NCB CAPITAL

EQUITY RESEARCH

Petrochemicals Tracker

Prices rise, capacity to follow

Natural gas prices increased 28.4% in December, outpacing the 2%-5% growth in oil grade prices during the month. Petrochemical prices showed a mixed trend. Though base metal prices rose across the board, those of precious metals (except palladium) remained relatively weak.

Among petrochemicals, benzene and styrene prices reported double-digit growth MoM, rising 14.5% and 13.9%, respectively, while MTBE remained the worst performer for the second consecutive month.

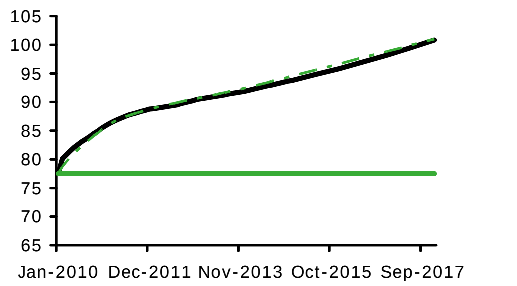
SABIC raised SR10bn through its first private bond placement with the Public Investment Fund (PIF) to finance its expansion plans. By 2020, **SABIC** aims to increase its annual production capacity 2.3 times from the 56mn mt in 2008. **SABIC**, **Sipchem** and **APPC** proposed annual dividends per share payments of SR1.5, SR1 and SR1, respectively, for 2009. **Saudi Kayan** expects to commence operations at its petrochemical complex in phases during 2H10 and early 2011. **Sipchem** started trial runs at its vinyl acetate plant and exported its first shipment of acetic acid to Asia. (*Please refer to our company note released on 24 November 2009*). Separately, China lowered its anti-dumping duty on Butanediol imports from Saudi Arabia to 4.5% from 20.9%. On the global front, **Tronox** canceled its assets sale to **Huntsman** after receiving US Bankruptcy Court's approval for its financing plan.

Key benchmark overview

Name	Latest	1 M (%)	QTD (%)	YTD (%)
TASI	6,149.9	(2.2)	(2.7)	28.0
TASI Petrochem	5,482.2	2.5	6.7	72.9
Brent ($/brl)	77.5	(0.3)	13.3	85.8
Gold ($/oz)	1,097.3	(5.5)	9.8	24.8
Natural Gas ($/MMBtu)	5.8	28.4	99.7	3.6
Ethylene	1,130.0	2.7	32.2	109.3

Source: Bloomberg, NCBC Research

Crude oil futures curve – Brent ($/brl)



Source: Bloomberg, NCBC Research

Saudi equities - performance and valuation

Name	LTP	Mkt cap (SRmn)	Price change (%) Last	1M	YTD	TTM (%) ROE	Valuation P/E-TTM	PBV	Div yld 08 (%)
SABIC	85.8	257,250	(0.3)	5.9	3.9	4.6	53.7	2.5	3.5
SAFCO	123.5	30,875	0.4	2.9	2.1	30.7	14.0	4.6	10.5
PetroRabigh	36.0	31,536	(0.3)	(2.7)	1.4	(22.0)	nm	3.9	-
Saudi Kayan	18.8	28,125	(0.5)	1.9	3.0	(0.2)	nm	1.8	-
YANSAB	35.0	19,688	1.4	11.1	4.8	(0.5)	nm	3.5	-
Tasnee	30.0	13,821	0.7	11.1	6.8	5.0	35.9	1.8	3.3
SIIG	23.0	10,328	0.2	0.2	5.5	(0.8)	nm	1.9	-
Sipchem	24.2	8,067	1.7	4.1	1.5	2.4	67.7	1.7	4.1
APPC	25.9	3,662	1.2	4.6	4.0	1.3	-	2.2	-
Sahara Petrochemical	22.0	6,436	0.5	6.5	4.0	0.7	-	2.3	-
Chemanol	16.2	1,948	2.5	1.6	4.9	1.9	75.2	1.4	-
Nama Chemicals	11.2	1,433	(0.4)	(3.9)	3.2	(7.4)	nm	0.9	-
Alujain	18.1	1,253	0.6	3.7	5.5	(10.8)	nm	2.4	-
Petrochem	16.1	7,704	1.3	(3.6)	3.2	-	-	1.6	-

Source: Bloomberg, NCBC Research

Tariq Al-Alaiwat
t.alalaiwat@ncbc.com
Tel: +966 2690 7627

SABIC signed an agreement with the Public Investment Fund (PIF) to raise SR10bn (USD2.67bn) through its first private bond placement to boost finances and fund expansion plans. The first issue of these bonds with a maturity of 7 years would take place in January 2010. **SABIC** aims to raise its annual production capacity to 130mn mt by 2020 from 56mn mt in 2008. **SABIC** and APC have submitted their final arguments to the Indian authorities seeking the lifting of dumping fees on methanol exports. A final decision is expected by the end of January 2010. **SABIC** announced it will pay a cash dividend of SR1.5 per share for the year 2009 in April 2010.

On 19 December 2009, experimental runs started at **Sipchem**'s vinyl acetate monomer plant. **Sipchem** shipped its first cargo of acetic acid to the Asian markets. **Sipchem** announced that China has decided to reduce the anti-dumping duty on Butanediol imported from Saudi Arabia to 4.5% from 20.9%. **Sipchem** proposed it would pay a cash dividend of SR1 per share for the year 2009 in March 2010. We are positive on Sipchem with an 'Overweight' rating and a target price of SR27.9.

Saudi Kayan signed a letter of intent with South Korea's Daelim Industrial Co for the engineering, procurement and construction (EPC) of the LDPE plant having annual production capacity of 300,000 mt. An award for the Amines plant is expected in January 2010. **Saudi Kayan** aims to start operating its main units in 2H10, with others to follow in 2011. About 95% of the EPC work is complete and natural gas supply from Saudi Aramco has started in order to facilitate testing operations.

