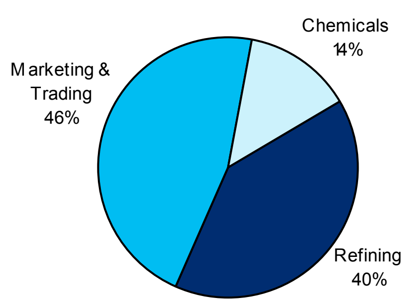
Figure 198. 2020E cash flow by region



Source: Citi Research

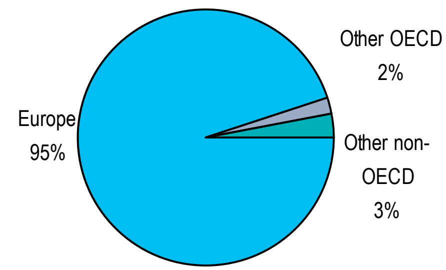
Repsol – Downstream

Figure 199. 2016E cash flow by segment



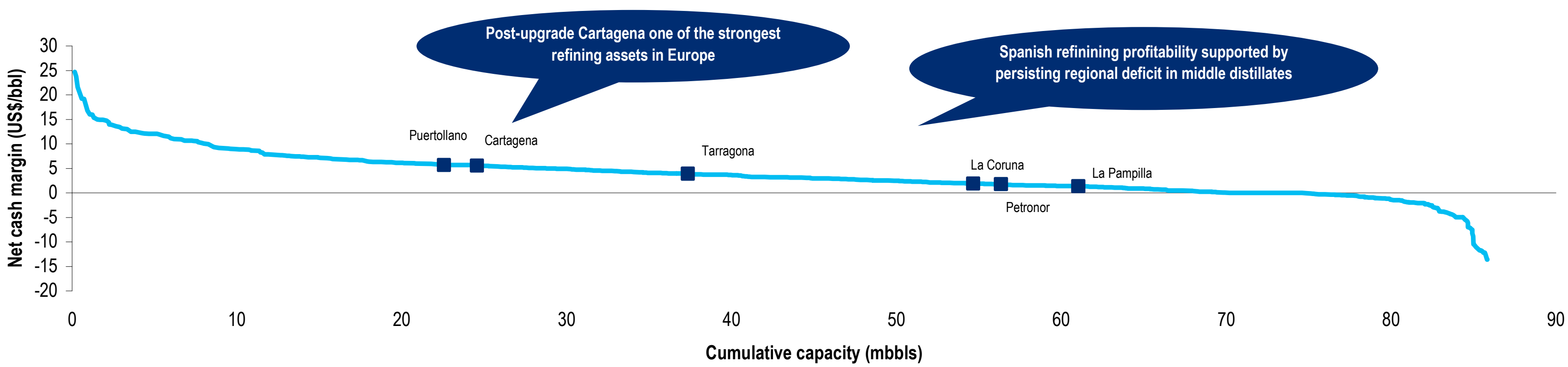
Source: Citi Research

Figure 200. 2016E cash flow by region



Source: Citi Research

Figure 201. Repsol refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Rosneft – Buy, US$7.3/share price target

Greenfield portfolio offers strong long-term growth prospects

While the Rosneft balance sheet remains somewhat stretched from the last decade, the high quality and youth of its key upstream assets mean it is quite efficient at replacing reserves. Rosneft's greenfield portfolio is the most promising in the country, including further exploration opportunities in the immediate vicinity of the Vankor field, numerous East Siberian exploration licenses, and the lion's share of offshore exploration licences and recently signed deals with ExxonMobil, Statoil, and Total to test and develop them. Downstream the company is facing as-yet unspecified cost overruns in its ambitious upgrade program, while the new management team, including highly-influential CEO Igor Sechin, has work to do to reestablish communications with the investment community.

- **Production large, growing, and with good long-term prospects** — Rosneft has 18.4bn barrels of proved oil reserves, giving it a reserve life of 21 years on production of over 2.4mmbpd of production. Output is set to rise again by year-end with the start-up of the second phase of the key Vankor field, which should add c200kbd to production. Further out Rosneft has the Yurubcheno-Tokhomskoye field, although it needs a specific tax regime from the government to justify investment there, followed by substantial and very promising offshore blocks in Russia's Kara and Black Seas, among others. Offshore deposits are to be developed via already-concluded agreements with the likes of ExxonMobil, Statoil, and Total. Replacement costs have typically run around $6/bbl, and are likely to stay in that attractive range for the medium term on the strength of initial well flow rates at the key Vankor and Priobskoye fields.

- **Downstream shows promise, but investment clarity needed** — Rosneft is running its refineries at over 1mmbpd in the first 7 months of 2012, making it Russia's largest refiner (19.1% of the total). The company has an aggressive plan to upgrade all 7 of its key refineries, including a substantial increase in primary distillation capacity at its export-oriented Tuapse plant on the Black Sea. However, while the whole programme was initially pegged by management to run at $7bn, in early 2012 the company indicated that the final budget would likely be well in excess of that number, although no new guidance was every established. With a highly favorable export duty regime, we think the returns on downstream investments are likely to remain comfortably above the company's cost of capital, but the market is unlikely to give Rosneft the benefit of the doubt on the subject unless and until management clarifies the situation around the investment budget.

- **Lack of investor communications key corporate governance issue, but likely to be addressed by new management team** — For a period starting with the release of 3Q11 results, when management inexplicably failed to host a conference call, Rosneft's investor communications effort went into hibernation. The 4Q11 call was similarly skipped, and top management only reappeared with the 2Q12 call. However, the new management team appears set to reestablish contact with the investment community, in particular with Dmitri Avdeev, the new CEO, signaling on the 2Q12 call that he will soon be reaching out to investors.

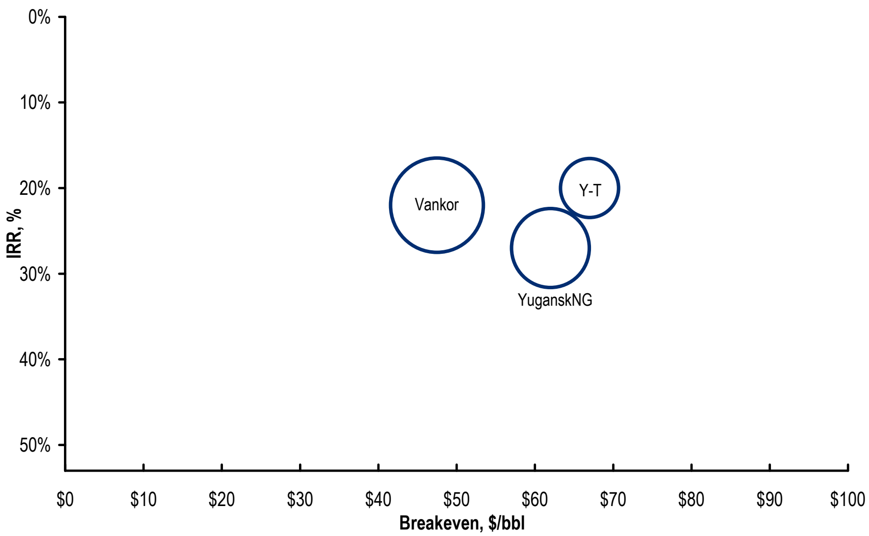
Figure 202. Rosneft summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	96.6	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	0.3%	0.2%
E&P volumes (mboepd)	2.08	2.16	2.23	2.37	2.42	2.51	2.64	2.64	2.69	2.71	2.76	2.76	2.76	2.76	2.6%	1.4%
YoY growth	1.3%	4.1%	2.9%	6.3%	2.5%	3.5%	5.2%	0.1%	1.9%	0.6%	1.9%	0.0%	0.0%	0.0%		
% oil	98%	98%	98%	99%	99%	99%	98%	98%	98%	98%	98%	98%	98%	98%		
E&P cash margins (US$/bbl)	16.4	7.9	12.8	11.7	15.2	14.9	12.2	11.6	11.2	10.7	10.3	10.6	10.8	11.1	-6.2%	-3.5%
Per share data:																
EPS (US$)	1.30	1.15	0.68	1.08	1.30	1.08	0.80	0.78	0.87	1.03	0.61	0.62	0.64	0.65	-12.9%	-7.4%
DPS (US$)	0.06	0.08	0.07	0.09	0.12	0.14	0.14	0.14	0.15	0.72	0.49	0.50	0.51	0.52	34.8%	18.1%
Valuation Ratios:																
P/E	532.8x	600.2x	1,018.1x	639.3x	4.9x	6.0x	8.2x	8.4x	7.5x	6.2x	10.7x	10.5x	10.2x	9.9x		
EV/DACF	4.6x	6.7x	7.9x	5.2x	4.4x	4.8x	5.6x	5.6x	5.0x	4.1x	4.8x	4.5x	4.2x	3.9x		
Dividend yield	1.0%	1.2%	1.1%	1.4%	1.8%	2.1%	2.1%	2.1%	2.3%	11.2%	7.5%	7.7%	7.8%	8.0%		
Free cash yield	17.0%	9.1%	4.9%	10.1%	3.7%	-0.6%	-0.9%	-0.4%	11.5%	11.6%	11.1%	12.3%	12.3%	11.6%		
Cash flow:																
Upstream	13.8	7.0	8.3	10.3	10.2	11.2	10.9	11.0	12.0	13.6	10.9	11.4	11.4	11.1	1.8%	1.0%
Downstream	3.4	7.4	2.1	4.9	5.6	4.4	4.7	4.9	5.5	6.4	5.3	5.6	5.6	5.4	-0.6%	-0.3%
Other and corporate	0.7	(1.5)	0.7	1.3	3.3	1.8	(0.1)	(0.2)	(0.3)	(0.5)	0.1	(0.3)	0.1	1.0		
Sources of funds	**17.9**	**12.9**	**11.0**	**16.5**	**19.1**	**17.4**	**15.5**	**15.7**	**17.2**	**19.6**	**16.3**	**16.7**	**17.1**	**17.5**	-1.7%	-0.9%
Changes in working capital	(0.7)	1.5	(0.7)	(1.3)	(3.3)	(1.8)	0.1	0.2	0.3	0.5	(0.1)	0.3	(0.1)	(1.0)		
Cash flow from operations	**17.1**	**14.4**	**10.3**	**15.2**	**15.7**	**15.6**	**15.5**	**15.9**	**17.5**	**20.0**	**16.2**	**17.0**	**17.0**	**16.5**		
Capex	(6.2)	(8.7)	(7.3)	(8.9)	(13.2)	(15.9)	(15.9)	(15.9)	(9.7)	(12.1)	(8.6)	(8.7)	(8.7)	(8.7)	-8.1%	-4.6%
Free cash flow	**10.9**	**5.7**	**3.1**	**6.2**	**2.5**	**(0.4)**	**(0.4)**	**(0.1)**	**7.8**	**7.9**	**7.5**	**8.4**	**8.4**	**7.9**		
Ordinary dividends	(0.5)	(0.5)	(0.6)	(0.7)	(0.9)	(1.1)	(1.3)	(1.3)	(1.3)	(6.7)	(4.5)	(4.6)	(4.7)	(4.8)	38.5%	19.8%
as % of operating c/flow	3%	4%	6%	5%	6%	7%	8%	8%	7%	33%	28%	27%	28%	29%		
Discretionary free cash flow	**10.3**	**5.1**	**2.4**	**5.5**	**1.6**	**(1.5)**	**(1.7)**	**(1.4)**	**6.6**	**1.2**	**3.0**	**3.8**	**3.7**	**3.0**		
Disposals/(Acquisitions)	nm	-	-	-	-	-	-	-	-	-	-	-	-	-		
Equity change	(7.5)	-	(0.0)	0.0	-	(2.0)	-	-	-	-	-	-	-	-		
Surplus (deficit)	**10.3**	**5.1**	**2.4**	**5.5**	**1.6**	**(1.5)**	**(1.7)**	**(1.4)**	**6.6**	**1.2**	**3.0**	**3.8**	**3.7**	**3.0**		
Balance sheet:																
Net debt	26.3	22.8	21.5	19.4	18.1	22.6	24.0	24.7	17.5	15.6	12.6	9.4	6.2	3.2		
Net debt/EBITDA	1.9x	1.3x	1.6x	1.0x	0.8x	1.1x	1.4x	1.4x	0.9x	0.7x	0.7x	0.5x	0.3x	0.2x		
Interest cover	11.3x	22.7x	138.9x	868x	nm	413x	110x	81x	96x	149x	148x	148x	148x	148x		
Net debt/equity	92%	59%	48%	36%	28%	31%	30%	29%	19%	17%	13%	10%	6%	3%		
Capital employed:																
Upstream	42.4	49.3	53.9	61.3	68.8	72.3	76.1	78.8	78.7	81.0	80.3	81.3	82.2	83.2	3.9%	2.1%
Downstream	13.3	13.7	14.4	16.8	20.3	24.9	29.1	33.1	32.8	31.4	30.1	30.5	30.8	31.2	9.0%	4.9%
% Upstream	76%	78%	79%	78%	77%	74%	72%	70%	71%	72%	73%	73%	73%	73%		
Return on capital employed:																
Upstream	24.4%	10.9%	9.7%	11.5%	11.7%	10.1%	6.8%	6.4%	7.0%	8.0%	4.7%	4.8%	4.8%	4.9%		
Downstream	19.0%	41.6%	9.0%	20.1%	21.9%	11.6%	7.7%	6.8%	7.7%	9.8%	6.1%	6.2%	6.3%	6.4%		
Aggregate group	**10.7%**	**16.0%**	**9.8%**	**13.7%**	**15.2%**	**10.8%**	**7.2%**	**6.4%**	**7.0%**	**8.3%**	**5.1%**	**5.3%**	**5.6%**	**5.8%**		

Source: Company Reports and Citi Research Estimates

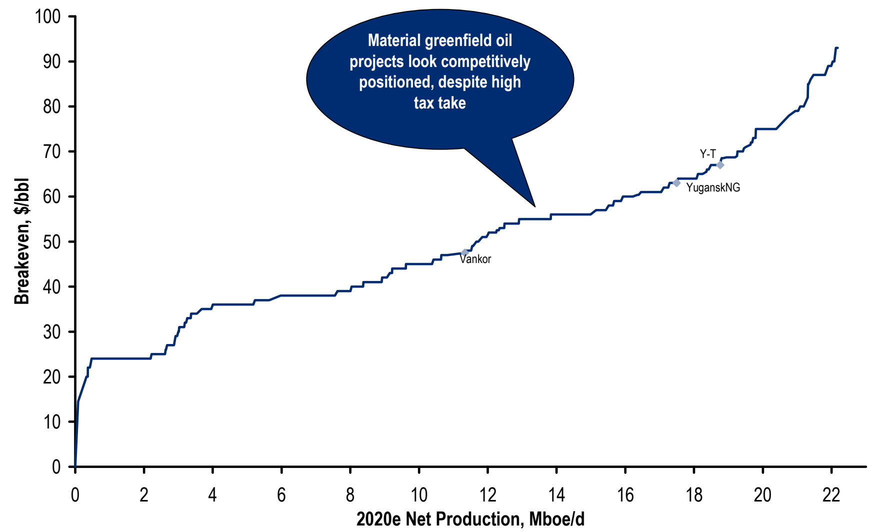
Rosneft – Upstream

Figure 203. Rosneft project portfolio (2012-2020 start-ups)



