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Seismic reflections

Cheap US chemical feedstock

Cheap natural gas liquids are providing a major boost to the competitiveness of the US chemical industry. As a result, interest in capacity expansion in US bulk chemicals is surging while the industry in Europe is increasingly concerned. Enhanced competitiveness is, of course, a function of the rapidly increasing availability of domestic feedstock following the development of liquids-rich shale gas resources, especially in the Eagle Ford and Marcellus formations of Texas and Appalachia respectively. The barely tapped Utica shale of western Appalachia offers further massive potential.

US feedstock costs plunge

US natural gas liquids (NGLs) prices have plunged over the past year with declines of 24%, 39% and 69% for butane, propane and ethane respectively. Most significant has been the plunge in ethane, given its role in the US as the feedstock for ethylene, the key building block for a wide range of plastics. At around 25 cts/gallon ethylene can be produced in the US for about $250/tonne which is in line with costs associated with Saudi Arabia. By contrast, in northwest Europe where ethylene is generally derived from oil based naphtha, ethylene is currently selling for about $1,200/tonne. Reflecting cheaper oil, naphtha can also be produced at a lower cost in the US than in Europe and the Far East. As of late December 2012 naphtha was selling on the US Gulf Coast for around $890/tonne, $70/tonne less than in Europe. While current US ethane prices are probably unsustainably low it is worth noting that even at 50 cts/gallon ethylene could still be produced for about $500/tonne which leaves plenty of headroom vis-a-vis international ethylene prices of $1,100-1,200/tonne.

US capacity expansion

According to the American Chemistry Council (ACC), a trade body, there are presently 17 ethane cracking projects either planned or under consideration in the US. The list of companies involved includes Dow Chemical, Exxon, Royal Dutch Shell, CP Chem (Chevron/Phillips 66 jv), Formosa Plastic (Taiwan), Braskem (Brazil), Bayer (Germany) and Sasol (South Africa). ACC believes that US ethane cracking capacity could increase by 40% by 2018. To counter a loss of competitiveness in bulk chemicals, European and Far Eastern companies can respond by either adding ethane cracking capacity in the US or possibly by vertically integrating into oil and gas to improve feedstock economics at existing facilities. The drawback to both strategies is high capital costs (probably at least $5bn for an ethane cracker and ethylene plant) and long lead times.

US industrial renaissance

The cocktail of internationally competitive prices for natural gas, NGLs and crude oil certainly offers the potential for a renaissance in US heavy industry. Note that the stimulus does not only apply to bulk chemicals. Energy intensive sectors such as transportation, petroleum refining, power generation, metallurgical processing/forming and cement and glass manufacturing should all benefit.

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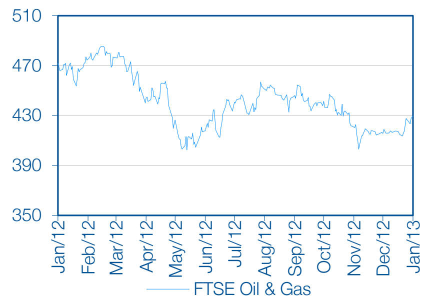

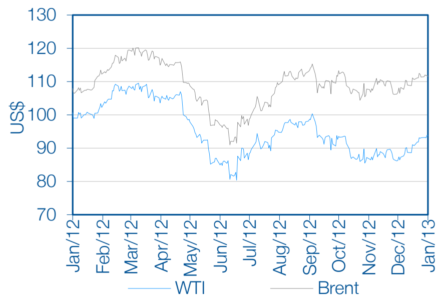

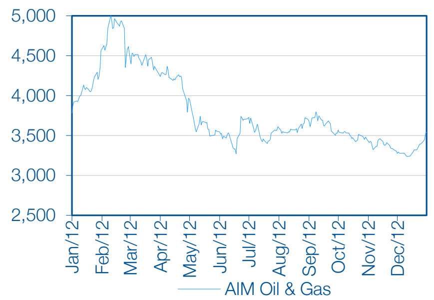

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Exhibit 1: Best and worst performers

1 week

No.	Best performers	% change	No.	Worst performers	% change
1	ROXI PETROLEUM PLC	83.3%	1	NIGHTHAWK ENERGY PLC	-10.2%
2	PETREL RESOURCES PLC	31.6%	2	TULLOW OIL PLC	-8.4%
3	BORDERS & SOUTHERN PETROLEUM	22.5%	3	EXILLON ENERGY PLC	-6.4%
4	GULF KEYSTONE PETROLEUM LTD	19.8%	4	SOUND OIL PLC	-6.1%
5	HARDY OIL & GAS PLC	16.8%	5	BANKERS PETROLEUM LTD	-5.9%

1 month

No.	Best performers	% change	No.	Worst performers	% change
1	ROXI PETROLEUM PLC	94.1%	1	ASCENT RESOURCES PLC	-33.9%
2	IGAS ENERGY PLC	77.3%	2	RESACA EXPLOITATION-DI	-29.6%
3	FORTUNE OIL PLC	38.9%	3	SOUND OIL PLC	-26.2%
4	BORDERS & SOUTHERN PETROLEUM	38.0%	4	NIGHTHAWK ENERGY PLC	-21.1%
5	PETREL RESOURCES PLC	32.6%	5	PETRO MATAD LTD	-13.6%

3 months

No.	Best performers	% change	No.	Worst performers	% change
1	PETREL RESOURCES PLC	316.3%	1	FALKLAND OIL & GAS LTD	-52.2%
2	LENI GAS & OIL PLC	228.9%	2	ASCENT RESOURCES PLC	-42.1%
3	IGAS ENERGY PLC	65.6%	3	SOUND OIL PLC	-38.0%
4	FORTUNE OIL PLC	37.0%	4	INDEPENDENT RESOURCES PLC	-34.5%
5	EUROPA OIL & GAS HOLDINGS	36.4%	5	RESACA EXPLOITATION-DI	-32.1%