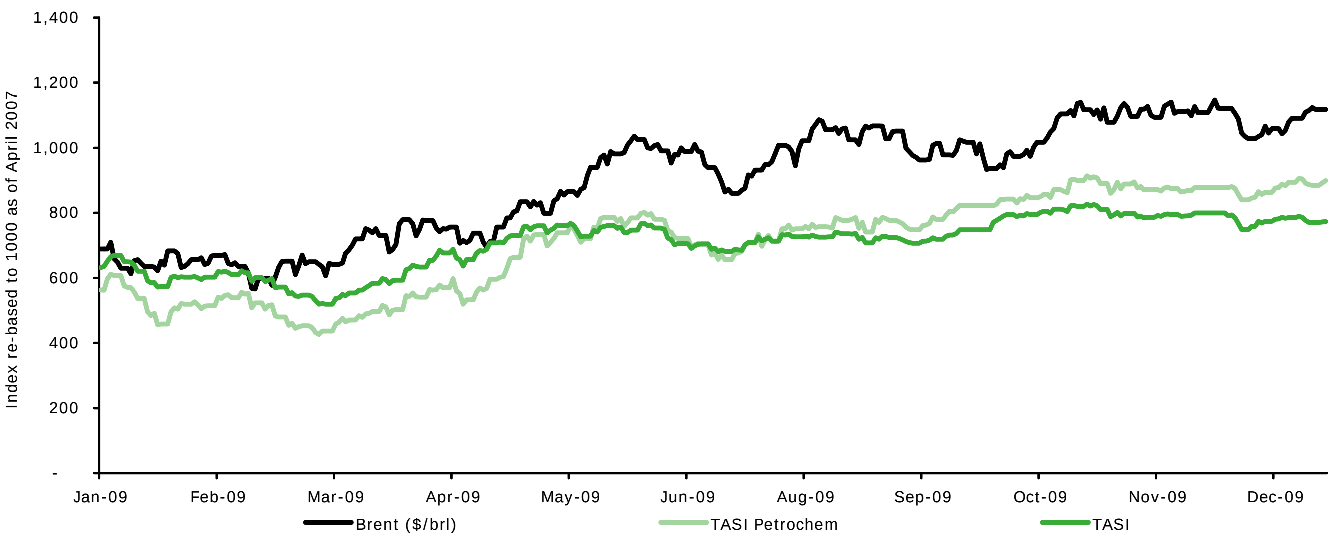
Chemanol commissioned its dimethyl formamide and pentaerythritol plants located at Jubail Industrial city. The facilities will have an annual production capacity of 60,000 mt of dimethyl formamide and 20,000 mt of pentaerythritol.

SIIG's profit in November 2009 grew 9.2% MoM to SR28.5mn, resulting in total profit for the 11 months of 2009 to SR214.5mn (up 118.9% YoY). **Petrochem**, a JV between SIIG and Chevron Phillips Chemical Co, is on schedule to start operations by 2011; construction is 65% complete. **APPC** announced to pay a cash dividend of SR0.5 per share for 2H09 in March 2010. Total dividend for 2009 stands at SR1 per share.

The US Bankruptcy Court authorized **Tronox**'s plan to replace its existing senior secured financing and enter into certain agreements as a part of its restructuring plan. The new option is sponsored by an ad-hoc group of Tronox's unsecured bondholders. Tronox also cancelled the auction scheduled on 21 December 2009 related to its proposed sale of assets to **Huntsman** and delivered a notice of termination of the sale agreement to Huntsman.

Equate Petrochemical Co started commercial operations of its Kuwait Paraxylene Production Co.'s Aromatics complex (worth USD2bn). It would produce 829,000mt of paraxylene and 393,000mt of benzene per year. **Qatar Petroleum** and **Exxon Mobil Chemical Qatar Ltd** signed an agreement to build a USD6bn worth petrochemical plant by 2015 having a 1.6mn mtpa steam cracker, two 0.65mn mtpa polyethylene units and a 0.7mn mtpa ethylene glycol unit in Ras Laffan Industrial City (Qatar).

Exhibit 1: Index tracker



Source: Bloomberg, NCBC Research

Spot vs. Futures

Natural gas increased 28.4% MoM, resulting in QTD growth of 99.7%. Growth in oil grades prices remained moderate, with WTI oil being the leader, rising 5.2% MoM, while Brent oil slipped 0.3%. Natural gas and oil futures outlook remained optimistic as future contract prices continue to trade at a premium to their spot prices (Exhibit 2). Oil and natural gas futures curves for this month remained broadly in line with last month's curves (Exhibit 3 & 4). However, the Gold futures curve shifted downward when compared with the last month's curve (Exhibit 5).

Exhibit 2: Commodity futures

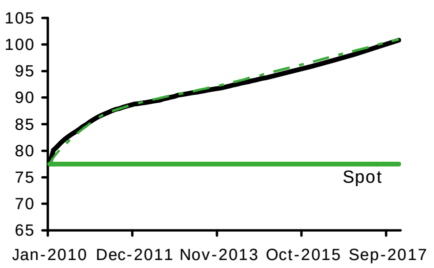
	Spot		1Q10E	2Q10E	3Q10E	4Q10E	2010E	2011E	2012E	2013E
		Forecast	73.0	76.0	80.0	82.0	75.0	85.0	91.5	88.0
WTI ($/brl)		Future	80.2	84.1	84.9	86.1	85.1	87.8	89.6	91.1
	79.4	Premium/Discount (%)	1.1	6.0	7.0	8.5	7.3	10.7	12.9	14.8
		Forecast	73.0	75.0	79.0	80.0	75.0	81.5	92.0	87.5
Brent ($/brl)		Future	82.1	82.9	84.2	85.6	84.1	87.9	89.8	91.4
	77.5	Premium/Discount (%)	5.9	6.9	8.7	10.5	8.6	13.4	15.8	17.9
		Forecast	5.3	5.5	6.0	6.5	6.0	6.5	7.0	7.0
Natural Gas Henry Hub ($/MMBtu)		Future	5.8	5.9	6.1	6.8	6.3	6.5	6.7	6.8
	5.8	Premium/Discount (%)	0.2	1.4	4.5	15.8	7.2	11.7	14.1	16.3
		Forecast	1,100	1,050	1,125	1,100	1,100	1,100	1,000	937
Gold ($/oz)		Future	1,097	1,122	1,123	1,124	1,123	1,138	1,176	1,220
	1,097.3	Premium/Discount (%)	(0.1)	2.2	2.3	2.4	2.3	3.7	7.1	11.2

Source: Bloomberg, NCBC Research

Futures charts

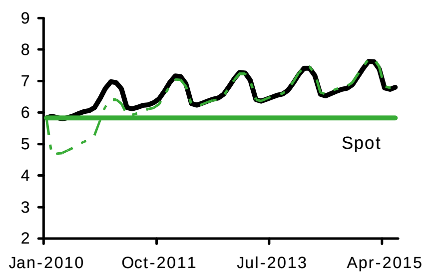
To enable a comparative analysis of the futures curves, last month's data has been included as a dotted line. The black line represents this month's data and the straight line represents this month's spot price.