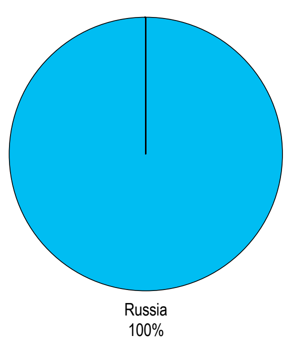
Source: Citi Research

Figure 204. Rosneft project portfolio versus the industry cost-curve



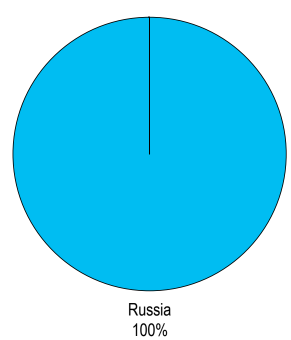
Source: Citi Research

Figure 205. 2012E cash flow by region



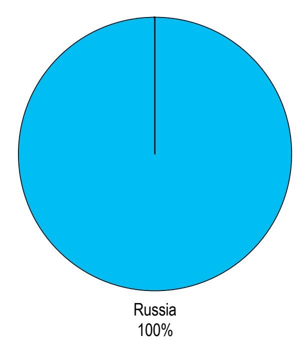
Source: Citi Research

Figure 206. 2016E cash flow by region



Source: Citi Research

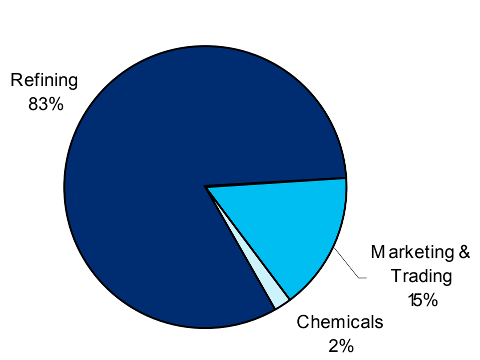
Figure 207. 2020E cash flow by region



Source: Citi Research

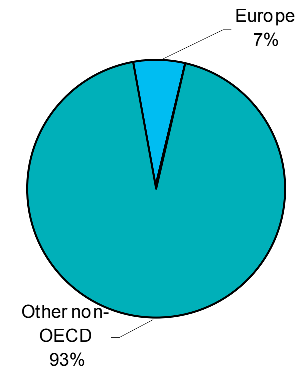
Rosneft – Downstream

Figure 208. 2016E cash flow by segment



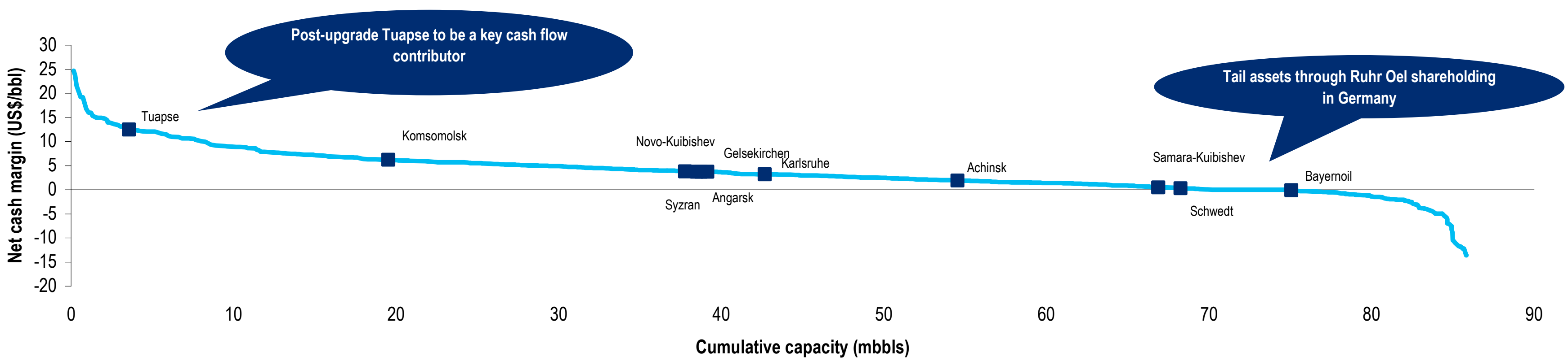
Source: Citi Research

Figure 209. 2016E cash flow by region



Source: Citi Research

Figure 210. Rosneft refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Santos – Buy, A$16.57/share price target

LNG growth being delivered, plus tailwind from rising domestic gas prices

Santos is in the process of delivering transformational growth – transitioning from a business with high cost, declining assets, to a business with underpinning LNG revenues and a reinvigorated Cooper Basin asset given increasing domestic gas prices. The stock is heavily discounted currently because investors are concerned about execution risk, particularly for its CGS LNG project, GLNG. We think these execution risks are overstated, given Santos now holds only a 30% interest in the GLNG project and the project represents only 16.5% of our DCF valuation. At <A$12/shr, the stock does not include full value for its base business and the PNG LNG project, let alone any value for the GLNG project, yet these projects are contracted and financed. There are many other growth opportunities for Santos, including further growth from the Cooper Basin (infill drilling, unconventional), potential for PNG LNG Train 3, Gunnedah Basin CSG, Bonaparte LNG, and an exciting exploration programme within the next 9 months.

- **CSG-LNG projects driving domgas prices higher, increasing value of East Coast domestic gas business —** In 2007 STO launched its plans for the GLNG project, which would not only provide a growth element for Santos, but also tighten up East Coast gas supply/demand, and increase gas prices from a historical ~A$3-4/GJ towards an LNG net-back parity of >A$8/GJ. Santos took FID on GLNG in January 2011, with first production anticipated in 2015. Santos' strategy is working – we think domgas prices for long term contracts are now up at ~A$8/GJ. We have added ~A$2/shr to our Cooper Basin valuation as a result of the higher gas prices and the anticipated reserve growth that will result. Our DCF does not attribute any value to the unconventional prospects in the Cooper Basin, which could be significant longer term.

- **Concerns over GLNG project overstated —** GLNG accounts for ~16.5% of our risked DCF, yet seems to account for the majority of investor focus, in our experience. Investors are concerned about extra capex blowouts, but even if capex increased by a further ~US$10b (entirely unrealistic in our view), DCF would reduce from A$16.56/shr to A$13.88/shr, and the stock would still be cheap, in our view. We view GLNG as a low IRR but positive NPV project in isolation, before considering the benefits STO has received from farm-downs and higher gas prices. We estimate a life cycle IRR for STO of 11.95% from the point of acquisition in mid-05, and this is before considering the portfolio benefits of higher domestic gas prices which have added ~A$2/shr to our Cooper Basin DCF.

- **Exploration to fuel next generation of growth —** Projects in construction look likely to deliver strong earnings growth for STO, including Kipper, PNG LNG, and GLNG. Beyond this, STO has many other growth opportunities including PNG T3, BLNG, GLNG T3 (Cooper or Gunnedah), plus the growth opportunities arising from its WA gas exploration. Four WA gas licences contain unrisked targets totalling 5.7tcf gas net to STO, worth A$6.50/shr unrisked, A$2.20/shr risked, of which only A$0.24/shr is in our DCF. By the time these growth options mature to investment decisions, we forecast STO will be earning strong cashflows from PNG LNG and GLNG to fund this growth.

- **Cooper Basin unconventional is a long development time likely, 5yrs+** — Extensive trial and error in the US has compressed commercialization timeframes of new shale plays to 3-5 years, but the lack of resources, operators, and contractors in Australia will mean longer development times. We think the STO-led SACBJV is best placed to benefit from unconventional gas in the Cooper given its acreage position and access to processing infrastructure. A lot more work is required before we would attribute significant value for STO, but early signs are encouraging. Santos' first shale well, Moomba-191, achieved a 2-3week stabilised flow rate of 2.6MMscfd from 3 fracs in the REM sequence, which compares favorably to BPT's initial rate of 1.3MMscfd from 5 frac stages which reduced to 650Mscfd after 3 weeks.

- **Valuation** — STO remains, in our view, the best value Australian large cap E&P stock with an ETR of >40%. We estimate a DCF of A$15.59/shr including producing assets and sanctioned projects, and our Risked DCF including modest value for longer dated growth is A$16.56/shr. STO's long term strategy is working – its CSM to LNG concept has increased domgas prices and it is now well positioned to benefit. The next 9 months comprise four exciting exploration catalysts (Crown, Hides GWC, Cooper lateral shale well, Winchester).

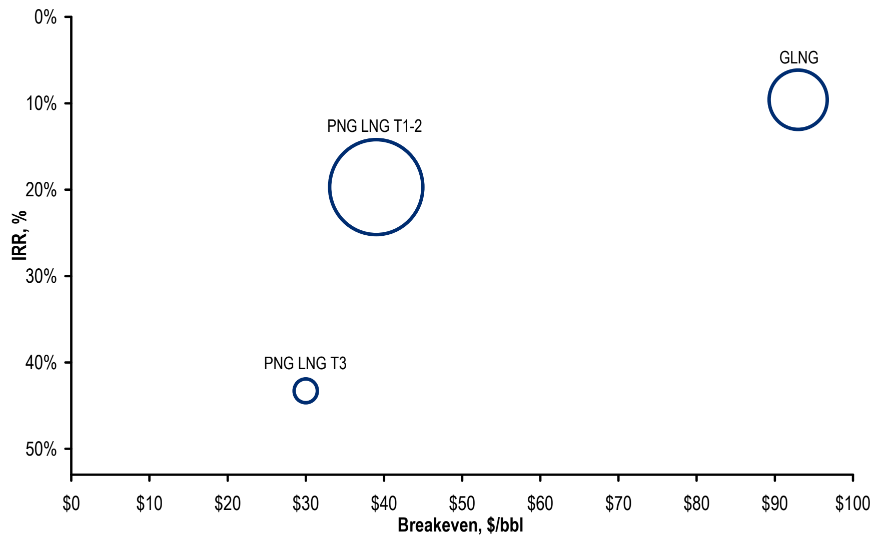
Figure 211. Santos summary financial model

A$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.9	97.9	62.1	80.2	111.8	113.5	98.8	95.4	97.8	94.7	97.1	99.5	102.0	104.5	-3.3%	-0.7%
USD/AUD	0.84	0.85	0.79	0.92	1.03	0.98	0.94	0.90	0.89	0.88	0.85	0.85	0.85	0.85		
E&P volumes (kboepd)	162	149	149	137	129	144	153	168	194	218	209	226	234	228	11.0%	6.5%
YoY growth		-7.9%	0.0%	-8.0%	-5.6%	11.6%	6.2%	9.5%	15.3%	12.8%	-4.3%	8.3%	3.4%	-2.6%		
% oil	30%	27%	25%	22%	25%	26%	25%	26%	22%	17%	15%	14%	13%	12%		
E&P cash margins (US$/bbl)	20.7	21.9	15.7	20.3	27.6	31.6	26.3	26.6	28.0	27.7	29.4	31.1	31.8	33.9	0.1%	2.3%
Per share data:																
EPS (AUD)	0.92	0.82	0.32	0.45	0.51	0.71	0.57	0.69	0.92	1.17	1.41	1.63	1.70	1.80	18%	15%
DPC (AUD)	0.40	0.42	0.42	0.37	0.30	0.30	0.30	0.30	0.46	0.58	0.70	0.82	0.85	1.80	14%	22%
Valuation ratios:																
P/E	12.9x	14.4x	37.3x	26.3x	23.2x	16.5x	20.7x	17.1x	12.7x	10.1x	8.4x	7.2x	6.9x	6.5x		
EV/DACF	11.1x	8.7x	10.5x	9.1x	7.6x	8.3x	9.6x	8.8x	7.0x	6.1x	5.7x	4.9x	4.4x	3.9x		
Dividend yield	3.4%	3.6%	3.6%	3.1%	2.5%	2.5%	2.5%	2.5%	3.9%	5.0%	6.0%	6.9%	7.2%	15.3%		
Free cash yield	-0.2%	-2.3%	-4.7%	-1.7%	-14.2%	-21.7%	-6.4%	-3.6%	-1.4%	9.0%	9.0%	13.8%	18.8%	18.7%		
Cash flow:																
Upstream	1.21	1.5	1.2	1.3	1.1	1.2	1.6	1.6	1.9	2.4	2.6	2.7	3.2	3.3	16%	13%
Other and corporate	-	0.0	-	(0.0)	0.4	0.5	(0.1)	0.2	0.3	0.1	0.1	0.3	0.0	0.0		
Sources of funds	**1.2**	**1.5**	**1.2**	**1.2**	**1.6**	**1.7**	**1.6**	**1.8**	**2.2**	**2.5**	**2.6**	**3.0**	**3.2**	**3.3**	10%	9%
Changes in working capital	0.0	(0.1)	(0.2)	0.3	(0.2)	(0.4)	0.1	(0.2)	(0.3)	(0.1)	(0.1)	(0.3)	(0.0)	(0.0)		
Cash flow from operations	**1.2**	**1.4**	**0.9**	**1.5**	**1.4**	**1.2**	**1.6**	**1.6**	**1.9**	**2.4**	**2.6**	**2.7**	**3.2**	**3.3**		
Capex	(1.3)	(1.6)	(1.4)	(1.7)	(2.8)	(3.7)	(2.4)	(2.1)	(2.1)	(1.4)	(1.5)	(1.1)	(1.0)	(1.2)	-14%	-9%
Free cash flow	**(0.0)**	**(0.2)**	**(0.4)**	**(0.2)**	**(1.5)**	**(2.4)**	**(0.7)**	**(0.4)**	**(0.2)**	**1.0**	**1.0**	**1.6**	**2.1**	**2.1**		
Ordinary dividends	(0.2)	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.2)	(0.2)	(0.3)	(0.5)	(0.6)	(0.7)	(0.8)	(1.3)	27%	27%
as % of operating c/flow	18%	18%	32%	20%	11%	15%	13%	13%	13%	21%	25%	27%	26%	39%		
Discretionary free cash flow	**(0.2)**	**(0.4)**	**(0.7)**	**(0.5)**	**(1.6)**	**(2.6)**	**(0.9)**	**(0.6)**	**(0.4)**	**0.5**	**0.4**	**0.9**	**1.3**	**0.8**		
Acquisitions	(0.1)	(0.0)	(0.4)	(0.0)	(0.0)	(0.1)	-	-	-	-	-	-	-	-		
Disposals	0.0	0.0	0.0	0.8	1.1	0.3	-	-	-	-	-	-	-	-		
Equity change	(0.2)	(0.1)	3.0	0.5	0.1	0.1	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(0.3)**	**(0.4)**	**(1.1)**	**0.3**	**(0.6)**	**(2.4)**	**(0.9)**	**(0.6)**	**(0.4)**	**0.5**	**0.4**	**0.9**	**1.3**	**0.8**		
Balance sheet:																
Net debt	1.9	0.9	(0.4)	(1.2)	(0.1)	2.6	3.5	4.1	4.5	4.0	3.6	2.8	1.5	0.6		
Net debt/EBITDA	1.2x	0.5x	(0.4x)	(0.9x)	(0.1x)	1.4x	1.7x	1.7x	1.4x	1.1x	0.9x	0.6x	0.3x	0.1x		
Interest cover	nm	19.7x	88.6x	nm	nm	nm	34x	29x	10x	9x	10x	14x	20x	28x		
Net debt/equity	57%	20%	-6%	-15%	-1%	27%	35%	40%	41%	35%	29%	21%	10%	4%		
Capital employed:																
Upstream	5.2	5.4	6.5	6.4	8.9	12.2	13.4	14.5	15.5	15.6	16.0	16.0	15.5	15.1	12%	6%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
% Upstream	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:																
Upstream	10.2%	9.7%	3.6%	4.5%	3.7%	4.7%	3.9%	4.5%	6.9%	8.5%	9.5%	10.3%	10.3%	10.7%		
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group	**10.2%**	**9.7%**	**3.6%**	**4.5%**	**3.7%**	**4.7%**	**3.9%**	**4.5%**	**6.9%**	**8.5%**	**9.5%**	**10.3%**	**10.3%**	**10.7%**		

