EDISON

Pura Vida Energy

Exploration value benchmarks

Peer analysis

Oil & gas

While 2014 offered numerous opportunities for investors seeking exposure to pure-play exploration, 2015 promises to be a much more rarefied year. The fall in oil price has triggered a retrenchment in exploration spending, leaving many wells postponed or at best uncertain. This leaves exploration at Mazagan, Morocco (Pura Vida) as one of the few companies with confirmed prospects drilling that investors can access directly. Our analysis indicates that the markets are already pricing in a significant discount on Pura Vida (PVD) shares. At around $0.1/ unrisked boe, PVD is trading at around half the valuation that many pure-plays were being valued at in past years and much lower levels than some wells, especially those of larger peers. While we are explicitly not valuing PVD in this report (a full initiation will follow), we believe the combination of price and significant near-term catalysts means PVD shares could be worth examining.

Exploration exposure at discount to (historical) peers

In this report, our work has concentrated on valuation implied by investors in previous exploration, whether that is in prices of pure-play explorers in the recent past prior to drilling result, or by the fall in share prices for larger entities (on news of a dry well). Both of these approaches imply PVD is trading at a notable discount to peers, based on the net prospective resources targeted by wells, even ignoring any value for PVD's other properties in Gabon and Madagascar.

Fully-carried Mazagan well should spud imminently

Pura Vida's (fully carried) Mazagan well is due to spud in April 2015, targeting gross unrisked best estimate prospective resources of 1.1bn boe across four to five stacked targets. A number of play types will be tested, with structural traps at shallower depths with higher risk stratigraphic traps in deeper Jurassic fans. With a very attractive farm-out deal negotiated in 2013, the company is fully carried on two wells up to a gross limit of $215m. Importantly, this should go some way to fund the second well, while a recent negotiation sets out a method of further farm-down to fund any expenditure over this limit, if required.

The second carried well should give PVD and the operator time to learn from the initial well. The licence is some distance (>500km) from the unsuccessful exploration undertaken in 2014 and early 2015, and is close to the Kosmos blocks that BP farmed-into at significant expense in 2013.

Valuation

This report does not attempt to value Pura Vida explicitly – we save this more detailed work for an upcoming initiation. However, it is clear from the work performed that the company is trading below historical trends on an EV/boe basis, suggesting that it may be worth examining further.

16 March 2015

Price	**A$0.38**
Market cap	**A$56m**

Net cash (A$m) at December 2014	18.2
Shares in issue	147.4m
Free float	88%
Code	PVD
Primary exchange	ASX
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	(12.2)	(17.7)	(24.0)
Rel (local)	(18.3)	(24.7)	(29.6)
52-week high/low		A$0.56	A$0.30

Business description

Pura Vida is a pure play explorer with assets in offshore Morocco, Gabon and Madagascar. Its first exploration well offshore Morocco is due to spud in April 2015.

Next event

MZ-1 well spud	April 2015

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Pura Vida Energy is a research client of Edison Investment Research Limited

Introduction

In this report, we examine the relative valuation of exploration in an effort to frame the current valuation of Pura Vida. Despite a large number of wells drilled, success in 2014 was poor amongst listed companies. The FAN-1 and SNE-1 wells drilled by Cairn and FAR in Senegal were the stand-out events. Moroccan exploration by Genel, Cairn, Kosmos and others was unsuccessful, while Tullow continued a recent run of bad form.

In this context, and because of a falling oil price, it is perhaps not surprising that exploration budgets have been severely reduced in 2015. This year, there are very few pure-play exploration companies drilling large prospects offshore, with many pure-plays (Chariot, Sterling, COPL to name a few) not drilling until 2016 at the earliest. In this environment, and for investors looking for exploration exposure, it makes sense to concentrate on those companies with material catalysts in 2015. Our analysis indicates Pura Vida is trading on an EV valuation below historical trends and may be worth investigation.