Exhibit 3: Crude oil – Brent ($/brl)



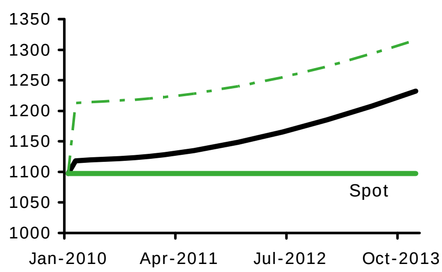
Source: Bloomberg, NCBC Research

Exhibit 4: Natural gas ($/MMBTU)



Source: Bloomberg, NCBC Research

Exhibit 5: Gold ($/troy ounce)

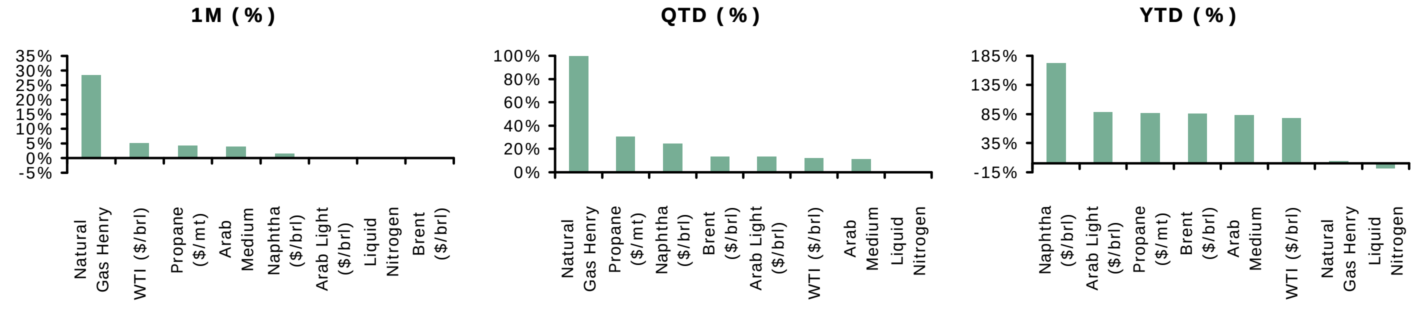


Source: Bloomberg, NCBC Research

Relative performance

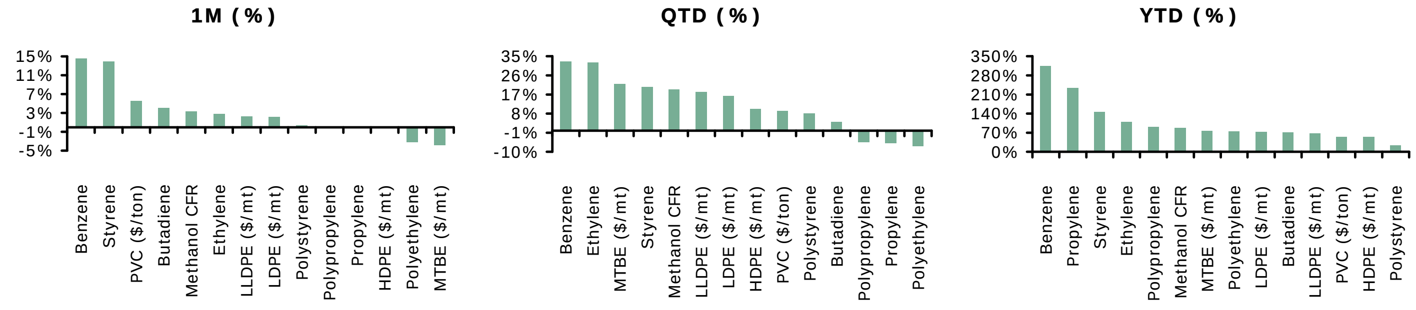
Natural gas prices gained 28.4% during December, but prices of oil grades moved up at a much slower rate with WTI oil leading the way (up 5.2% MoM). Petrochemical prices continued to rise but at a slower pace, except Benzene and Styrene which registered double-digit growth during the month. MTBE continued to be the worst performer, falling 3.8%, followed by polyethylene, down 3.2% during the month. Amongst fertilizers, DAP prices reported double-digit growth, followed by Urea, which increased 6.9% during the month. Base metal prices grew across the board, with Nickel emerging the leader, growing 15.8% MoM. In the precious metals space, prices of Palladium and Platinum rose, while those of Gold and Silver fell 5.5% and 8.8%, respectively, reversing last month's trend.

Exhibit 6: Oil and Gas



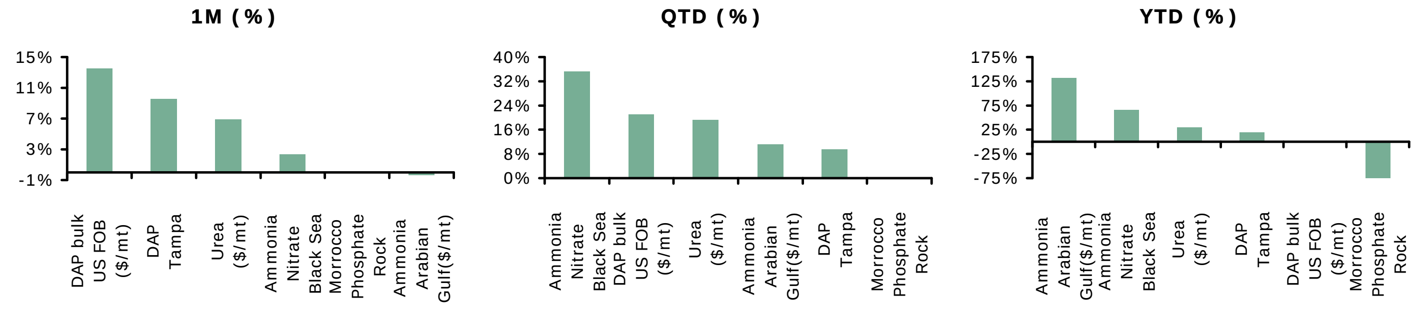
Source: Bloomberg, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Exhibit 7: Petrochemicals



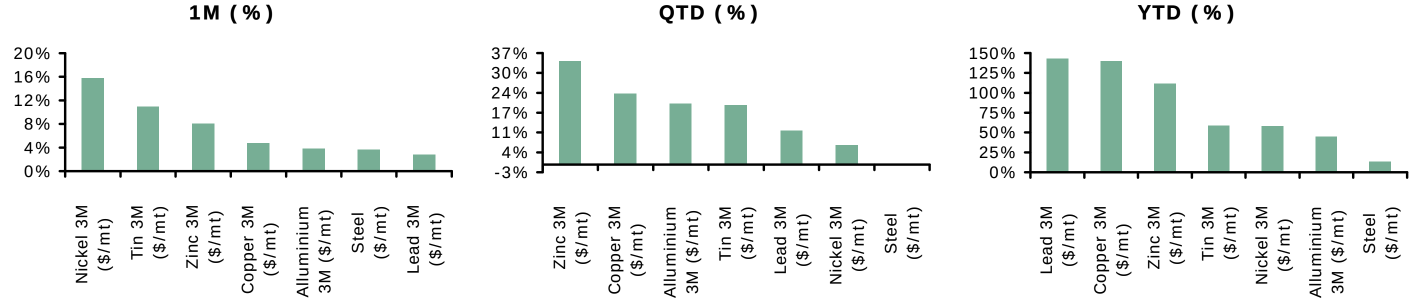
Source: Bloomberg, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Exhibit 8: Fertilizers