Source: Company Reports and Citi Research Estimates

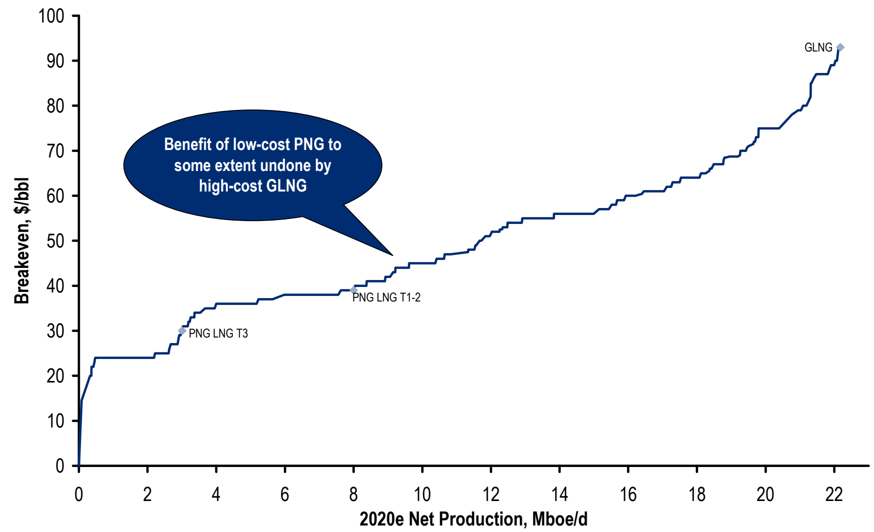
Santos – Upstream

Figure 212. Santos project portfolio (2012-2020 start-ups)



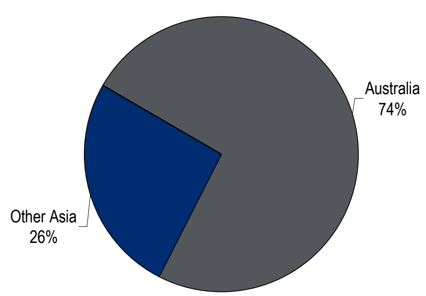
Source: Citi Research

Figure 213. Santos project portfolio versus the industry cost-curve



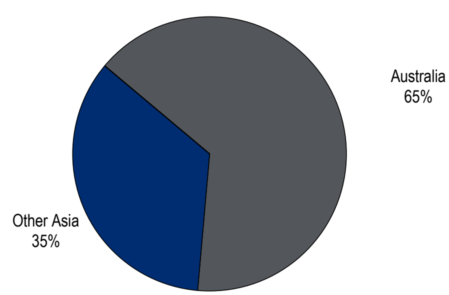
Source: Citi Research

Figure 214. 2011E cash flow by region



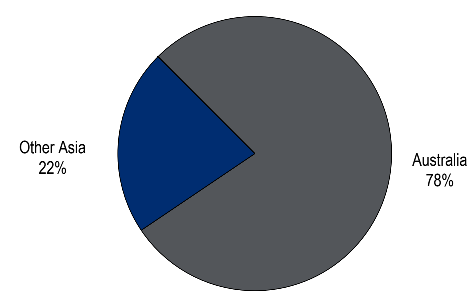
Source: Citi Research

Figure 215. 2015E cash flow by region



Source: Citi Research

Figure 216. 2020E cash flow by region



Source: Citi Research

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Sinopec – Neutral, HK$7.4/share price target

Waiting for refining industry reform

Like PetroChina, we see regulatory decisions as the key driver of the Sinopec's long-term returns. Sinopec continues to invest heavily in new refining capacity despite losses in 5 of the past 10 years. A more market oriented system for pricing oil products in China could be a key positive in 2013. Investment in new upstream petrochemical capacity has make the company a much more competitive chemical producer than even just 5 years ago, but as a naphtha based producer, will face long term pressure from feedstock advantaged North American producers. Upstream returns are likely to fall due to rising costs for liquids production in China. Many of the group's most attractive upstream assets outside of China, deepwater developments in Brazil for example, remain held by Sinopec's parent company but could be injected into Sionpec at some point.

- **Refining losses are rising** — we expect Sinopec's refining business to rise ~19% this year to US$6.6b (~US$4/bbl) eliminating ~36% of earnings. The government has followed China's current oil product pricing mechanism, which calls for prices to be adjusted when the 22-day moving average oil price rises or falls by 4%, although we think in a somewhat inconsistent manner. In 2011 and early 2012 the government generally passed through rising oil prices, but delays to price hikes drove losses. In 2Q12 as oil prices fell the government cut prices quickly resulting in inventory losses.

- **New mechanism is possible** — The National Reform and Development Commission has proposed a new mechanism that would be based on a 10-day moving average +/- 2-3% resulting in more frequent price changes. And, it would eliminate a requirement for top government approval of price hikes, reducing delays. The new mechanism would likely result in much lower losses or a small profit for Sinopec's refining business we believe. Although energy industry reforms are a high priority on the government's agenda, we believe implementation is unlikely before next year.

- **Potential restructuring** — in our view some restructuring of the Sinopec group over the next few years could feature under new Chairman, Fu Cheng-Yu's tenure. While the company's upstream division accounted for 68% of earnings last year, the bulk of the group's foreign upstream assets, including pre-salt Brazil projects, are held at the parent company level. These assets could be injected into Listco Sinopec at some point in the future, a move that would likely be accretive to minority shareholders, in our view.

- **Marketing will continue to be SNP's best business** — China's oil product marketing business is dominated by PetroChina and Sinopec, which we expect will continue, reinforced by regulatory structures. We expect that Sinopec's marketing division will generate a return on capital of ~20% this year and steady volume growth should be sustained by growing Chinese demand.

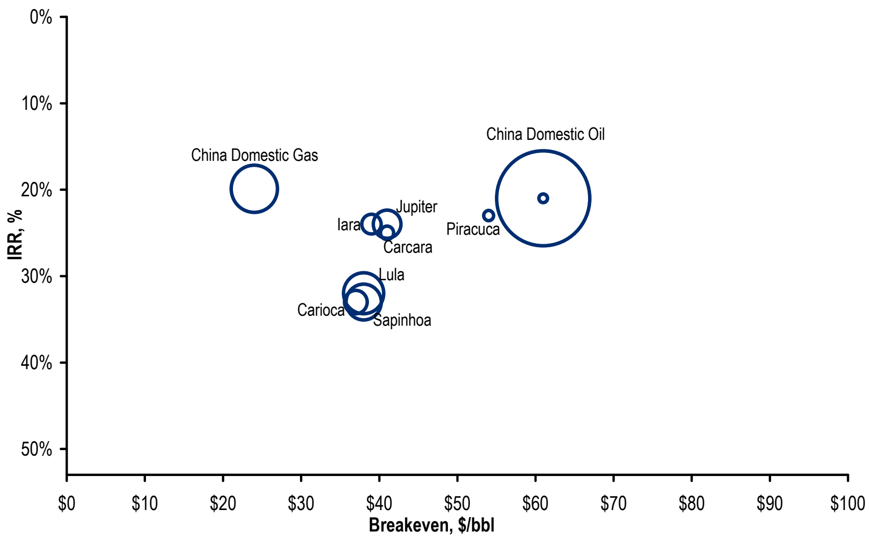
Figure 217. Sinopec summary financial model

CNY B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.9	97.3	61.9	79.7	111.0	115.0	100.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	-4.1%	-2.3%
SNP Refining margin (US$/bbl)	(1.2)	(7.2)	2.5	1.5	(3.5)	(4.0)	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
USD/CNY	7.61	6.95	6.83	6.77	6.46	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37		
E&P volumes (mboepd)	0.93	0.94	0.96	1.10	1.12	1.16	1.20	1.23	1.26	1.29	1.31	1.31	1.32	1.32	2.9%	1.9%
YoY growth	3.3%	1.8%	1.8%	14.4%	1.6%	4.0%	3.6%	2.0%	2.7%	2.2%	1.8%	0.3%	0.3%	0.4%		
% oil	86%	86%	86%	82%	79%	77%	75%	73%	71%	69%	67%	66%	65%	65%		
E&P cash margins (US$/bbl)	26.0	37.0	18.5	29.0	40.6	40.7	34.5	30.8	30.8	32.2	32.3	32.4	32.5	32.6	-4.5%	-2.4%
Per share data:																
EPS (CNY)	0.65	0.34	0.70	0.82	0.82	0.60	0.90	0.95	0.96	0.98	1.03	1.07	1.11	1.10	3.7%	3.4%
EPS (US$)	0.09	0.05	0.10	0.12	0.13	0.09	0.14	0.15	0.15	0.15	0.16	0.17	0.18	0.17	4.0%	3.5%
DPS (CNY)	0.17	0.12	0.12	0.12	0.30	0.15	0.23	0.24	0.24	0.25	0.26	0.27	0.28	0.20	-3.7%	-4.2%
DPS (US$)	0.02	0.02	0.02	0.02	0.05	0.02	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	-3.4%	-4.0%
Valuation ratios:																
P/E	10.8x	18.9x	8.9x	7.6x	7.3x	9.8x	6.5x	6.2x	6.1x	6.0x	5.7x	5.5x	5.3x	5.2x		
EV/DACF	5.8x	8.8x	4.9x	4.1x	4.7x	5.1x	4.2x	4.0x	3.9x	3.7x	3.5x	3.3x	3.0x	2.8x		
Dividend yield	2.8%	2.1%	2.1%	2.1%	5.1%	2.6%	3.9%	4.1%	4.2%	4.3%	4.5%	4.6%	4.8%	3.5%		
Free cash yield	3.3%	-5.7%	9.1%	14.2%	1.8%	-3.8%	1.7%	7.5%	13.5%	12.9%	13.3%	14.0%	14.5%	14.9%		
Cash flow:																
Upstream	52.5	93.8	40.4	67.0	89.2	92.1	83.4	77.6	79.8	84.4	86.0	86.4	86.8	94.6	-1.1%	0.7%
Downstream	62.6	(13.5)	91.9	88.3	62.8	38.2	96.8	117.8	119.3	122.3	126.9	132.0	137.2	132.4	14.2%	8.6%
Other and corporate	(2.0)	(11.3)	11.6	14.0	(5.0)	12.9	0.1	(4.2)	(3.8)	(8.7)	(9.7)	(10.8)	(11.9)	(9.8)		
Sources of funds	**113.1**	**69.0**	**143.9**	**169.3**	**147.0**	**143.2**	**180.2**	**191.2**	**195.3**	**197.9**	**203.1**	**207.6**	**212.1**	**217.1**	6.1%	4.4%
Changes in working capital	13.0	9.4	15.6	1.0	3.6	7.0	(3.9)	(1.5)	3.9	3.2	3.0	4.1	4.2	6.8		
Cash flow from operations	**126.2**	**78.3**	**159.4**	**170.3**	**150.6**	**150.2**	**176.3**	**189.7**	**199.2**	**201.1**	**206.2**	**211.7**	**216.3**	**223.9**		
Capex	(109.4)	(107.8)	(112.9)	(97.6)	(141.0)	(169.5)	(167.7)	(151.4)	(130.2)	(135.0)	(138.0)	(139.9)	(141.9)	(147.7)	-0.9%	0.5%
Free cash flow	**16.7**	**(29.4)**	**46.6**	**72.7**	**9.6**	**(19.3)**	**8.6**	**38.3**	**69.0**	**66.1**	**68.2**	**71.8**	**74.4**	**76.3**		
Ordinary dividends	(13.9)	(12.6)	(13.6)	(16.4)	(19.5)	(22.6)	(15.8)	(20.2)	(20.9)	(21.2)	(21.9)	(22.9)	(23.9)	(14.7)	1.7%	-3.1%
as % of operating c/flow	11%	16%	9%	10%	13%	15%	9%	11%	11%	11%	11%	11%	11%	7%		
Discretionary free cash flow	**2.8**	**(42.0)**	**33.0**	**56.3**	**(9.9)**	**(42.0)**	**(7.2)**	**18.2**	**48.0**	**44.9**	**46.3**	**48.8**	**50.5**	**61.6**		
Acquisitions	(5.5)	(3.7)	(3.5)	(11.3)	(7.5)	-	-	-	-	-	-	-	-	-		
Disposals	1.4	1.4	0.5	1.7	3.0	-	-	-	-	-	-	-	-	-		
Equity change	11.4	29.9	-	0.0	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**10.1**	**(14.5)**	**30.1**	**46.7**	**(14.4)**	**(42.0)**	**(7.2)**	**18.2**	**48.0**	**44.9**	**46.3**	**48.8**	**50.5**	**61.6**		
Balance sheet:																
Net debt	172.4	217.9	208.4	191.8	209.6	254.5	269.0	263.2	227.3	193.1	156.3	115.5	71.5	14.1		
Net debt/EBITDA	1.3x	2.9x	1.5x	1.2x	1.2x	1.7x	1.4x	1.3x	1.1x	0.9x	0.7x	0.5x	0.3x	0.1x		
Interest cover	18.7x	6.8x	19.0x	22.5x	22.1x	18.5x	19.9x	19.1x	19.9x	24.0x	29.1x	36.9x	51.2x	81.3x		
Net debt/equity	56%	66%	55%	46%	44%	51%	48%	42%	33%	26%	19%	13%	7%	1%		
Capital employed:																
Upstream	132.9	172.5	181.7	199.8	201.7	229.1	251.0	272.6	294.1	311.7	330.6	349.7	368.8	372.9	9.1%	7.1%
Downstream	295.2	317.9	341.9	357.8	397.0	440.1	491.1	533.5	551.0	559.9	569.5	578.6	586.8	593.4	7.1%	4.6%
% Upstream	31%	35%	35%	36%	34%	34%	34%	34%	35%	36%	37%	38%	39%	39%		
Return on capital employed:																
Upstream	24.2%	40.8%	7.9%	16.1%	24.6%	21.1%	14.2%	10.2%	9.7%	10.1%	10.0%	9.7%	9.5%	4.3%		
Downstream	8.6%	-12.1%	14.3%	11.8%	6.2%	1.3%	9.0%	10.7%	10.3%	10.0%	10.2%	10.6%	10.9%	9.4%		
Aggregate group	**12.6%**	**5.4%**	**11.3%**	**12.2%**	**11.1%**	**7.3%**	**9.9%**	**9.8%**	**9.3%**	**9.6%**	**9.6%**	**9.5%**	**9.4%**	**6.6%**		