This report is restricted to peers analysis by design. We do not attempt to give a full account of Pura Vida beyond a brief description of the upcoming well – this will come in a later full initiation report. Instead, the report is purely meant as a companion piece to investors' thoughts on exploration and to better frame the company within its peer and historical context.

Exhibit 1: Peers of Pura Vida

		Market cap (US$m)	EV (US$m)	Notes
African Petroleum	APCL NO Equity	41	33	Holds large working interests in ten blocks, offshore West Africa. Is in the process of farming down to gain well funding.
Azonto	AZO LN Equity	3	(2)	Developing a gas resource in Côte d'Ivoire.
Borders and Southern	BOR LN Equity	45	25	Assets in Falkland Islands.
Chariot	CHAR LN Equity	33	(20)	Assets off West Africa, no drilling likely in 2015.
Circle	COP LN Equity	97	101	Moroccan onshore gas play.
COPL	XOP CN Equity	29	24	Liberia and Namibia exploration, no drilling likely in 2015.
FAR	FAR AU Equity	220	168	African explorer. Very successful Senegalese campaign in 2014.
Falkland Oil and Gas	FOGL LN Equity	228	121	Spudded Zebedee prospect on 6 March 2015, targeting 112mmboe net to FOGL (281mmboe gross).
Fastnet	FAST LN Equity	12	12	Currently evaluating options following bad exploration results in 2014.
Hurricane	HUR LN Equity	170	123	UK North Sea basement play, successful drilling in 2014.
Hyperdynamics	HDY US Equity	16	(9)	Guinea exploration with Tullow Oil (TLW) as operator. Not drilling in 2015.
Lekoil	LEK LN Equity	121	64	Nigerian focus, found Ogo in 2014 (with Afren).
Pancontinental	PCL AU Equity	15	8	Early stage in Namibia. Kenya offshore exploration was not successful.
Petromanas	PMI CN Equity	36	26	Albanian exploration with Shell. Drilling programme ongoing in 2015.
Pura Vida	**PVD AU Equity**	**45**	**23**	**See rest of note. Fully funded 2015 drilling.**
Serica	SQZ LN Equity	11	(5)	No drilling likely in 2015.
Simba	SMB CN Equity	7	7	Onshore Kenya (& other Africa). Unfunded, unlikely to drill in 2015.
Sterling	SEY LN Equity	61	(46)	Assets in Madagascar (with PVD), and Gabon. Production in Mauritania.
Swala	SWE AU Equity	12	10	Onshore Tanzania, early stage.
Taipan	TPN CN Equity	3	3	Onshore Kenya. Recent dry well.
88 Energy	88E AU Equity	9	7	Alaska exploration. Late 2015 drilling possible, but need farm-downs.
Tower	TRP LN Equity	10	4	No drilling likely in 2015.

Source: Edison Investment Research, Bloomberg

Pura Vida and MZ-1

Pura Vida is an Australian-listed exploration company with offshore assets in Africa. It holds a 23% interest in the Mazagan permit, Morocco. It also holds a 100% interest in the Nkembe block, Gabon (subject to a potential 20% government back-in) and a 50% interest in the Ambilobe Block, Madagascar. For this report, we concentrate on the Moroccan acreage, as the nearest term catalyst for investors.

Mazagan-permit

In January 2013, Pura Vida farmed-down its Mazagan licence to Plains Exploration (now Freeport-McMoRan) in exchange for carries on two deepwater wells (retaining a 23% interest). The maximum carry of up to $215m should more than cover the company-estimated initial well cost of $137m, including any increased costs from side-tracking or deepening. Should the second well take costs beyond this limit, the parties have negotiated a further deal by which PVD can reduce its stake further in return for funding (on a scale of $4.5m gross costs for 1%). For full details of the farm-down negotiated, please refer to the company's website.

The deal agreed was done on extremely good terms for Pura Vida, as funding two wells with such large carries is rare in today's markets. The first of the resulting wells should spud imminently, and is targeting four to five intervals with best estimates of 806-1,112mmbbls, as seen below.