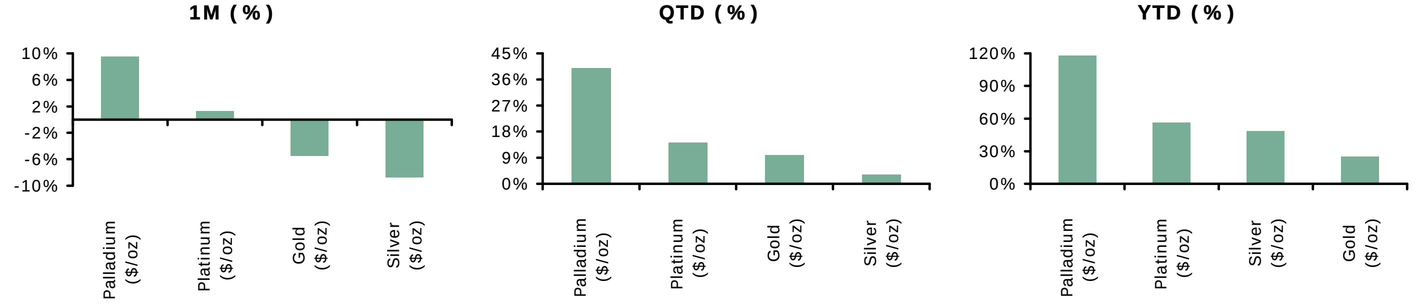
Source: Bloomberg, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Exhibit 9: Base metals



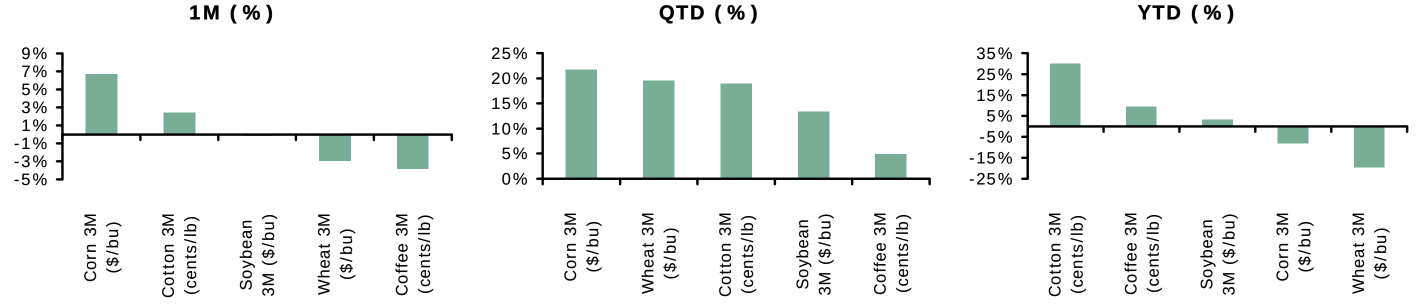
Source: Bloomberg, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Exhibit 10: Precious metals



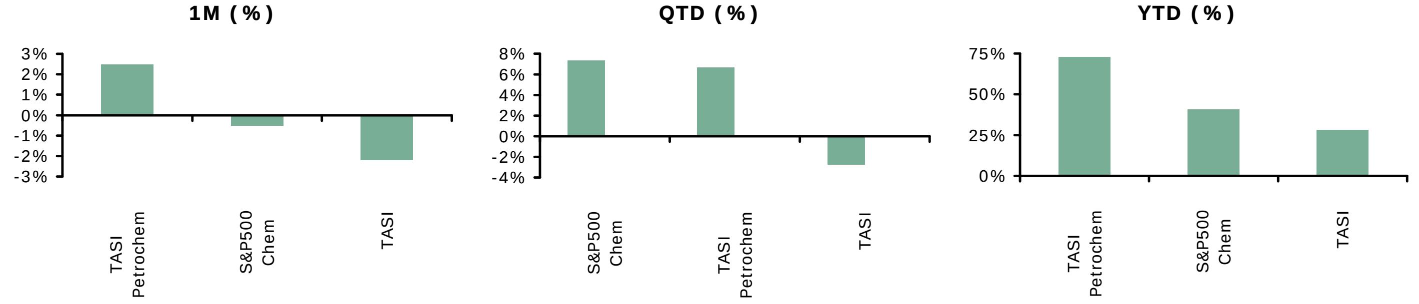
Source: Bloomberg, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Exhibit 11: Agricultural products



Source: Bloomberg, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Exhibit 12: Indices



Source: Bloomberg, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Performance and valuation

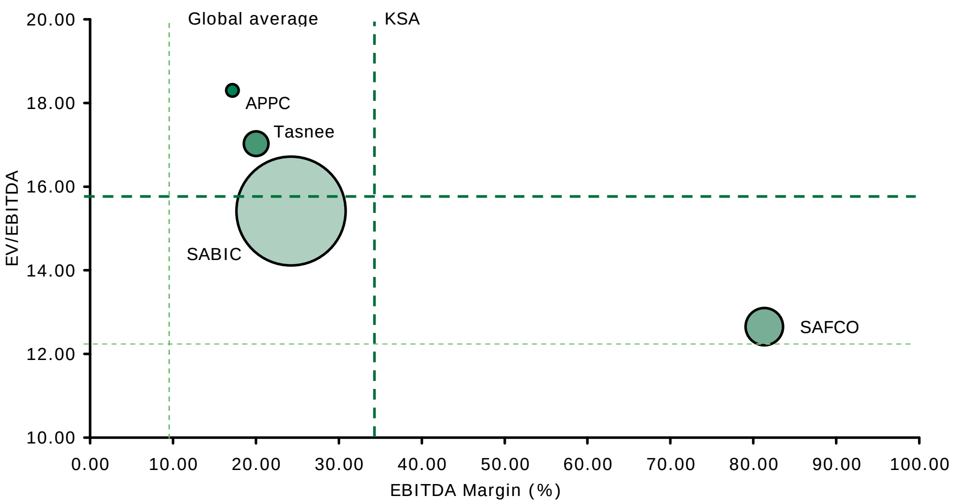
Saudi petrochemical sector displayed a mixed performance with Yansab and Tasnee gaining 11.1% each, while Nama Chemicals shed 3.9% during the month. We remain bullish on Tasnee with an 'overweight' rating and a price target of SR33.2 *(Please refer our initiating coverage note released on 22 December 2009 for more details).* SABIC, Sipchem and APPC announced proposed annual dividend per share payments of SR1.5, SR1 and SR1, respectively, for 2009. This month also witnessed updates on Saudi firms' on-going capex plans and announcements regarding new expansion plans. On the global front, Dow Chemical emerged as the leader with 4.5% MoM growth, while Eastman and BASF both dropped close to 1% during the month.