Source: Company Reports and Citi Research Estimates

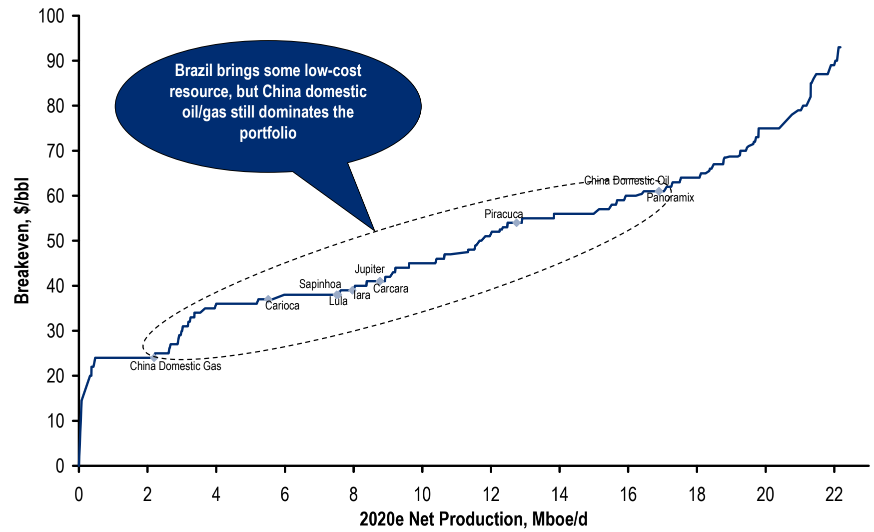
Sinopec – Upstream

Figure 218. Sinopec project portfolio (2012-2020 start-ups)



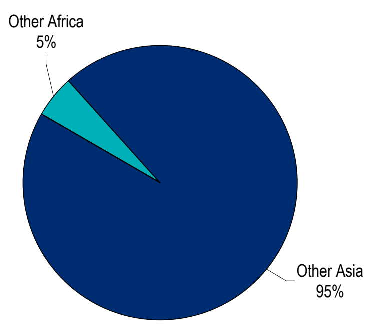
Source: Citi Research

Figure 219. Sinopec project portfolio versus the industry cost-curve



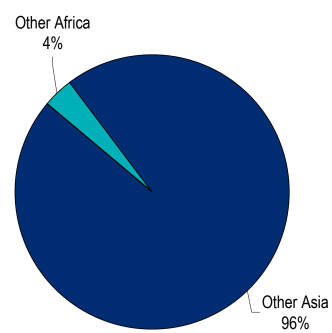
Source: Citi Research

Figure 220. 2012E cash flow by region



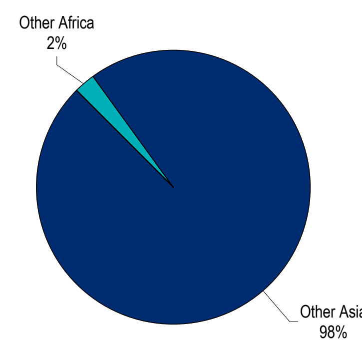
Source: Citi Research

Figure 221. 2016E cash flow by region



Source: Citi Research

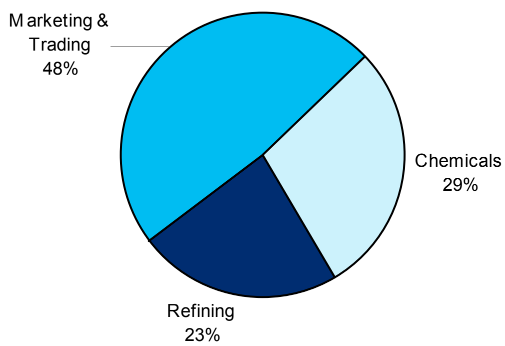
Figure 222. 2020E cash flow by region



Source: Citi Research

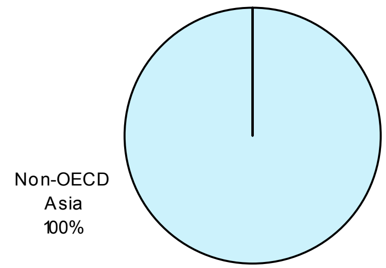
Sinopec – Downstream

Figure 223. 2016E cash flow by segment



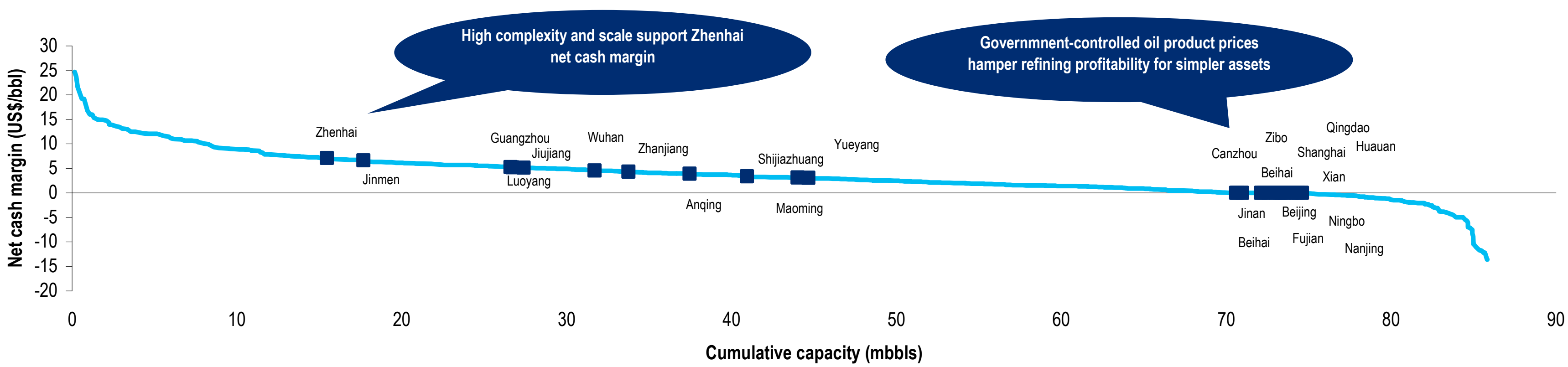
Source: Citi Research

Figure 224. 2016E cash flow by region



Source: Citi Research

Figure 225. Sinopec refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Statoil – Neutral, NOK150/share price target

Improving visibility around medium-term growth

In our view Statoil has changed significantly over the last two or three years. A combination of acquisitions and some exploration success provides the portfolio with more genuine depth than it once had. Targets for growth that once looked purely driven by top-down ambitions, now look to have some asset visibility behind them. Importantly the company looks, for a period of time at least, to be able to grow in a way that is not totally damaging to profitability; the average IRR of the growth portfolio is above that of other large-cap peers. Beyond 2016 the visibility diminishes and the targets look to take on a bit more of a top-down feel, although recent exploration success in Norway (Johan Sverdrup and Skrugard/Havis) could help to change that picture as development plans are firmed up over the next 12 months.

- **Medium-term E&P growth profile looks robust —** we see scope for around 3% p.a growth in top-line E&P to 2016, delivered by a modest contraction in the core Norway business and extensive growth in the International portfolio (Angola, Gulf of Mexico, US unconventionals and offshore Brazil). Delivery on growth targets has been a key issue for this company in the past, a criticism that we would level at top-down ambitions that never looked broadly supported by assets. We think that basis may have now changed given what has been a strong portfolio build-out in recent years – resource growth of 1.4x is best-in-class of the large-cap peers.

- **Growth beyond still needs definition –** beyond 2016 the growth targets look to take on a bit more of a top-down feel again (2.5 mboepd of equity production by 2020), although material exploration successes on the Norwegian Continental Shelf (Johan Sverdrup and Skrugard/Havis) certainly start to improve the confidence. The two main building blocks look to be US unconventionals and Azerbaijan gas, although there is also an expectation that the core legacy business in Norway can still grow. Maintaining profitability in this legacy business will be one of the key challenges that the company faces.

- **Growth looks well-positioned on the cost-curve —** we see the E&P growth as fairly well positioned on the cost-curve, with an average oil price breakeven of US$55/bbl over the decade and IRR that is higher than sector peers. Profitability looks strong to 2016, but then looks to deteriorate a little as higher cost-curve capital (Angola Block 31 SE) is committed.

- **Downstream business poorly positioned, but small part of group capital employed —** Statoil has a total refining capacity of 307kb/d, composed of company-operated Mongstad and Kalundborg refineries and a 10% share in the Shell-operated supersite Pernis. Despite a largely competitive configuration, Mongstad sits at the lower-end of 2nd quartile/upper 3rd quartile in our global mid-cycle net cash margin curve, restricted by a limited location premium and low-sulphur crude diet. Kalundborg's simple configuration and relatively small scale position it in the fourth quartile of our refining curve.

- **Strong balance sheet supports defensible dividend** — we estimate that Statoil needs c. US$100/bbl in 2012-13 to cover both capex and current dividends, so we see gearing moving slightly higher into 2013 on our current assumptions. However, the company looks well-capitalised (13% net debt/equity at end 2012) and, given the growth outlook, is projected to move into a stronger free cash position by 2015.

- **Valuation in context** — our valuation screens suggest the market is building a modest valuation discount on Statoil to sector peers in the period to 2016. Beyond that the discount looks to narrow, largely a reflection of our view that the company may struggle to sustain both growth and profitability towards the back-end of the decade. We also note that a valuation discount is not inconsistent with this company's past; the high state shareholding is one reason why we believe some level of discount will always remain.

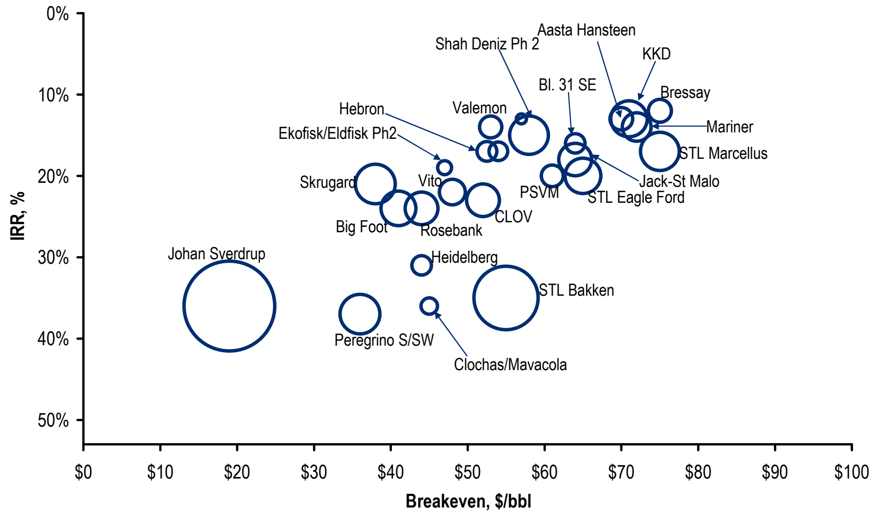
Figure 226. Statoil summary financial model