Exhibit 2: Prospect sizes targeted in first well

	Unrisked gross prospective resources (mmbbls)				
	Low	Best	High	Mean	GCoS
Cenomanian	9	39	95	47	23%
Aptian	42	238	680	309	30%
Lower Jurassic - Fan-1	84	450	1290	588	13%
Lower Jurassic - Fan-2	21	79	189	95	12%
Lower Jurassic - Fan-3	60	306	820	385	12%

Source: Pura Vida

Ways of looking at pricing of exploration over time

In an effort to see the pricing of exploration we can compare relative valuations of exploration companies as they are today. However, in the current environment, and with such poor sentiment due to the oil price, this may present a limited view. We therefore look to compare various other methodologies to try to gain a fuller view.

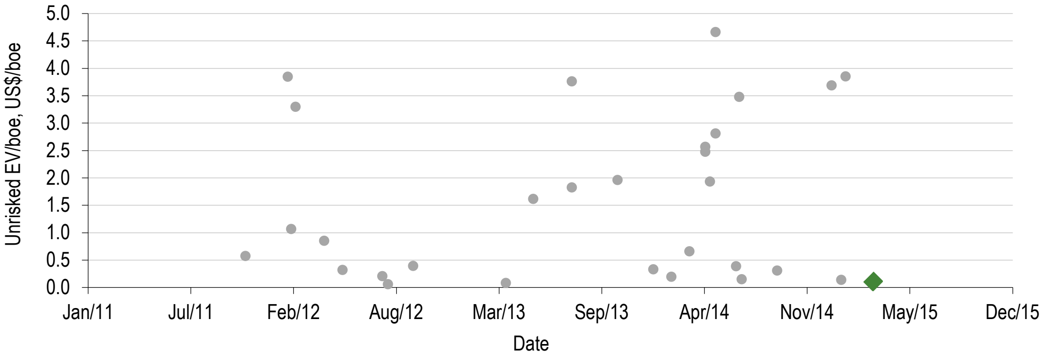
Pricing of pure play exploration plays pre-result

A way of looking at sentiment is the value ascribed to pure-play companies before well results are announced. In this case, we look at pure-play company valuations the day before a well result is announced.

This implicitly assumes that the valuations of companies on that day are dominated by the upcoming well, and excludes the value of other assets or further wells planned in the foreseeable future. This is obviously a false assumption, as most companies will have other assets than the well being drilled. We also concentrate on unrisked prospects/resources. Using risking would be better, but many wells were not ascribed a GCoS, and using an assumed GCoS for some wells and not others adds a further level of confusion (we have run the data on an assumed risking basis (20% GCoS), but this does not materially change the picture).

While our database (made up largely of London-listed E&Ps which drilled in recent times) doesn't go back beyond 2011 (and is fairly noisy) the limited data does suggest significant variation pre-drill, with investors willing to pay up to around $4.5 /unrisked net boe, though many are priced below $1/boe. There have been some wells that investors have not been willing to price in material value – including the upcoming well (and second well and other assets) for Pura Vida.

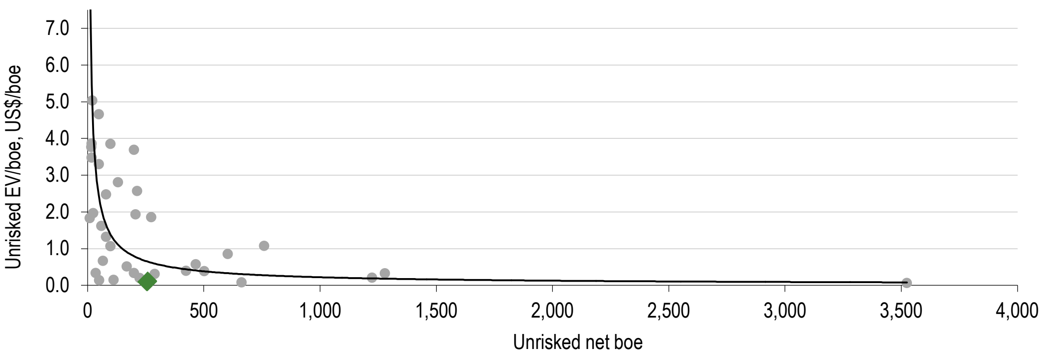
Exhibit 3: Unrisked EV/boe for pre-drill pure-play explorers over time (day of spud)