Exhibit 13: Industry - performance and valuation

Name	Country (currency)	LTP (LC)	Mkt cap (SRmn)	Price change (%)			TTM (%)		Valuation		Div yld
				Last	1M	YTD	ROE	ROA	P/E-TTM	PBV	08 (%)
Saudi Arabia											
SABIC	KSA	85.8	257,250	(0.3)	5.9	3.9	4.6	1.7	53.7	2.5	3.5
SAFCO	KSA	123.5	30,875	0.4	2.9	2.1	30.7	25.1	14.0	4.6	10.5
PetroRabigh	KSA	36.0	31,536	(0.3)	(2.7)	1.4	(22.0)	(4.6)	nm	3.9	-
Saudi Kayan	KSA	18.8	28,125	(0.5)	1.9	3.0	(0.2)	(0.1)	nm	1.8	-
YANSAB	KSA	35.0	19,688	1.4	11.1	4.8	(0.5)	(0.2)	nm	3.5	-
Tasnee	KSA	30.0	13,821	0.7	11.1	6.8	5.0	1.3	35.9	1.8	3.3
SIIG	KSA	23.0	10,328	0.2	0.2	5.5	(0.8)	(0.3)	nm	1.9	-
Sipchem	KSA	24.2	8,067	1.7	4.1	1.5	2.4	1.1	67.7	1.7	4.1
APPC	KSA	25.9	3,662	1.2	4.6	4.0	1.3	0.6	-	2.2	-
Sahara Petrochemical	KSA	22.0	6,436	0.5	6.5	4.0	0.7	0.3	-	2.3	-
Chemanol	KSA	16.2	1,948	2.5	1.6	4.9	1.9	1.0	75.2	1.4	-
Nama Chemicals	KSA	11.2	1,433	(0.4)	(3.9)	3.2	(7.4)	(4.7)	nm	0.9	-
Alujain	KSA	18.1	1,253	0.6	3.7	5.5	(10.8)	(1.9)	nm	2.4	-
Petrochem	KSA	16.1	7,704	1.3	(3.6)	3.2	-	-	-	1.6	-
Global											
BASF SE	Germany	44.1	219,141	5.9	(1.1)	1.4	3.6	1.3	62.7	2.4	4.4
Industries Qatar	Qatar	114.2	64,708	(0.6)	0.8	0.1	21.4	14.7	16.0	3.5	7.0
Dow Chemicals	US	30.5	130,554	10.9	4.5	10.3	(7.3)	(2.2)	-	2.1	3.3
Sumitomo	Japan	406.0	28,912	10.0	0.2	0.2	(10.7)	(3.1)	-	1.2	0.7
Eastman	US	61.0	16,599	2.1	(1.3)	1.2	9.6	3.0	24.0	2.7	3.3

Source: Bloomberg, NCBC Research

Exhibit 14: Bubble chart – EV/EBITDA vs. EBITDA Margin



Source: NCBC Research

Product portfolio and capacities

The following section outlines product portfolios of listed petrochemical companies in the Kingdom. The planned commissioning dates are based on available information or discussions with the management. We have displayed the respective changes in commodity prices to indicate the potential impact on producers or on plants yet to go on-stream.

Exhibit 15: Product portfolio and capacities

Company	Product	Capacity (mn mt)	Planned commissioning of capacity	Price 1M (%)	Price YTD (%)
SABIC (Saudi Basic Industries Corporation)					
	Ethylene	7.185	on-stream	2.7	109.3
	Methanol	4.129	on-stream	3.3	87.9
	Gases	4.100	on-stream		
	Polyethylene	4.095	on-stream	(3.2)	74.8
	Monoethylene Glycol (MEG)	3.505	on-stream		
	Methyl Tertiary Butyl Ether (MTBE)	3.308	on-stream	(3.8)	75.1
	Urea	3.105	on-stream	6.9	29.2
	Long Steel	2.702	on-stream		
	Ammonia	2.451	on-stream	(0.3)	131.2
	Flat Steel	1.154	on-stream		
	Styrene	1.074	on-stream	13.9	145.6
	Propylene	0.870	on-stream	0.0	234.5
	Ethylene Dichloride (EDC)	0.827	on-stream		
	Polypropylene	0.774	on-stream	0.1	91.2
	Caustic Soda (NaOH)	0.632	on-stream		
	Vinyl Chloride Monomer (VCM)	0.434	on-stream		
	Polyvinyl Chloride (PVC)	0.415	on-stream	5.5	54.8
	Benzene	0.374	on-stream	14.5	314.8
	Di Ethylene Glycol (DEG)	0.332	on-stream		
	Purified Terephthalic Acid (PTA)	0.298	on-stream		
	Phosphate, compound and liquid	0.256	on-stream		
	Paraxylene	0.252	on-stream		
	Polystyrene (PS)	0.174	on-stream	0.4	23.1
	2-Ethylene Hexanol (2EH)	0.166	on-stream		
	Butene	0.151	on-stream		
	Butadiene	0.121	on-stream	4.1	71.4
	Pyrolysis Gasoline	0.117	on-stream		
	Sulphuric Acid	0.097	on-stream		
	Polyethylene Terephthalate (PET) Resin	0.079	on-stream		
	CIE (crude industrial ethanol)	0.070	on-stream		
	Textile Chips	0.051	on-stream		
	Dioctyle Phthalate (DOP)	0.029	on-stream		
	Melamine	0.021	on-stream		
	Tri Ethylene Glycol (TEG)	0.018	on-stream		
	Urea Formaldehyde	0.013	on-stream		
	Polyester Fibres	0.008	on-stream		
	LDPE	0.400	on-stream	2.1	72.3
	Methyl methacrylate	0.250	2013		
	Polymethyl methacrylate	0.030	2013		
PetroRabigh (Rabigh Refining and Petrochemical Company)					
	Petroleum Products	17.300	on-stream		
	Ethylene	1.250	on-stream	2.7	109.3
	Propylene	0.900	on-stream	0.0	234.5
	LDPE	0.350	on-stream	2.1	72.3
	LLDPE	0.250	on-stream	2.2	67.1
	HDPE	0.300	on-stream	(3.2)	74.8
	Mono Ethylene Glycol	0.600	on-stream		
	Polypropylene	0.700	on-stream	0.1	91.2
	Polypropylene Oxide	0.200	on-stream		