in NOK B, unless stated	'07	'08	'09	'10	11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	96.6	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
UK NBP gas (p/therm)	29.9	57.9	31.2	42.4	56.4	62.5	65.5	60.5	62.6	64.4	66.2	68.1	70.0	71.9	2.7%	2.7%
NOK/USD rate	5.86	5.65	6.30	6.05	5.61	5.92	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	1.4%	0.8%
E&P volumes (mboepd)	1.72	1.75	1.81	1.71	1.65	1.81	1.78	1.88	1.90	1.94	1.99	2.07	2.16	2.19	3.3%	3.2%
YoY growth	0.9%	1.6%	3.2%	-5.5%	-3.3%	9.6%	-1.3%	5.2%	1.0%	2.2%	2.6%	4.3%	4.3%	1.3%		
% oil	62%	60%	59%	57%	57%	55%	57%	58%	56%	56%	55%	54%	55%	54%		
% Norway	82%	83%	80%	81%	80%	74%	72%	67%	65%	65%	64%	63%	64%	65%		
E&P cash margins (US$/boe)	25.1	28.6	21.9	25.9	33.0	32.0	30.8	31.0	31.7	31.9	32.9	33.3	33.7	34.1	-0.7%	0.4%
Per share data:																
EPS adjusted (NOK)	13.35	18.76	11.92	12.99	14.85	17.16	15.78	16.82	17.06	17.26	18.01	18.81	20.23	21.06		
DPS (NOK)	8.50	7.25	6.00	6.25	6.50	6.83	7.17	7.52	7.90	8.30	8.71	9.15	9.60	10.08		
Valuation ratios:																
P/E	12.7x	8.2x	10.9x	10.2x	9.4x	8.7x	9.5x	8.9x	8.8x	8.7x	8.3x	8.0x	7.4x	7.1x		
EV/DACF	6.6x	6.1x	6.2x	5.0x	3.3x	3.3x	4.3x	4.1x	3.9x	3.7x	3.5x	3.2x	2.9x	2.7x		
Dividend yield	5.0%	4.7%	4.6%	4.7%	4.7%	4.6%	4.8%	5.0%	5.3%	5.5%	5.8%	6.1%	6.4%	6.7%		
FCF yield	6.6%	7.5%	-0.5%	1.8%	4.3%	-1.9%	1.7%	5.5%	5.9%	6.3%	7.4%	8.7%	9.9%	10.2%		
Cash flow:																
Upstream	88.9	85.5	90.8	97.5	111.6	124.6	119.4	126.7	130.8	134.9	142.7	150.8	158.8	163.0		
Downstream	2.8	2.9	3.0	3.7	2.5	0.5	-	-	-	-	-	-	-	-		
Other	1.7	17.9	(15.1)	(5.0)	16.5	9.9	3.4	3.3	3.3	3.2	3.3	3.4	3.5	3.7		
Sources of Funds	**93.4**	**106.3**	**78.7**	**96.2**	**130.6**	**135.0**	**122.8**	**129.9**	**134.1**	**138.1**	**145.9**	**154.2**	**162.4**	**166.7**	1%	3%
Changes from working capital	0.5	(3.8)	(5.7)	(15.4)	(19.1)	(25.0)	-	-	-	-	-	-	-	-		
Cash flow from operations	**93.9**	**102.5**	**73.0**	**80.8**	**111.5**	**110.0**	**122.8**	**129.9**	**134.1**	**138.1**	**145.9**	**154.2**	**162.4**	**166.7**		
Capex	(57.9)	(65.8)	(75.2)	(73.2)	(92.2)	(119.0)	(114.8)	(103.6)	(105.8)	(108.1)	(110.5)	(113.0)	(115.5)	(118.0)	3%	3%
Free cash flow	**36.0**	**36.7**	**(2.1)**	**7.6**	**19.2**	**(9.0)**	**8.0**	**26.4**	**28.3**	**30.0**	**35.4**	**41.2**	**46.9**	**48.7**	9%	11%
Dividends	(25.7)	(27.1)	(23.1)	(19.1)	(19.9)	(20.7)	(21.7)	(22.8)	(23.9)	(25.1)	(26.4)	(27.7)	(29.1)	(30.6)	5%	5%
as % of operating c/flow	27%	26%	32%	24%	18%	19%	18%	18%	18%	18%	18%	18%	18%	18%		
Discretionary free c/flow	**10.3**	**9.6**	**(25.2)**	**(11.5)**	**(0.7)**	**(29.7)**	**(13.7)**	**3.6**	**4.3**	**4.8**	**9.0**	**13.5**	**17.8**	**18.2**		
Acquisitions	(17.6)	(23.5)	-	(5.1)	(25.7)	-	-	-	-	-	-	-	-	-		
Divestments	1.1	5.4	1.4	6.0	29.8	28.8	-	-	-	-	-	-	-	-		
Net share buybacks	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Surplus / (deficit)	**(6.2)**	**(8.5)**	**(23.8)**	**(10.5)**	**3.5**	**(0.9)**	**(13.7)**	**3.6**	**4.3**	**4.8**	**9.0**	**13.5**	**17.8**	**18.2**		
Balance sheet:																
Net debt	28.9	46.9	72.4	69.7	71.0	40.3	54.0	50.5	46.1	41.3	32.3	18.8	1.0	(17.2)		
Net debt/EBITDA	0.2x	0.2x	0.4x	0.4x	0.3x	0.1x	0.2x	0.2x	0.2x	0.2x	0.1x	0.1x	0.0x	(0.1)x		
Cash interest cover	34x	(53)	6x	29x	17x	32x	39x	31x	27x	23x	22x	20x	19x	18x		
Net debt/equity	16%	22%	36%	31%	25%	12%	15%	13%	11%	9%	7%	4%	0%	-3%		
Capital employed:																
Upstream	187.2	236.7	245.2	266.5	320.5	341.4	383.6	410.6	436.6	461.4	483.2	501.8	519.2	537.5	8%	6%
Other	20.8	26.3	27.2	29.6	35.6	30.6	31.2	31.9	32.5	33.1	33.8	34.5	35.2	35.9	-1%	0%
% E&P	90%	90%	90%	90%	90%	92%	92%	93%	93%	93%	93%	94%	94%	94%		
Return on capital employed:																
Upstream	22.4%	25.0%	14.9%	15.2%	16.8%	16.7%	13.6%	13.4%	12.8%	12.2%	12.1%	12.2%	12.7%	12.7%		
Other	4.6%	12.0%	11.0%	9.9%	4.0%	2.3%	6.9%	6.0%	5.2%	4.4%	3.6%	2.7%	1.5%	0.6%		
Aggregate group	**20.6%**	**23.7%**	**14.5%**	**14.7%**	**15.5%**	**15.6%**	**13.1%**	**12.8%**	**12.2%**	**11.7%**	**11.6%**	**11.6%**	**11.9%**	**12.0%**		

Source: Company Reports and Citi Research Estimates

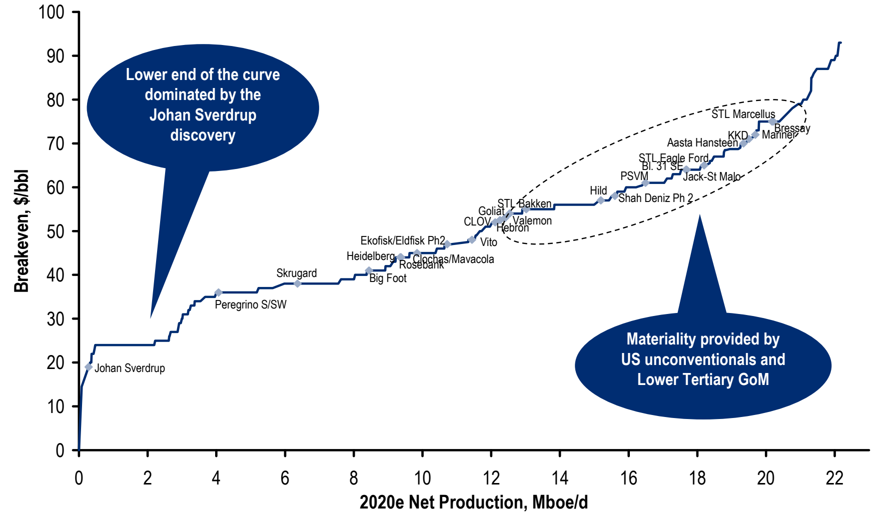
Statoil - Upstream

Figure 227. Statoil project portfolio (2012-2020 start-ups)



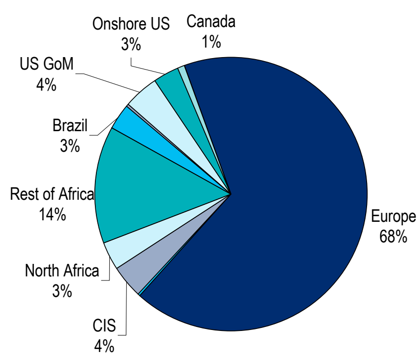
Source: Citi Research

Figure 228. Statoil project portfolio versus the industry cost-curve



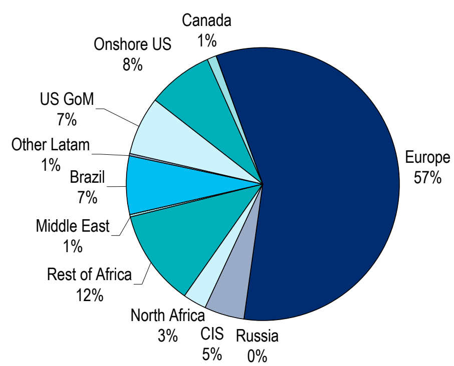
Source: Citi Research

Figure 229. 2012E cash flow by region



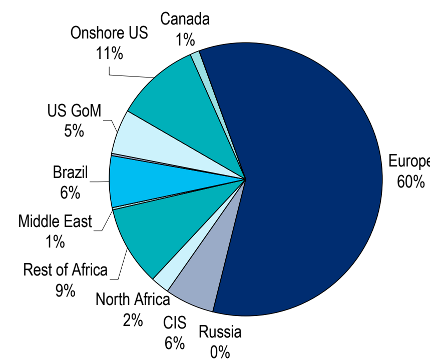
Source: Citi Research

Figure 230. 2016E cash flow by region



Source: Citi Research

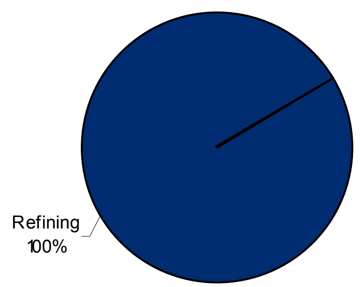
Figure 231. 2020E cash flow by region



Source: Citi Research

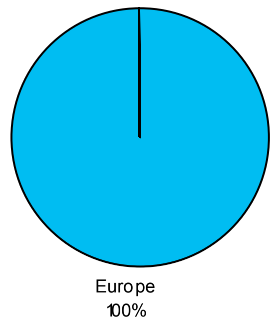
Statoil – Downstream

Figure 232. 2016E cash flow by segment



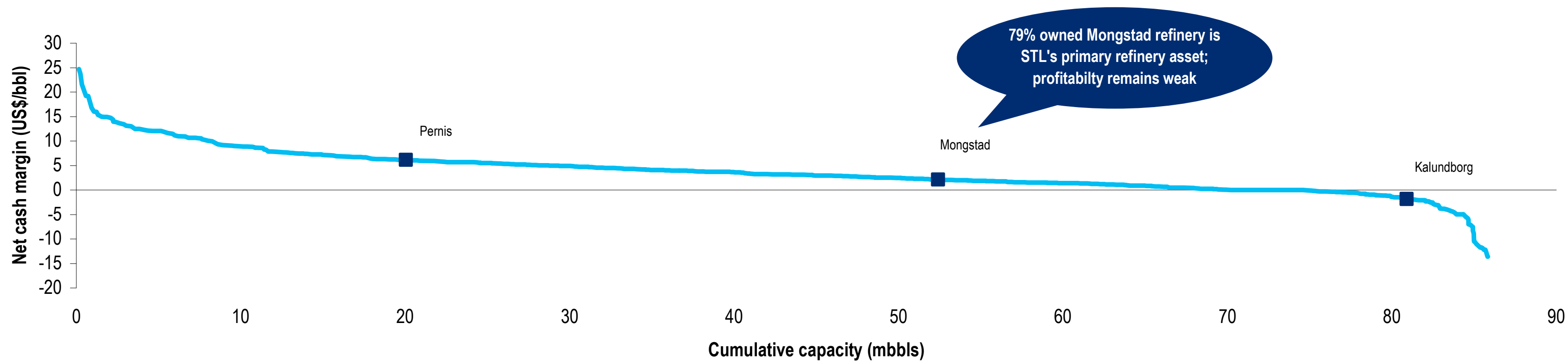
Source: Citi Research

Figure 233. 2016E cash flow by region



Source: Citi Research

Figure 234. Statoil refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Total – Neutral, €40/share price target

Upstream re-focus presents a slightly more conservative view of the future

A key conclusion of our January 2012 Oil Vision was that high current spending and a high future portfolio breakeven combine to place Total as one of the higher-beta plays in the sector. Since then there has been some evolution to the portfolio, notably with the cancellation of high-cost projects in Shtokman and Canada heavy oil that leave the E&P growth outlook now around a very similar breakeven/materiality footprint to peers such as RDS and CVX. Current cash flow still does not support current capex/dividend ambitions and the move to raise the dividend through 1H12 results looks aggressive, but underpins management confidence in delivering on near-term growth ambitions. And, to be fair, in an environment of a low cost of debt (5-year debt 45 bps above US Treasuries) financial theory supports that aggression.

- **Upstream re-focus** – We think 1H12 has seen a strategic shift at Total, at least versus how we previously interpreted the company was looking to position itself. Still present in the strategy is a central belief that prices for oil and gas in Europe & Asia will rise over this decade, but around that is a subtle change in approach. 2 or 3 of the extreme 4th—quartile (high breakeven, long payback) projects have departed the portfolio – notably the cancellation of Shtokman in Russia and the apparent deferral of both Fort Hills and Joslyn in Canada. The upstream portfolio is still heavily populated by 2nd/3rd quartile projects – Total is almost devoid of anything at the low-end of the curve on our analysis – nevertheless the portfolio average breakeven (US$60/bbl), profitability (c. 20% at US$90/bbl oil) and materiality does not look any different to sector peers such as RDS and CVX.

- **Upstream outlook –** Top-line growth of 3-3.5% CAGR over 2011-16 should prove well supported, although a multitude of production problems in 2012 (Elgin/Yemen/Nigeria) probably quite rightly raise some doubts around that growth delivery. Key projects are the ramp-up of Usan/Pazflor through 2012/13 and Total's stake in Kashagan, both projects that should add significant cost-recovery margin to the cash flow. We see overall E&P cash flow growth approaching 4% CAGR to 2016.

- **Battle on the downstream cost-curve –** Current targets to increase underlying profitability by 4% to 2015 (from 9% in 2010) remain a stretch, in our view, for a business that has so much capital deployed in mature and competitive European markets, and where refining remains so heavily geared towards gasoline. Forward plans see the start-up of Jubail in Saudi Arabia (2013) and likely a greater integration of refining and petrochemicals to strength competitiveness. But the real challenge to rationalise the weight of 4th-quartile capital is hampered by a French union agreement until 2014 and even then, as the wrangling over the Dunkirk closure proved in 2011, the scope for deep cuts looks limited, in our view.

- **Low cost of debt supports dividend hike –** 1H12 rolling operating cash flow of US$26bn (pre-working capital) in a US$112/b Brent world did not alone support the combination of gross organic capex (US$25bn) and dividend (US$7bn). The target framework for 2012-15 implies the business should be able to deliver c.US$34bn of cash flow in this oil price environment; the difference largely to be made up through Upstream growth and a US$1-1.5bn cash flow gain from Downstream performance improvement. The re-start of Elgin/Yemen/Nigeria plus Usan/Pazflor could be up to US$2bn of cash flow on our numbers. Nevertheless the decision to raise the quarterly dividend by 3.5%, the first growth in 18 quarters, was a little surprising. Clearly the company is willing to use the ability to finance in cheap debt markets (TOT 5-year US$ debt is c. 45 bps above US Treasuries), backed by the confidence that cash flow will reach targets in the near-future.