Source: Edison Investment Research, Bloomberg Note: Pura Vida is in green

This is evident if we chart resources versus unrisked value (Exhibit 4). It is clear that the wells with the largest resource are not achieving commensurately high per barrel values. Based on this analysis, Pura Vida is trading on a very low multiple, equal to very large wells of over 2bnboe. Under this analysis, Pura Vida could more than double in value and still be below the trend line.

Exhibit 4: Unrisked resources versus value attributed by investors (day before result)



Source: Edison Investment Research, Bloomberg

This significant discount for large resources could be explained by:

- The market is negative, ascribing very little value to exploration; or
- Exploration success on marquee wells (of say 1bn boe gross unrisked) has been so poor in recent years that investors are not willing to pay for field size. That is, the market will only pay up to a limited amount for exploration, meaning larger prospects effectively are priced at a discounted EV/boe.

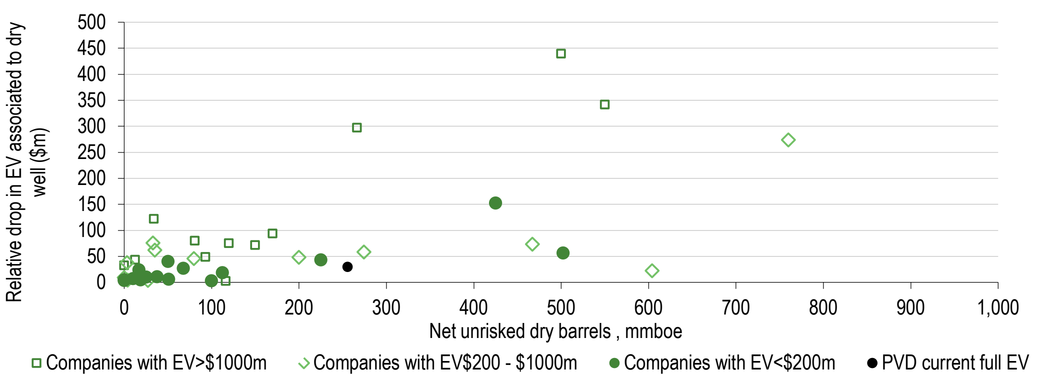
We concede that the data are noisy and relatively restricted; pure-play explorers are fairly rare and so derived data points are limited.

Market price of dry wells

The number of pure-play explorers is limited. The majority of exploration is done by large, more diversified companies – where we cannot derive any information from EV before spud. However, we can assume that share performance on the announcement of a dry well does give an indication of how much the market was pricing in the value. We normalise this by seeing the relative share price performance vs an Edison-generated index of London-listed oil stocks, to ensure that we are not including general market movements. Obviously we can never expect to exclude all other factors in a company's share movement, so the larger the company, the noisier the data is likely to be. The key is getting enough data to distinguish the signal from the noise.

Not unexpectedly, the results are noisy with a low R^2. The implied value per unrisked barrel of $0.25/boe is below that implied by the pure play pre-result values – perhaps because investors in large companies (which dominates this data set) tend to focus less on exploration value than smaller companies where more of the investment case is the ongoing drilling and because the data is necessarily noisy. Again, we employ unrisked resource size to reduce assumptions made on our part.