Exhibit 15: Product portfolio and capacities

Company	Product	Capacity (mn mt)	Planned commissioning of capacity	Price 1M (%)	Price YTD (%)
SAFCO (Saudi Arabian Fertilizer Company)					
	Urea	2.270	on-stream	6.9	29.2
	Ammonia	2.098	on-stream	(0.3)	131.2
	Sulphuric Acid	0.130	on-stream		
Saudi Kayan (Saudi Kayan Petrochemical Company)					
	Ethylene	1.478	3Q-10	2.7	109.3
	Propylene	0.630	3Q-10	0.0	234.5
	LDPE	0.300	2011	2.1	72.3
	HDPE	0.400	3Q-10	0.0	54.2
	Ethylene Glycols	0.537	3Q-10		
	Polypropylene	0.350	3Q-10	0.1	91.2
	Polycarbonate	0.260	3Q-10		
	Acetone	0.133	3Q-10		
	Benzene	0.109	3Q-10	14.5	314.8
	Ethanolamines	0.100	2011		
	Bisphenol A	0.240	3Q-10		
	Dimethyl Formamide	0.050	3Q-10		
	Ethoxylates	0.040	3Q-10		
	Choline Chloride	0.020	3Q-10		
	Cumene	0.325	3Q-10		
	Ethylene oxide	0.550	3Q-10		
	Ethylamines	0.135	2011		
Yansab (Yanbu National Petrochemicals Company)					
	Ethylene	1.300	on-stream	2.7	109.3
	Propylene	0.400	on-stream	0.0	234.5
	Mono Ethylene Glycol (MEG)	0.700	on-stream		
	Di Ethylene Glycol (DEG)	0.065	on-stream		
	Tri Ethylene Glycol (TEG)	0.005	on-stream		
	Polypropylene	0.400	on-stream	0.1	91.2
	HDPE	0.400	on-stream	0.0	54.2
	LDPE	0.400	on-stream	2.1	72.3
	Benzene	0.170	on-stream	14.5	314.8
	Butene	0.115	on-stream		
	Benzene-Toulene and Xylene (BTX)	0.070	on-stream		
	Methyl Tertiary Butyl Ether (MTBE)	0.020	on-stream	(3.8)	75.1
Sipchem (Saudi International Petrochemical Company)					
	Methanol	1.000	on-stream	3.3	87.9
	Carbon Monoxide	0.345	on-stream		
	Butanediol	0.075	on-stream		
	Acetic Acid	0.460	on-stream		
	Vinyl Acetate Monomer (VAM)	0.300	on-stream		
	Ethylene Vinyl Acetate	0.200	2H-13		
	Polyvinyl Acetate	0.125	2H-13		
SIIG (Saudi Industrial Investment Group)					
	Styrene	0.750	on-stream	13.9	145.6
	Propylene	0.145	on-stream	0.0	234.5
	Ethylene	1.165	3Q-11	2.7	109.3
	HDPE/LLDPE	1.100	3Q-11	0.0	54.2
	Propylene	0.445	3Q-11	0.0	234.5
	Polypropylene	0.400	3Q-11	0.1	91.2
	Polystyrene	0.200	3Q-11	0.4	23.1
	1-Hexene	0.100	3Q-11		
Tasnee (Tasnee and Sahara Olefins Company)					
	Ethylene	1.000	on-stream	2.7	109.3
	Titanium Dioxide	0.790	on-stream		
	Polypropylene	0.450	on-stream	0.1	91.2
	HDPE	0.400	on-stream	0.0	54.2
	LDPE	0.400	on-stream	2.1	72.3

Exhibit 15: Product portfolio and capacities

Company	Product	Capacity (mn mt)	Planned commissioning of capacity	Price 1M (%)	Price YTD (%)
	Propylene	0.285	on-stream	0.0	234.5
Sahara Petrochemicals (Sahara Petrochemical Company)					
	Ethylene	1.000	on-stream	2.7	109.3
	Polyethylene	0.800	on-stream	(3.2)	74.8
	Propylene	0.460	on-stream	0.0	234.5
	Polypropylene	0.450	on-stream	0.1	91.2
	Caustic Soda	0.250	2Q-11		
	Ethylene Dichloride (EDC)	0.245	2Q-11		
APPC (Advanced Petrochemicals Company)					
	Propylene	0.455	on-stream	0.0	234.5
	Polypropylene	0.450	on-stream	0.1	91.2
Chemanol (Methanol Chemicals Company)					
	Methanol	0.231	on-stream	3.3	87.9
	Pentaerythritol	0.020	on-stream		
	Dimethylformaldehyde (DMF)	0.060	on-stream		
	Methylamines	0.050	2010		
	Carbon Monoxide	0.033	2010		
	Acetaldehyde	0.012	2010		
	Formaldehyde	0.215	2010		
	Paraformaldehyde	0.014	2010		
	Resins	0.014	2010		
	Hexamine	0.011	2010		
Alujain (Alujain Corporation)					
	Polypropylene	0.400	on-stream	0.1	91.2

Source: Company, NCBC Research; Please note that YTD calculation uses 01January 2009 prices