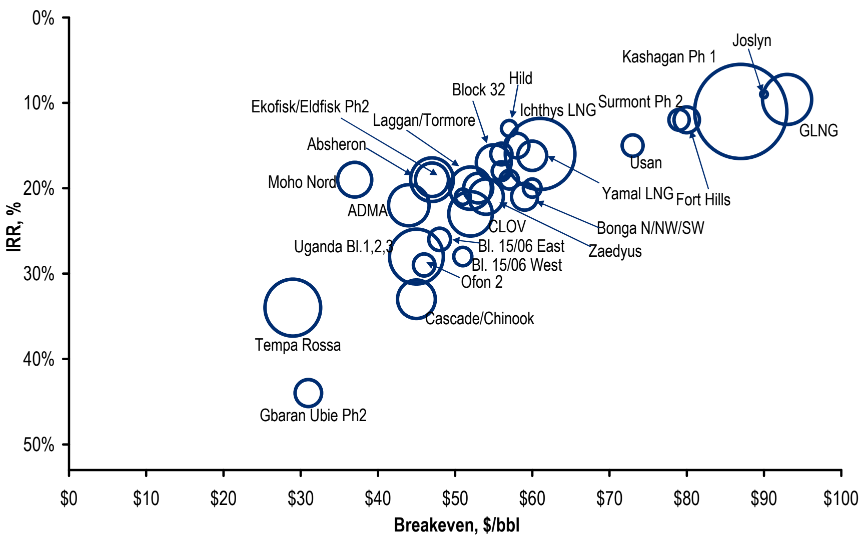
Figure 235. Total summary financial model

€ B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.8	97.4	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
NW Europe refining margin (US$/bbl)	6.5	4.9	3.3	3.0	3.5	4.4	4.1	4.5	4.4	4.2	4.1	3.9	3.8	3.6	4.0%	0.5%
US$/EUR rate	1.37	1.46	1.39	1.32	1.39	1.28	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25		
E&P volumes (kboepd)	2,391	2,339	2,279	2,371	2,338	2,330	2,446	2,457	2,616	2,747	2,845	2,902	2,943	2,948	3.3%	2.6%
YoY growth	1.5%	-2.2%	-2.6%	4.0%	-1.4%	-0.3%	5.0%	0.5%	6.5%	5.0%	3.6%	2.0%	1.4%	0.2%		
% oil	63%	62%	61%	57%	52%	52%	53%	53%	53%	53%	53%	53%	53%	52%		
E&P cash margins (US$/boe)	22.4	24.9	19.0	22.3	26.5	27.1	26.1	26.9	28.0	28.8	29.7	29.6	29.3	29.6	1.7%	1.2%
Per share data:																
EPS (€)	5.37	6.19	3.48	4.59	5.06	5.14	5.02	5.04	5.53	5.99	6.43	6.36	6.24	6.27	3%	2%
EPADR (US$)	7.36	9.06	4.82	6.07	7.05	6.55	6.27	6.30	6.91	7.49	8.04	7.94	7.80	7.84	1%	1%
DPS (€)	2.07	2.28	2.28	2.28	2.28	2.34	2.36	2.36	2.36	2.40	2.44	2.48	2.52	2.56	1%	1%
Valuation ratios:																
P/E	10.2x	7.7x	11.6x	8.8x	8.0x	7.9x	8.1x	8.0x	7.3x	6.8x	6.3x	6.4x	6.5x	6.5x		
EV/DACF	7.6x	5.8x	6.8x	5.8x	5.0x	4.9x	4.9x	4.8x	4.5x	4.2x	3.9x	3.8x	3.7x	3.6x		
Dividend yield	3.8%	4.8%	5.6%	5.6%	5.6%	5.8%	5.8%	5.8%	5.8%	5.9%	6.0%	6.1%	6.2%	6.3%		
Free cash yield	4.9%	5.7%	-0.3%	6.5%	3.2%	5.1%	3.3%	3.7%	5.2%	6.4%	8.1%	8.5%	8.3%	8.6%		
Cash Flow:																
Upstream	12.6	14.3	11.3	15.6	17.1	18.1	18.6	19.3	21.4	23.1	24.7	25.0	25.2	25.5	6%	5%
Downstream	4.4	5.1	2.0	2.4	2.7	4.1	4.2	4.2	4.3	4.3	4.4	4.4	4.5	4.5	10%	6%
Other	(0.2)	(0.5)	1.3	(1.1)	0.9	(1.3)	(1.7)	(1.8)	(1.9)	(2.0)	(2.0)	(2.0)	(2.0)	(2.1)		
Adjusted cash flow from ops	**17.8**	**20.0**	**15.1**	**17.8**	**21.2**	**21.7**	**22.3**	**22.9**	**25.0**	**26.8**	**28.4**	**28.8**	**29.1**	**29.4**	5%	4%
Capex	(11.6)	(12.6)	(12.6)	(12.6)	(16.6)	(17.6)	(19.3)	(19.5)	(20.2)	(20.9)	(20.9)	(21.0)	(21.5)	(21.5)	5%	3%
Operational free c/flow	**6.2**	**7.4**	**2.5**	**5.3**	**4.6**	**4.2**	**3.0**	**3.4**	**4.8**	**5.9**	**7.4**	**7.8**	**7.6**	**7.9**		
Ordinary dividends	(4.5)	(4.9)	(5.1)	(5.1)	(5.1)	(5.3)	(5.6)	(5.6)	(5.6)	(5.7)	(5.8)	(5.9)	(6.0)	(6.1)	2%	2%
as % of operating c/flow	25%	25%	34%	29%	24%	25%	25%	25%	23%	21%	20%	20%	20%	21%		
Discretionary free c/flow	**1.7**	**2.4**	**(2.6)**	**0.2**	**(0.6)**	**(1.2)**	**(2.6)**	**(2.3)**	**(0.8)**	**0.2**	**1.6**	**1.9**	**1.6**	**1.8**		
Acquisitions	(0.2)	(1.0)	(0.7)	(3.7)	(8.2)	(2.3)	-	-	-	-	-	-	-	-		
Divestments	1.6	2.6	3.1	4.3	8.6	1.7	-	-	-	-	-	-	-	-		
Share buybacks	(1.5)	(1.2)	-	-	-	-	-	-	-	-	-	-	-	-		
Surplus (deficit)	**1.6**	**2.8**	**(0.2)**	**0.8**	**(0.2)**	**(1.8)**	**(2.6)**	**(2.3)**	**(0.8)**	**0.2**	**1.6**	**1.9**	**1.6**	**1.8**		
Balance sheet:																
Net debt	11.8	10.7	13.6	13.0	15.7	16.5	19.2	21.7	22.7	22.7	21.2	19.5	18.0	16.3		
Net debt/EBITDA	0.4x	0.3x	0.6x	0.5x	0.5x	0.5x	0.6x	0.7x	0.6x	0.6x	0.5x	0.4x	0.4x	0.3x		
Cash interest cover	10.0x	20.0x	28.5x	38.3x	29.7x	20.9x	15.6x	14.8x	15.4x	16.2x	17.5x	18.4x	19.4x	20.5x		
Net debt/equity	26%	21%	25%	21%	23%	22%	23%	25%	24%	22%	19%	16%	14%	12%		
Capital employed:																
Upstream	27.1	32.7	37.4	44.0	58.9	64.5	74.8	83.9	93.3	102.9	111.9	120.4	129.0	137.5	12%	10%
Downstream	19.2	21.0	22.2	22.9	21.3	30.9	31.7	32.2	32.3	32.4	32.5	32.5	32.5	32.6	9%	5%
% Upstream	58%	61%	63%	66%	73%	68%	70%	72%	74%	76%	78%	79%	80%	81%		
Return on capital employed:																
Upstream	33.6%	35.9%	18.2%	21.1%	20.2%	17.1%	14.4%	12.9%	12.9%	12.7%	12.6%	11.5%	10.5%	9.9%		
Downstream	17.6%	16.1%	5.7%	9.0%	8.3%	8.4%	8.0%	7.7%	7.7%	7.6%	7.7%	7.6%	7.7%	7.5%		
Aggregate group	**16.3%**	**18.3%**	**9.7%**	**11.3%**	**11.3%**	**10.4%**	**9.7%**	**9.2%**	**9.5%**	**9.8%**	**9.9%**	**9.4%**	**8.8%**	**8.5%**		

Source: Company Reports and Citi Research Estimates

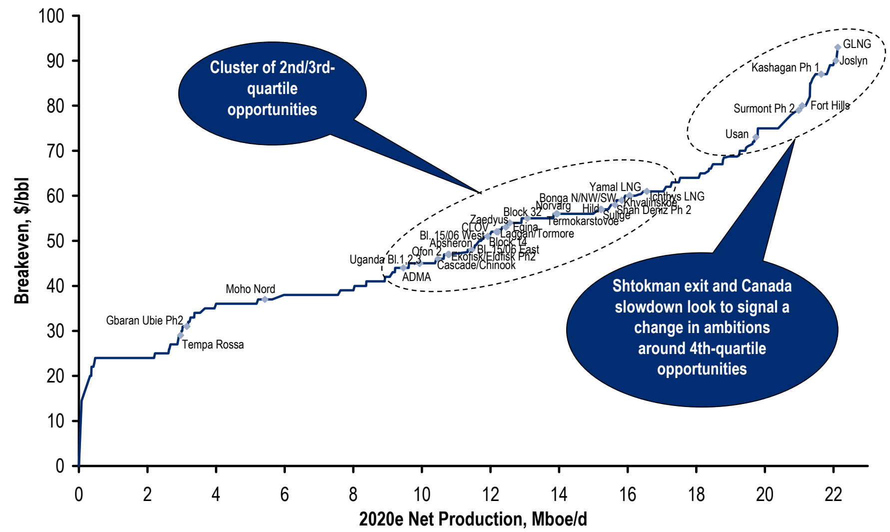
Total – Upstream

Figure 236. Total project portfolio (2012-2020 start-ups)



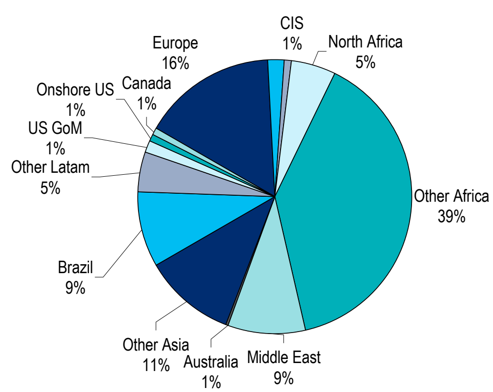
Source: Citi Research

Figure 237. Total project portfolio versus the industry cost-curve



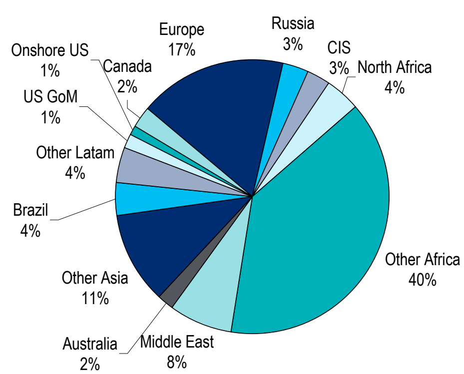
Source: Citi Research

Figure 238. 2012E cash flow by region



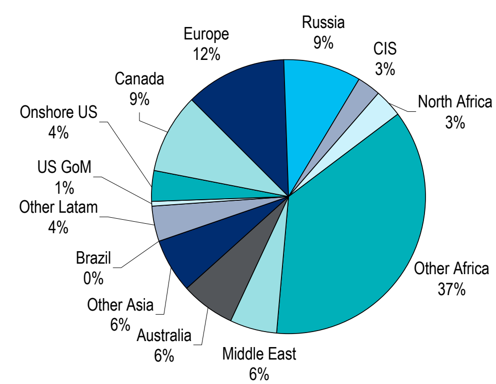
Source: Citi Research

Figure 239. 2016E cash flow by region



Source: Citi Research

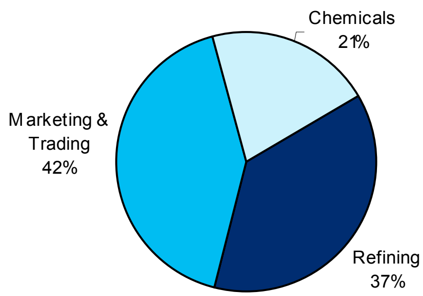
Figure 240. 2020E cash flow by region



Source: Citi Research

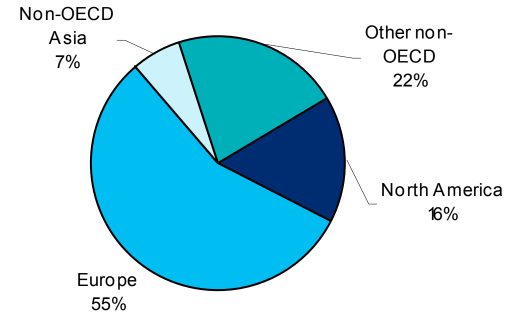
Total – Downstream

Figure 241. 2016E cash flow by segment



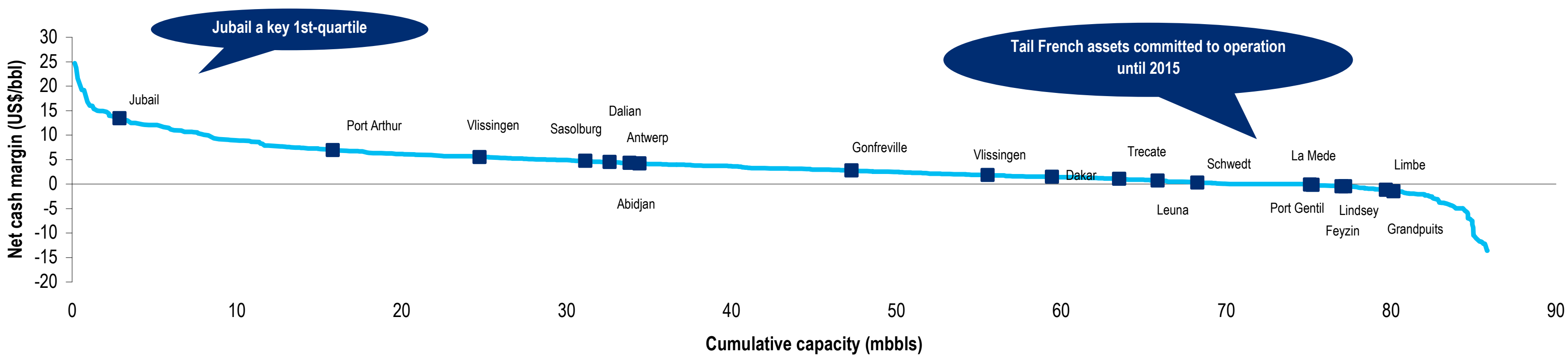
Source: Citi Research

Figure 242. 2016E cash flow by region



Source: Citi Research

Figure 243. Total refining asset competitive position in a global context (based on mid-cycle conditions)



Source: Citi Research

Tullow – Neutral, 1550p/share price target

High quality portfolio that continues to offer leverage to exploration

We believe Tullow has a high quality portfolio that delivers attractive growth and high returns. Near-term growth is driven by the ramp up of Jubilee and the delivery of the TEN development in Ghana, while an export development in Uganda will likely be onstream by the back end of the decade. Tullow continues to offer leverage to exploration with core campaigns focused across the West Africa Transform Margin (Ghana and Cote d'Ivoire), Central Atlantic Margin (Mauritania), Guyanas Trend (French Guiana) and the East African rift basins (Kenya and Ethiopia). However, we believe this potential is largely reflected in valuation with Tullow trading close to our base case NAV of 1550p/share.