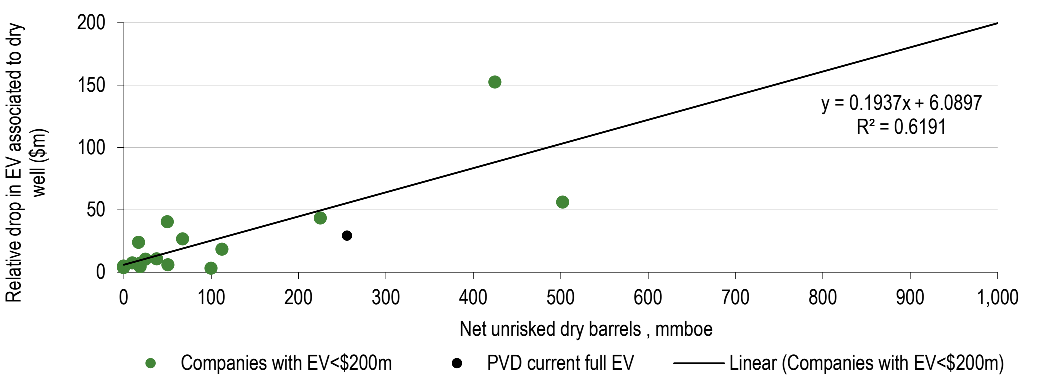
Exhibit 5: Implied value of dry wells



Source: Edison Investment Research, Bloomberg Note: Black dot represents Pura Vida's entire EV

If we zoom in on just the companies worth less than $200m, the value in Pura Vida's shares (vs historic trends) becomes more evident.

Exhibit 6: Implied value of dry wells, for companies with EV <$200m

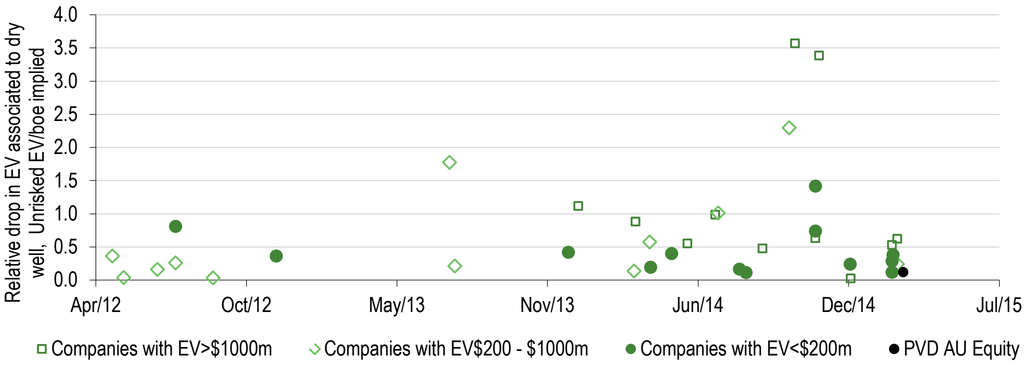


Source: Edison Investment Research, Bloomberg

The chart indicates that the market has, in the past, discounted more than PVD's entire EV for a dry well of the size that PVD is targeting. One could argue that this implies that PVD shares should be priced higher currently.

There is no clear movement in valuation emphasis over time evident, albeit the data is limited. It is clear though that Pura Vida's imminent well is valued by the market at the cheaper end of historical trends – even if we compare PVD's current entire EV vs value lost on announcement of a dry well That is to say, that the charts suggest that the market is not only ignoring part of the value of the upcoming well, but its other assets too.