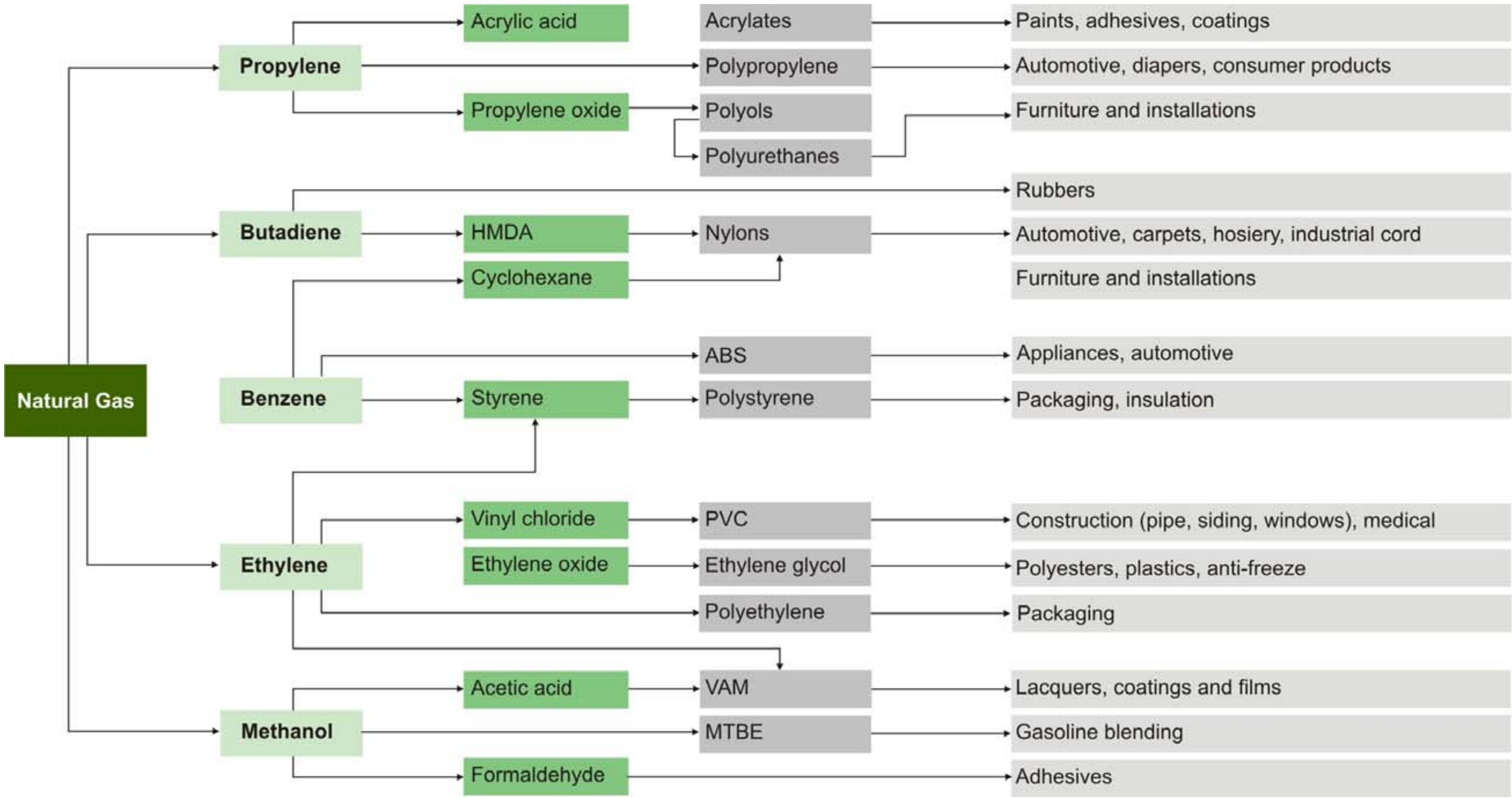
Appendix

Exhibit 16: Commodity wrap-up

Name	Latest	1 wk (%)	MTD (%)	QTD (%)	YTD (%)	TTM (%)	5yr high	5yr low
Oil and Gas								
Natural Gas Henry Hub ($/MMBtu)	5.8	(1.2)	28.4	99.7	3.6	8.0	15.4	1.9
WTI ($/brl)	79.4	0.6	5.2	12.1	77.9	71.3	145.3	31.4
Propane ($/mt)	749.0	1.1	4.2	30.6	86.3	82.7	995.0	320.5
Arab Medium ($brl)	74.8	0.6	3.8	11.3	83.2	76.2	137.6	30.3
Naphtha ($/brl)	79.6	1.4	1.5	24.8	172.0	130.9	135.5	25.3
Arab Light ($/brl)	79.0	3.4	0.1	13.2	88.6	71.7	143.0	31.5
Liquid Nitrogen	109.7	0.0	0.0	0.0	(8.6)	(8.6)	134.4	109.7
Brent ($/brl)	77.5	0.4	(0.3)	13.3	85.8	62.4	145.9	33.8
Petrochemicals								
Benzene ($/gallon)	350.5	0.0	14.5	32.5	314.8	324.8	457.5	82.5
Styrene ($/lb)	55.3	0.0	13.9	20.5	145.6	145.6	82.5	22.5
PVC ($/ton)	960.0	1.1	5.5	9.1	54.8	54.8	1,325.0	580.0
Butadiene ($/lb)	55.7	0.0	4.1	4.1	71.4	71.4	142.5	14.5
Methanol CFR China ($/ton)	310.0	0.0	3.3	19.2	87.9	87.9	580.0	165.0
Ethylene ($/mt)	1,130.0	0.4	2.7	32.2	109.3	103.6	1,670.0	330.0
LLDPE ($/mt)	1,370.0	2.6	2.2	18.1	67.1	65.1	1,860.0	710.0
LDPE ($/mt)	1,430.0	2.1	2.1	16.3	72.3	66.3	1,950.0	810.0
Polystyrene ($/mt)	1,307.5	0.0	0.4	8.1	23.1	20.2	2,137.5	837.5
Polypropylene ($/mt)	1,123.5	0.0	0.1	(5.4)	91.2	91.2	2,162.5	587.5
Propylene ($/lb)	48.5	0.0	0.0	(6.1)	234.5	177.1	82.5	14.5
HDPE ($/mt)	1,280.0	1.6	0.0	10.3	54.2	54.2	1,830.0	750.0
Polyethylene ($/mt)	1,070.5	0.0	(3.2)	(7.3)	74.8	67.9	1,887.5	612.5
MTBE ($/mt)	842.0	1.7	(3.8)	21.9	75.1	65.3	1,360.0	439.0
Fertilizers								
DAP bulk US FOB ($/mt)	369.0	0.0	13.5	21.0	(1.6)	(1.6)	1,225.0	220.0
DAP Tampa	350.5	3.9	9.5	9.5	18.8	n/a	1,220.0	265.0
Urea ($/mt)	310.0	0.0	6.9	19.2	29.2	29.2	815.0	142.0
Ammonia Nitrate Black Sea ($/mt)	215.0	0.0	2.4	35.2	65.4	65.4	815.0	142.0
Morrocco Phosphate Rock	214.3	0.0	0.0	0.0	(74.3)	(74.3)	1,023.8	100.0
Ammonia Arabian Gulf($/mt)	289.0	0.0	(0.3)	11.2	131.2	131.2	860.0	120.0
Base Metals								
Nickel 3M ($/mt)	18,525.0	(3.5)	15.8	6.3	58.3	40.3	51,600.0	9,050.0
Tin 3M ($/mt)	16,950.0	1.3	11.0	19.4	58.4	45.8	25,300.0	6,000.0
Zinc 3M ($/mt)	2,560.0	0.5	8.1	33.8	111.9	100.0	4,515.0	1,065.0
Copper 3M ($/mt)	7,375.0	1.4	4.8	23.2	140.2	128.3	8,730.0	2,845.0
Alluminium 3M ($/mt)	2,230.0	(1.9)	3.8	20.0	44.8	42.0	3,317.0	1,288.0
Steel ($/mt)	492.5	0.0	3.7	(0.3)	13.2	13.2	1,530.0	393.8
Lead 3M ($/mt)	2,432.0	(0.7)	2.8	11.1	143.4	123.1	3,890.0	823.0
Precious metals								
Palladium ($/oz)	407.6	5.3	9.5	39.8	117.9	111.7	580.0	164.5
Platinum ($/oz)	1,462.7	(0.1)	1.3	14.3	56.5	54.5	2,250.5	771.0
Gold ($/oz)	1,097.3	0.0	(5.5)	9.8	24.8	25.4	1,196.6	412.7
Silver ($/oz)	16.9	(1.2)	(8.8)	3.3	48.3	46.0	20.8	6.4
Agricultural products								
Corn 3M ($/bu)	414.5	(0.6)	6.7	21.7	(8.2)	(9.2)	700.5	304.0
Cotton 3M (cents/lb)	75.6	0.7	2.4	18.9	30.1	30.1	100.5	49.0
Soybean 3M ($/bu)	1,048.5	0.1	(0.2)	13.4	3.2	3.5	1,560.0	808.3
Wheat 3M ($/bu)	541.5	0.1	(3.0)	19.6	(19.5)	(19.7)	1,140.0	441.3
Coffee 3M (cents/lb)	136.0	(0.3	(3.8)	4.9	9.5	10.3	188.2	116.0
Indicies								
TASI Petrochem	5,482.2	1.4	2.5	6.7	72.9	59.8	10,675.0	2,600.0
S&P500 Chem	259.8	(1.5)	(0.5)	7.3	40.8	35.2	348.5	153.6
TASI	6,149.9	0.5	(2.2)	(2.7)	28.0	21.8	20,634.9	4,130.0