- **Medium-term E&P growth driven by Ghana —** we forecast E&P entitlement production to rise from c. 70k boe/d in 2011 to 103 k boe/d in 2016 (8% CAGR) driven primarily by the ramp up to plateau of the Jubilee field and the delivery of the TEN development in Ghana. The ramp up of the Jubilee field has been impacted by poor well performance. However, recent remedial work has delivered positive results and Tullow is confident that plateau production from the field (c. 120k boe/d gross) can be achieved in 2013. Tullow plans to submit the plan of development for the TEN development in Ghana during 3Q12, but approvals could be delayed due to the upcoming government elections. Tullow is guiding to first oil c. 36 months following project sanction. In addition, Tullow is moving forwards with the potential sanction of the Banda gas field in Mauritania, which plans to supply a lower power station.

- **Growth beyond still needs definition** – beyond 2016 further production growth will be driven by the delivery of a Ugandan export development, which we believe could be achieved by 2017/18. We see additional potential development projects within Tullow's current portfolio including a possible Zaedyus development (French Guiana) and a Kenya hub development (following the recent Ngamia exploration success). However, both potential projects require additional exploration and appraisal success to de-risk sufficient upstream volumes to reach commerciality.

- **Growth looks well-positioned on the cost-curve —** we see the E&P growth as well positioned on the cost-curve, with an average oil price breakeven of US$40/bbl over the decade and an IRR of 30%.

- **Upstream portfolio continues to offer leverage to exploration —** Tullow continues to offer leverage to exploration and Tullow plans an active E&A campaign over the next 12-18 months. The high impact wells include Okure (formerly Tweneboa Deep) and Sapele in Ghana and Priodontes in French Guiana. In addition, Tullow is ramping up activity across its East Africa portfolio (Kenya and Ethiopia) following the recent play opening success at Ngamia. The next well will be Twiga South, which is on the same trend as Ngamia. Another frontier exploration area being targeted in 2013 is Mauritania, where Tullow has built an inventory of c. 80 prospects across different play types. In total, we have included 484p/share risked for Tullow's 2012/13 drilling progamme in our base case NAV of 1550p/share, but unrisked it could be worth up to 1387p/share.

- **Capital structure —** high investment requirements see Tullow continuing to raise borrowing levels until 2016. However, following the partial sale of its Uganda asset to Total and CNOOC, Tullow is well capitalised and we do not anticipate net debt/EBITDA climbing above 2.2x on our oil price deck (US$90/bbl real). We expect Tullow to diversify its funding sources over the next 12 months, most likely, in our view, a bond raise. In addition, Tullow continues to retain high equity stakes in key assets (e.g. TEN development and East Africa Rift), which it could look to partially monetise over the medium-term ahead of planned capital commitments.

- **Valuation** – Tullow screens attractively on both our group and UOV-screens with high returns and growth from its upstream portfolio. However, on our metrics the current valuation looks to reflect this growth and returns outlook over both the 5-year and 10-year time frames.

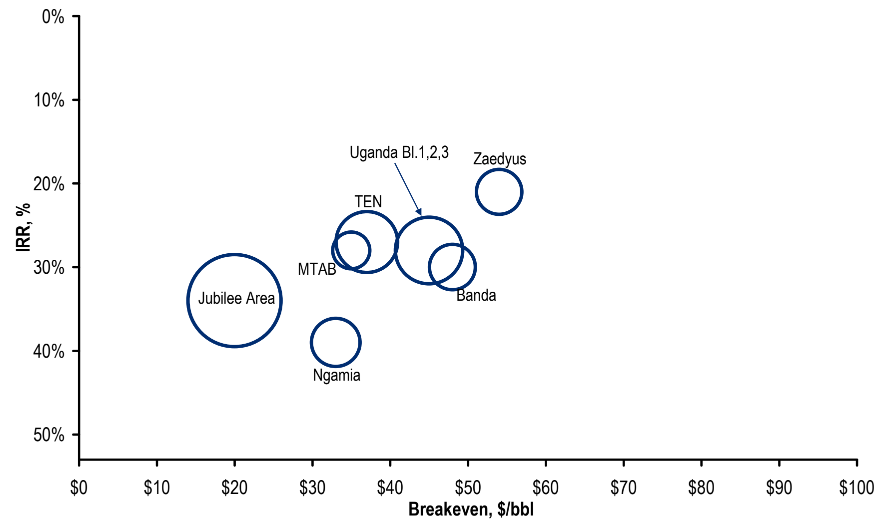
Figure 244. Tullow summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	98.1	62.3	80.3	110.8	113.1	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
GBP/USD	2.00	1.85	1.56	1.54	1.60	1.57	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56		
E&P volumes (kboepd)	64	54	49	49	69	74	87	87	84	103	149	180	198	200	8.3%	12.6%
YoY growth	19.3%	-16.3%	-9.6%	0.4%	40.9%	7.7%	17.7%	-0.9%	-2.9%	22.0%	44.7%	21.4%	9.8%	1.0%		
% oil	42%	50%	55%	62%	64%	72%	71%	77%	78%	79%	82%	87%	88%	85%		
E&P cash margins (US$/boe)	35.5	48.9	15.5	41.0	68.8	51.9	52.0	49.7	51.0	54.2	57.3	58.9	59.4	60.7	-4.7%	-1.4%
Per share data:																
EPS (US$)	0.19	0.14	0.05	0.09	0.69	0.70	0.79	0.68	0.64	0.91	1.52	1.87	2.15	2.26	5.7%	14.2%
EPS (pence)	9.7	7.8	3.5	5.9	42.8	44.6	51.0	43.4	40.8	58.1	97.5	120.2	137.9	145.2	6.3%	14.5%
DPS (US$)	0.12	0.11	0.10	0.09	0.19	0.19	0.20	0.21	0.22	0.23	0.25	0.28	0.30	0.33	3.5%	6.4%
DPS (pence)	6.0	5.9	6.1	6.0	12.0	12.0	12.6	13.3	13.9	14.6	16.1	17.7	19.5	21.4	4.1%	6.7%
Valuation ratios:																
P/E	38.8x	74.4x	282.8x	207.5x	30.0x	30.7x	27.0x	31.7x	33.7x	23.7x	14.1x	11.5x	10.0x	9.5x		
EV/DACF	12.9x	18.3x	30.0x	36.8x	17.5x	16.1x	14.8x	16.4x	17.6x	13.7x	8.6x	6.6x	5.6x	5.1x		
Dividend yield	1.3%	0.9%	0.6%	0.5%	0.9%	0.9%	0.9%	1.0%	1.0%	1.1%	1.2%	1.3%	1.4%	1.6%		
Free cash yield	1.2%	-1.1%	-6.9%	-12.3%	-1.0%	-3.2%	-3.2%	-4.1%	-5.2%	-3.3%	1.7%	5.3%	7.3%	7.8%		
Cash flow:																
Upstream	0.7	0.8	0.3	0.5	1.5	1.6	1.5	1.4	1.4	1.9	2.9	3.7	4.1	4.2	4%	12%
Other and corporate	0.1	(0.0)	0.0	0.1	(0.0)	(0.2)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1		
Sources of funds	**0.8**	**0.8**	**0.4**	**0.6**	**1.5**	**1.3**	**1.6**	**1.5**	**1.5**	**1.9**	**2.9**	**3.7**	**4.1**	**4.3**	5%	13%
Changes in working capital	(0.1)	0.1	(0.1)	0.1	0.1	(0.0)	-	-	-	-	-	-	-	-		
Cash flow from operations	**0.8**	**0.9**	**0.2**	**0.6**	**1.5**	**1.3**	**1.6**	**1.5**	**1.5**	**1.9**	**2.9**	**3.7**	**4.1**	**4.3**		
Capex	(0.7)	(0.9)	(1.2)	(2.6)	(1.7)	(2.0)	(2.2)	(2.3)	(2.5)	(2.5)	(2.6)	(2.7)	(2.7)	(2.8)	9%	6%
Free cash flow	**0.0**	**0.0**	**(1.0)**	**(2.0)**	**(0.1)**	**(0.6)**	**(0.6)**	**(0.8)**	**(1.0)**	**(0.7)**	**0.3**	**1.0**	**1.4**	**1.5**		
Ordinary dividends	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	12%	11%
as % of operating c/flow	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Minority dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Discretionary free cash flow	**(0.0)**	**(0.1)**	**(1.0)**	**(2.1)**	**(0.2)**	**(0.8)**	**(0.8)**	**(1.0)**	**(1.2)**	**(0.9)**	**0.1**	**0.8**	**1.2**	**1.2**		
Disposals	(0.0)	0.5	0.0	0.0	-	2.6	-	-	-	-	-	-	-	-		
Acquisitions	(0.7)	-	(0.0)	-	(0.4)	-	-	-	-	-	-	-	-	-		
Share buybacks/issues	0.0	(0.0)	0.6	1.5	0.1	0.0	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(0.7)**	**0.5**	**(0.5)**	**(0.6)**	**(0.6)**	**1.8**	**(0.8)**	**(1.0)**	**(1.2)**	**(0.9)**	**0.1**	**0.8**	**1.2**	**1.2**		
Balance sheet:																
Net debt	0.9	0.6	1.1	1.9	2.8	1.0	1.9	2.8	4.0	4.9	4.8	4.0	2.8	1.6		
Net debt/EBITDA	1.2x	0.8x	2.2x	3.1x	1.7x	0.6x	0.9x	1.5x	2.2x	2.0x	1.2x	0.8x	0.5x	0.3x		
Cash interest cover	10.8x	11.0x	7.3x	6.6x	7.4x	15.9x	33.1x	19.7x	13.1x	12.3x	16.1x	20.9x	27.8x	39.4x		
Net debt/equity	67%	30%	44%	49%	59%	19%	31%	45%	60%	66%	56%	40%	24%	12%		
Capital employed:																
Upstream	2.0	2.4	3.0	4.6	6.6	7.0	7.3	8.7	10.2	11.8	13.1	14.0	14.6	15.2	12%	10%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
% Upstream	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:																
Upstream	17.0%	12.6%	4.3%	4.8%	16.6%	16.1%	18.5%	13.6%	11.2%	13.3%	18.9%	21.4%	23.1%	23.1%		
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group	**17.0%**	**12.6%**	**4.3%**	**4.8%**	**16.6%**	**16.1%**	**18.5%**	**13.6%**	**11.2%**	**13.3%**	**18.9%**	**21.4%**	**23.1%**	**23.1%**		

Source: Citi Research and Company Reports

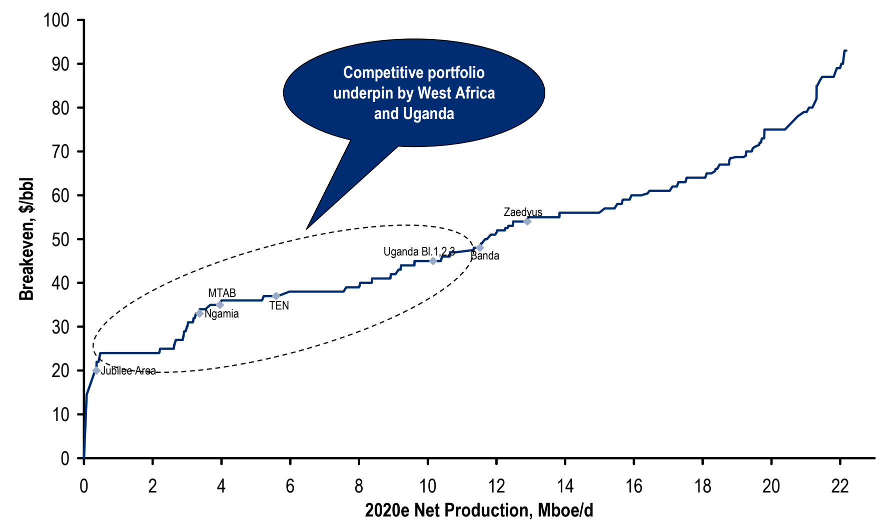
Tullow - Upstream

Figure 245. Tullow project portfolio (2012-2020 start-ups)



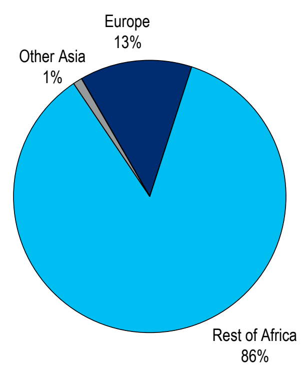
Source: Citi Research

Figure 246. Tullow project portfolio versus the industry cost-curve



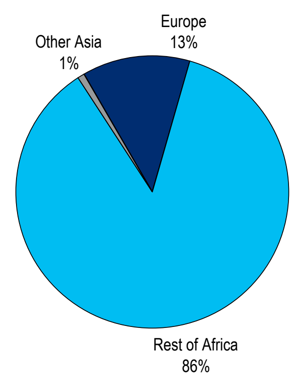
Source: Citi Research

Figure 247. 2012E cash flow by region



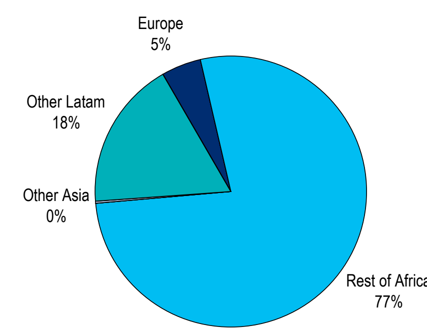
Source: Citi Research

Figure 248. 2016E cash flow by region



Source: Citi Research

Figure 249. 2020E cash flow by region



Source: Citi Research

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Woodside – Buy, A$42.02/share price target

Growth looks longer dated in cost challenged environment

Woodside's current valuation is largely underpinned by its producing asset base, the NW Shelf, its oil assets, and Pluto LNG. Woodside has three main growth options, the Browse LNG project, Sunrise LNG, and potential to leverage existing Pluto infrastructure for a Pluto expansion project. The timing of these projects is long dated and uncertain, but there is tangible value in its growth portfolio, demonstrated by the recent farmdown of a 14.7% equity stake in Browse to MIMI for US$2b. We think market expectations are now sufficiently low on WPL's growth, and we see little downside risk in the share price. We think 1H13 will see greater clarity for the future of the Browse LNG project, with FLNG the most likely commercialization option. Some investors fear that WPL will pursue an expensive acquisition to fill in a production "hole", but we are not concerned, we think that Woodside will seek exploration or appraisal farm-ins as a way of growing the business rather than pursuing expensive production assets.