Exhibit 7: Market implied value of dry wells

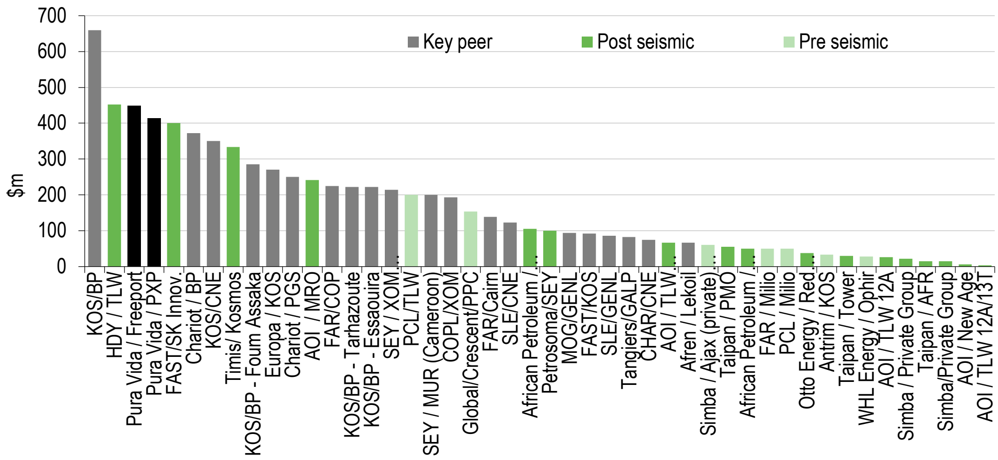


Source: Edison Investment Research, Bloomberg

How does industry view Pura Vida?

The equity market is not giving Pura Vida a similar multiple as other pure-plays in recent years based on its (risked) resources. However, the chart below shows that Pura Vida's Moroccan block was valued by Plains Exploration partners (taken over by Freeport shortly after) at a value only beaten by two deals (Tullow's farm-in of Hyperdynamics in Guinea and BP farming-in to Kosmos's Moroccan acreage). Industry therefore rates the acreage highly.

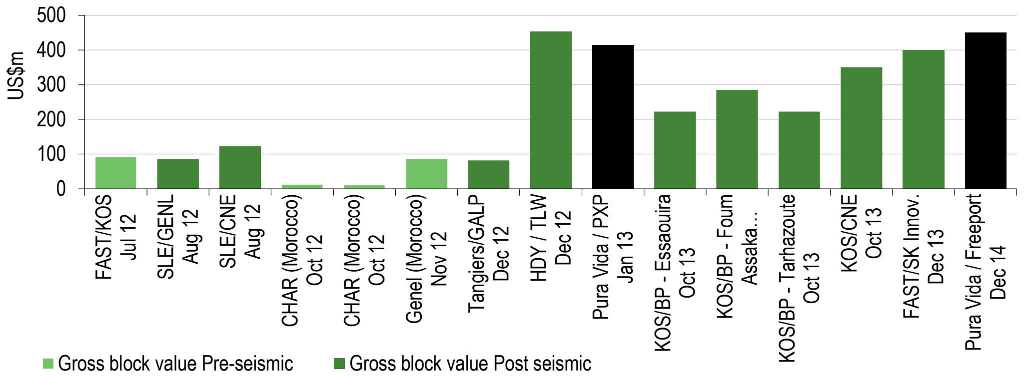
Exhibit 8: Gross farm-down value for African farm-downs



Source: Edison Investment Research Note: Pura Vida has executed two farm-down agreements with PXP/Freeport, shown in black.

PVD's farm-outs give an idea of how sentiment on Morocco increased in recent years, and recognition of potential resources that could be drilled.