6 months

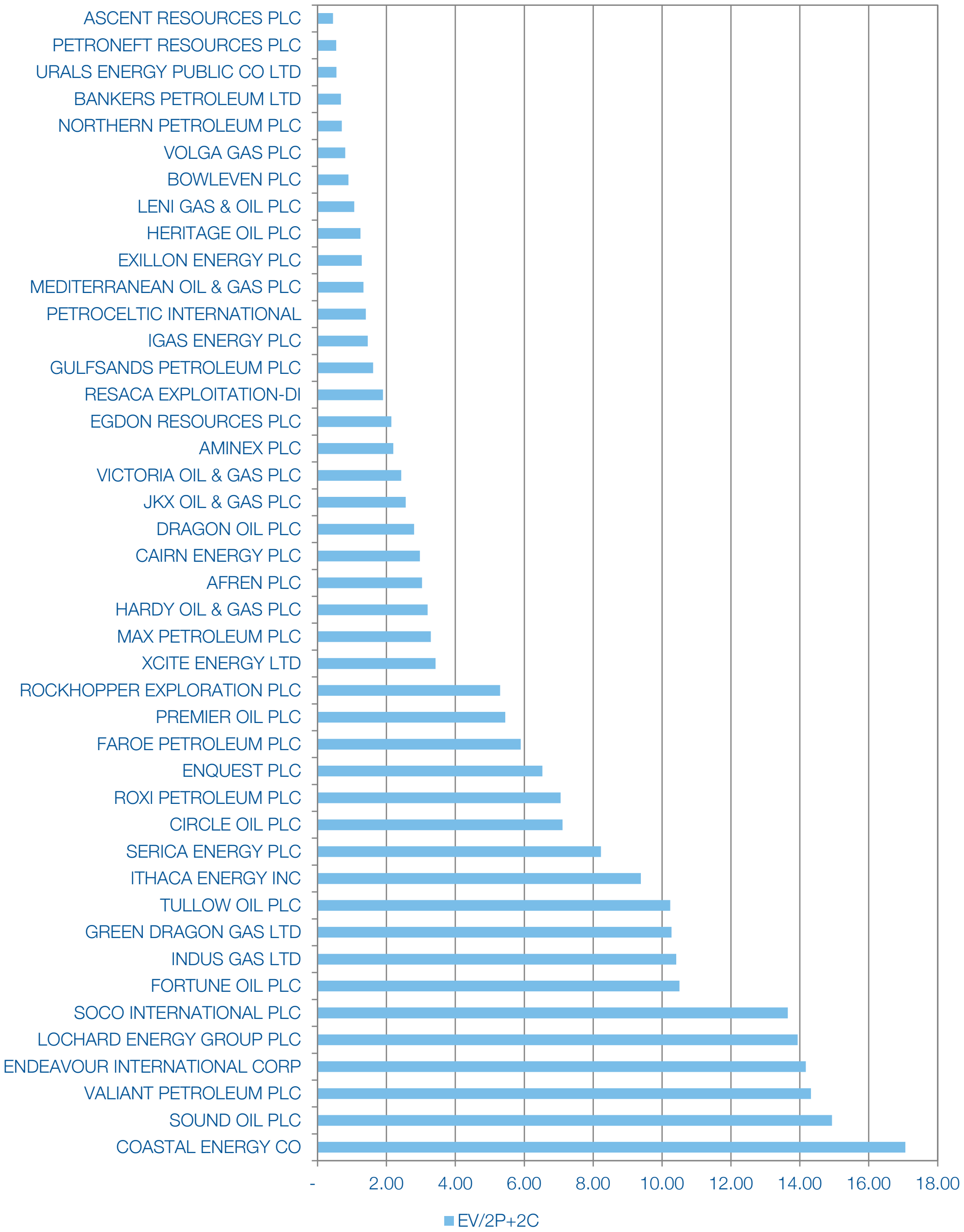
No.	Best performers	% change	No.	Worst performers	% change
1	PETREL RESOURCES PLC	371.1%	1	RESACA EXPLOITATION-DI	-75.9%
2	EUROPA OIL & GAS HOLDINGS	100.0%	2	CHARIOT OIL & GAS LTD	-75.9%
3	LENI GAS & OIL PLC	97.8%	3	ASCENT RESOURCES PLC	-66.6%
4	IGAS ENERGY PLC	79.2%	4	FALKLAND OIL & GAS LTD	-63.2%
5	HERITAGE OIL PLC	65.3%	5	BORDERS & SOUTHERN PETROLEUM	-63.2%

1 year

No.	Best performers	% change	No.	Worst performers	% change
1	PETREL RESOURCES PLC	225.5%	1	RESACA EXPLOITATION-DI	-83.4%
2	AMERISUR RESOURCES PLC	176.7%	2	INDEPENDENT RESOURCES PLC	-82.6%
3	LENI GAS & OIL PLC	150.5%	3	PETRO MATAD LTD	-81.4%
4	IGAS ENERGY PLC	127.3%	4	CHARIOT OIL & GAS LTD	-71.6%
5	MEDITERRANEAN OIL & GAS PLC	109.8%	5	ASCENT RESOURCES PLC	-70.3%

Source: Bloomberg

Exhibit 2: EV/2P + 2C rankings



Source: Bloomberg, company releases, Edison Investment Research

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