- **Greater clarity to be obtained for Browse in 1H13 —** We think the Browse JV will fulfill its retention licence obligation to evaluate James Price Point by 1H13, but we estimate the IRR will be less than 12% and so the government will allow the JV to pursue other options. We estimate FLNG has an IRR of 13.4%, and a DCF of A$4.21/shr today (unrisked) compared to a NW Shelf tieback IRR of 15.3% and a DCF of A$3.72/shr today. We suspect that Chevron was not interested in FLNG, but it was interested in Browse to NW Shelf, so its decision to exit suggests that FLNG could now be the favoured development option. We do not see FID on a Browse FLNG project until CY15, and 1st LNG not before CY20.

- **Pluto Expansion on hold after disappointing exploration**— Woodside has drilled 25 exploration wells since FID on Pluto in Jul-07 chasing additional gas resource for Pluto expansion. 11 wells intersected gas, but reserves have been booked on 4 wells only in WA-404-P (on the basis on backfill gas for Pluto), with evaluation ongoing for the Ragnar well. It has been a disappointing programme. We note that in contrast, Chevron made 13 gas discoveries from its 14 wells drilled in Australia in the 3.5 years to early 2012. WPL has stated discussions will continue with third parties into CY13. The options are Exxon/BHP's Scarborough discovery, and Hess's Equus discovery. We are not overly optimistic given economic challenges with these projects. Also, development of Scarborough is not a priority for BHP, and Exxon is studying FLNG as a potential development concept. For Hess, we think a tieback to the NW Shelf is its favoured development option given superior economics to a Pluto tieback.

- **Sunrise FLNG continues to face opposition from Timor —** Sunrise FLNG would be an attractive project, we estimate an IRR of 14.7% and a DCF A$2.68/shr today (unrisked). However, Timor's re-elected Gusmao continues to seek a Timor-located LNG project which is technically and economically challenging. If agreement can be reached on the FLNG concept, then the project should move forward without delay, but FID would not likely be until 2015 and 1st LNG in 2020.

- **LNG price environment remains favourable —** Investors are concerned about low US gas prices and the threat to Asian LNG pricing. However, we believe recent LNG deals have been signed at "traditional Asian LNG pricing", i.e. slopes near to 0.1485 vs JCC, which highlights a robust market.

- **Shell's remaining 23% stake remains an overhang —** Shell has flagged it is a seller of its remaining stake, although the timing and its price objectives remain uncertain. Shell sold its first 10% stake at A$42.23/shr in Nov-10.

- **Valuation—** We value WPL's producing assets at A$34.63/shr, and WPL trades at a significant discount to our Risked DCF of A$42.02/shr. The timing of Browse, Sunrise, and Pluto-2 appears long dated, but there is value in WPL's Browse/Sunrise resources, demonstrated by recent transactions. We forecast a significant lift in profitability in CY14 driven by LNG price re-openers in Jan-14 and a debottlenecking of Pluto to 4.6mtpa. WPL is, in our view, cheap on an absolute basis, hence the Buy rating.

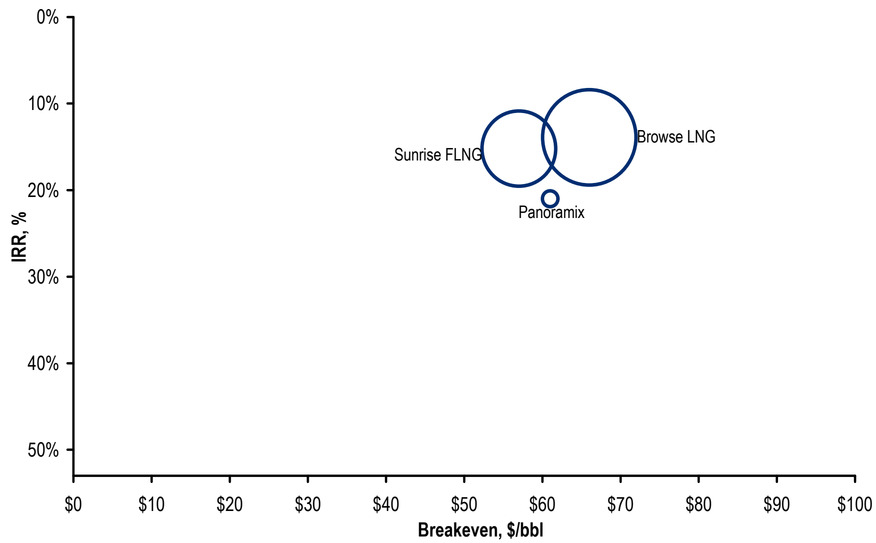
Figure 250. Woodside summary financial model

US$B, unless stated	'07	'08	'09	'10	'11	'12E	'13E	'14E	'15E	'16E	'17E	'18E	'19E	'20E	CAGR 11-16	CAGR 11-20
Key assumptions:																
Brent oil (US$/bbl)	72.7	97.4	62.3	80.0	110.8	110.6	98.8	95.4	98.1	100.8	103.6	106.5	109.5	112.6	-1.9%	0.2%
USD/AUD	0.84	0.85	0.79	0.92	1.03	0.98	0.94	0.90	0.89	0.88	0.85	0.85	0.85	0.85		
E&P volumes (kboepd)	193	223	222	199	177	224	248	263	257	266	241	234	228	294	8.5%	5.8%
YoY growth		15.3%	-0.6%	-10.2%	-11.2%	26.8%	10.8%	5.7%	-2.2%	3.6%	-9.3%	-3.0%	-2.5%	28.9%		
% oil	49%	53%	49%	46%	43%	33%	25%	24%	22%	29%	26%	24%	21%	17%		
E&P cash margins (US$/bbl)	28.6	33.6	25.1	34.8	43.8	40.1	36.5	42.8	44.5	44.6	45.5	50.6	50.7	39.7	0.4%	-1.1%
Per share data:																
EPS (US$)	1.47	2.46	1.41	1.88	2.04	2.37	2.03	2.77	3.13	3.21	2.95	3.27	3.26	3.18	9.3%	5.0%
EPS (Acps)	1.23	2.10	1.11	1.73	2.11	2.33	1.90	2.49	2.78	2.81	2.50	2.78	2.77	2.70	5.9%	2.8%
DPS (US$)	0.91	1.02	0.97	1.05	1.10	1.30	1.10	1.37	1.56	1.58	1.48	1.63	1.63	1.59	7.6%	4.2%
DPS (Acps)	0.76	0.87	0.77	0.97	1.14	1.28	1.03	1.23	1.38	1.39	1.26	1.39	1.39	1.35	4.0%	1.9%
Valuation ratios:																
P/E	28.0x	16.4x	31.0x	19.9x	16.4x	14.8x	18.1x	13.8x	12.4x	12.3x	13.8x	12.4x	12.5x	12.8x		
EV/DACF	12.5x	10.0x	21.8x	14.9x	16.5x	8.4x	10.4x	7.7x	7.8x	7.2x	7.1x	7.5x	7.9x	7.0x		
Dividend yield	2.5%	2.8%	2.7%	2.9%	3.1%	3.6%	3.1%	3.8%	4.3%	4.4%	4.1%	4.5%	4.5%	4.4%		
Free cash yield	-0.1%	-3.4%	-13.7%	-4.1%	-6.3%	5.6%	5.7%	7.4%	6.1%	7.9%	6.2%	2.0%	-1.5%	5.0%		
Cash flow:																
Upstream	2.5	3.2	1.5	2.1	2.2	3.0	3.3	4.0	4.1	4.3	4.2	4.1	4.0	4.3	14%	8%
Other and corporate	(0.0)	(0.0)	0.0	0.2	(0.1)	1.1	(0.1)	0.1	(0.0)	0.0	0.0	(0.1)	(0.0)	0.2		
Sources of funds	**2.5**	**3.2**	**1.5**	**2.3**	**2.1**	**4.1**	**3.2**	**4.2**	**4.0**	**4.3**	**4.2**	**4.0**	**4.0**	**4.5**	15%	9%
Changes in working capital	0.1	0.1	(0.2)	0.2	(0.4)	(0.1)	0.1	(0.1)	0.0	(0.0)	(0.0)	0.1	0.0	(0.2)		
Cash flow from operations	**2.6**	**3.2**	**1.3**	**2.5**	**1.8**	**4.0**	**3.3**	**4.0**	**4.1**	**4.3**	**4.2**	**4.1**	**4.0**	**4.3**		
Capex	(2.6)	(4.1)	(4.8)	(3.6)	(3.6)	(2.4)	(1.6)	(1.8)	(2.2)	(1.9)	(2.4)	(3.5)	(4.4)	(2.8)	-12%	-3%
Free cash flow	**(0.0)**	**(0.8)**	**(3.5)**	**(1.1)**	**(1.8)**	**1.7**	**1.7**	**2.2**	**1.8**	**2.4**	**1.8**	**0.6**	**(0.4)**	**1.5**		
Ordinary dividends	(0.3)	(0.5)	(0.3)	(0.5)	(0.7)	(0.7)	(0.7)	(1.0)	(1.2)	(1.3)	(1.2)	(1.3)	(1.4)	(1.3)	16%	8%
as % of operating c/flow	11%	17%	23%	22%	37%	17%	23%	25%	30%	32%	29%	32%	34%	31%		
Discretionary free cash flow	**(0.3)**	**(1.4)**	**(3.8)**	**(1.7)**	**(2.5)**	**1.0**	**1.0**	**1.2**	**0.6**	**1.0**	**0.6**	**(0.7)**	**(1.8)**	**0.2**		
Acquisitions	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Disposals	0.1	0.1	0.0	0.7	0.1	1.6	-	-	-	-	-	-	-	-		
Equity change	0.3	0.2	1.4	1.2	0.8	0.4	-	-	-	-	-	-	-	-		
Surplus (deficit)	**(0.2)**	**(1.3)**	**(3.7)**	**(1.0)**	**(2.4)**	**2.5**	**1.0**	**1.2**	**0.6**	**1.0**	**0.6**	**(0.7)**	**(1.8)**	**0.2**		
Balance sheet:																
Net debt	0.8	2.0	3.8	4.0	5.1	3.1	2.2	1.0	0.4	(0.7)	(1.3)	(0.6)	1.2	1.0		
Net debt/EBITDA	0.4x	0.5x	1.6x	1.4x	1.6x	0.7x	0.6x	0.2x	0.1x	(0.1x)	(0.2x)	(0.1x)	0.2x	0.2x		
Interest cover	232.4x	193.1x	188.9x	nm	118x	34x	28x	48x	63x	81x	108x	123x	81x	31x		
Net debt/equity	18%	42%	42%	36%	40%	21%	13%	6%	2%	-3%	-6%	-3%	5%	4%		
Capital employed:																
Upstream	5.3	6.9	13.1	15.6	18.3	19.0	19.0	19.0	19.8	20.1	20.7	22.9	26.0	27.2	2%	4%
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
% Upstream	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Return on capital employed:																
Upstream	15.3%	21.6%	8.4%	8.7%	8.5%	9.5%	8.2%	10.8%	11.8%	11.8%	10.5%	11.0%	10.1%	9.6%		
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aggregate group	**15.3%**	**21.6%**	**8.4%**	**8.7%**	**8.5%**	**9.5%**	**8.2%**	**10.8%**	**11.8%**	**11.8%**	**10.5%**	**11.0%**	**10.1%**	**9.6%**		

Source: Company Reports and Citi Research Estimates

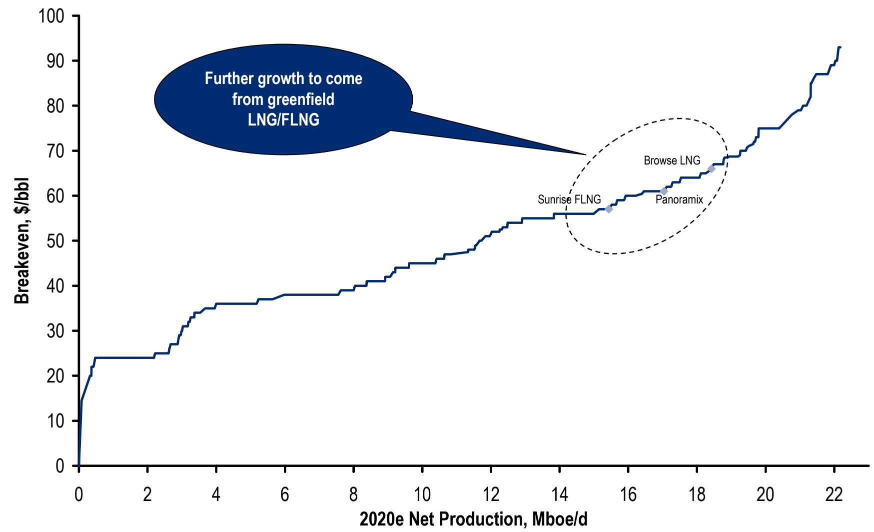
Woodside – Upstream

Figure 251. Woodside project portfolio (2012-2020 start-ups)



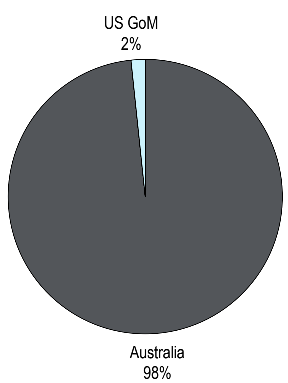
Source: Citi Research

Figure 252. Woodside project portfolio versus the industry cost-curve



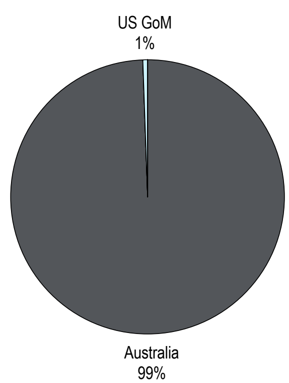
Source: Citi Research

Figure 253. 2012E cash flow by region



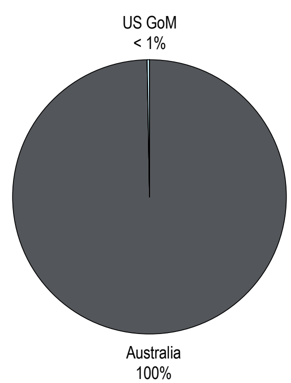
Source: Citi Research

Figure 254. 2016E cash flow by region



Source: Citi Research

Figure 255. 2020E cash flow by region



Source: Citi Research

Appendix A-1

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