Exhibit 9: Chronological development of farm-down deals, Africa

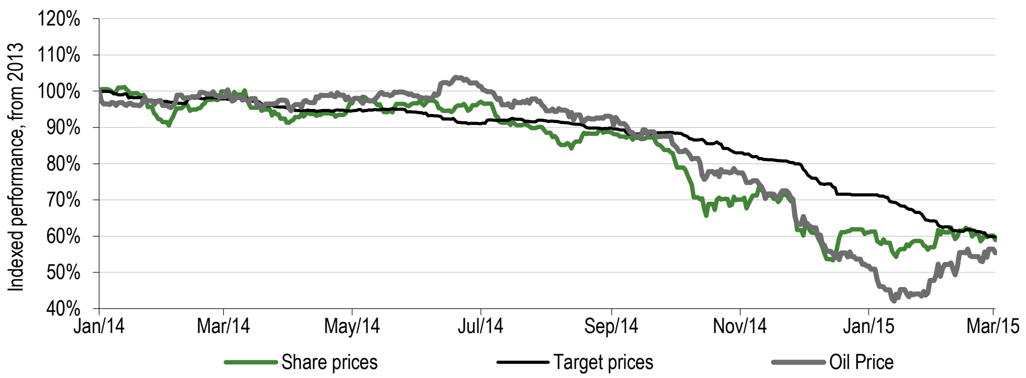


Source: Edison Investment Research Note: Pura Vida has executed two farm-down agreements with PXP/Freeport, shown in black. We treat the BP/Kosmos farm-in across three blocks as three farm-in deals with full carries assigned based on assumed well costs – we do not, however, assume a contingent well is drilled in any of the blocks. For PVD's first farm-in we assume the full $215m carry. For HDY, we assume both carried wells (including contingent well), although if we use just one well, the gross block value be $260m.

E&Ps out of favour

The decline of the oil price has exacerbated already weak sentiment in independent E&Ps. As the chart below shows, the arithmetic average of a basket of E&P shares has traded in line with oil prices, declining markedly over the last six months. Interestingly, this decoupled in early January as equities held up while oil continued to slide (and subsequently recover).

Exhibit 10: Indexed performance of oil shares, target prices and oil price



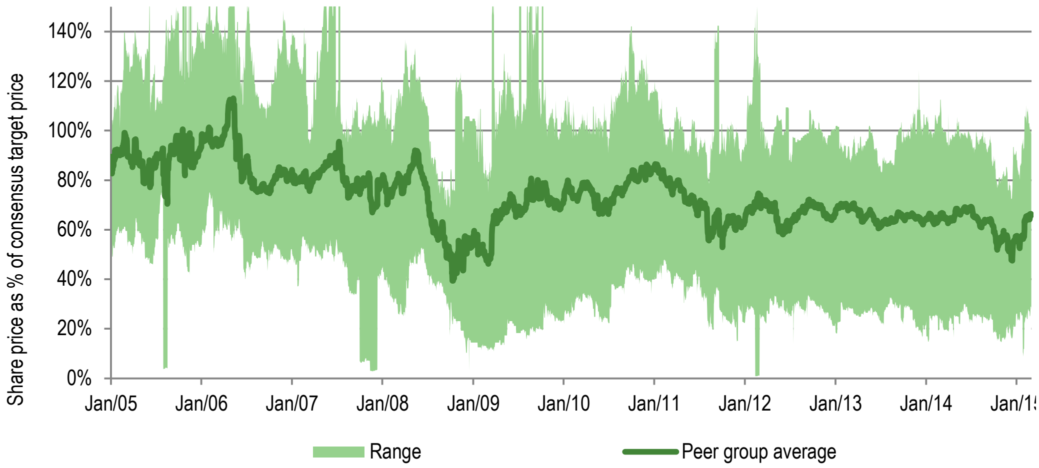
Source: Bloomberg, Edison Investment Research

Over 2014-2015, share prices have generally tracked the oil price. Given the high operational gearing (and sticky costs) in the sector, it perhaps would not have been surprising to see a greater gearing to oil prices with shares falling to a larger extent (which is what we saw in 2008 and for a short period in October 2014 for example).

This is possibly because (i) the market assumes that future developments will have lower costs so as to buffer the effect of lower oil prices (ii) the uncertainty in the oil price is such that investors are happy to track the oil prices until a clearer picture on pricing appears (iii) the shares were already discounting so much negativity that shares had reached a bottom.

As is inevitable in a fast-evolving macro environment, analysts are behind the curve in adjusting target prices, and so a lag in catching up to the share prices is expected. The net effect of this is little net change to the level of discounting applied to analysts' target prices.

Exhibit 11: Discount to target price, European E&Ps



Source: Bloomberg, Edison Investment Research

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