Source: NCBC Research; Please note that YTD calculation uses 01January 2009 prices

Exhibit 17: Petrochemical production flow



Source: NCBC Research

Glossary - Industry

AA (Acetic Acid)	An organic intermediate used in the preparation of metal acetates that are used in printing processes, Acetates including vinyl acetate and acetic anhydride)
AAC	Arabian Amines Company
ABS	Acrylonitrile-Butadiene-Styrene Terpolymer, has a glossy surface and is an engineering plastic with thermal, chemical and impact resistance
Acrylic Acid	Acrylic acid, along with the basic alkyl esters (methyl, ethyl and butyl esters). An important monomer for manufacturing of adhesives, detergents, varnishes, and plastics
Adhesives	A sticky substance used to bond two solids
Aromatics	An organic compound containing a hexagonal ring of carbon atoms (eg. Benzene)
Base Chemical	A chemical building block early in the supply chain from which downstream products are produced (eg. Ethylene and Benzene)
Benzene	A colorless liquid which occurs naturally in fossil raw materials such as crude oil and coal. Among the most important feedstock for the chemical industry and is not used directly by end consumers
Bn	Billion
Borouge	Abu Dhabi Polymers Company
Brl	Barrel
Bu	Bushel
CO2	Carbon Dioxide
Commodity Chemicals	Chemicals that are mostly sold in bulk and generally at lower margins relative to more downstream products. Market share, economies of scale, feedstock cost can lead to competitive advantage
Crackers	This is the name given to the production facilities that manufacture vast volumes of petrochemicals from oil or gas feedstock
Cracking	A process when long chains of organic molecules are split into small ones (i.e. naphtha into ethylene)
DAP	Di-Ammonia Phosphate
Derivative	A chemical compound derived (made) from other chemicals. Polystyrene is a derivative of styrene
De-Stocking	The sellers of the products are reducing their inventory levels
DETA	Di-Ethylenetriamine
DME	Di-methyl Ether
Downstream Activities	Processing of hydrocarbons like oil and natural gas into compounds that can be used in usable products
EDA	Ethylene Di-Amine
EDC	Ethylene Di-Chloride
EG (Ethylene Glycol)	A colorless, oily, odorless, toxic liquid. Commercially produced from ethylene oxide. Used widely as an anti-freeze in automobile cooling systems and in the manufacturing of man-made fibers and brake fluids
EO (Ethylene oxide)	An industrial chemical primarily used in sterilizing medical equipment. In its pure form it is a colorless gas
EO/EG	Ethylene Oxide/Ethylene Glycol
EoIs	Expressions of Interest
EPC	Engineering, Procurement and Construction
EPCM	Engineering, Procurement and Construction Management
Ethane	The second most important constituent of natural gas, a major raw material for the production of polyethylene plastic, ethylene glycol and ethyl alcohol
FEED	Front-end Engineering and Design
Fertil	Ruwais Fertilizer Company
GTO	Gas-to-Olefins
HDPE (High Density Polyethylene)	A thermoplastic resin made from ethylene. It is mostly used in the manufacturing of grocery bags and milk jugs
HoA	Heads of Agreement
HoI	House of Invention
Hydrocarbon	These are compounds that contain only hydrogen and carbon atoms. They are the basic materials in oil, gas and the chemical industries
In-organic chemicals	Inorganic chemicals are all substances encompassing the other 91 naturally occurring elements as well as those that contain carbon that doesn't covalently bonded to itself or hydrogen. Inorganic chemicals are used in agriculture and also as pigments, coatings, additives etc
ITB	invitation to bid
lb	Pound
LDPE (Low Density Polyethylene)	Similar to HDPE, it is a thermoplastic resin made from ethylene. It is mostly used in the manufacturing of food packaging and coatings.
LLDPE (Linear Low Density Polyethylene)	A thermoplastic resin made from ethylene. It is mostly used in the manufacturing of shrink wrap and packaging
LoI	Letter of Intent
LPG (Liquefied petroleum gas)	Obtained from the fractional distillation of crude oil, it is a primary feedstock for a cracker
LSTK	Lump-sum turnkey
LTP	Last traded price
Maaden	Saudi Arabian Mining Company
MDI	Methylene Di-Phenyl Di-Isocyanate
MEG (Mono Ethylene Glycol)	see Ethylene Glycol

Methanol	The simplest form of alcohol, used as a feedstock for many downstream products including formaldehyde, MTBE and acetic acid
mt	Metric tons
Mm BTU	One million British Thermal Units
Monomer	A base unit in a polymer. Ethylene is a monomer, which among other polymers, goes into polyethylene
MoU	Memorandum of Understanding
MTBE (Methyl tertiary butyl ether)	Is a gasoline additive, used as an oxygenate in fuels to reduce vehicle exhaust emissions
Naphtha	This is an important primary feedstock and is obtained by fractional distillation of crude oil
Natural Gas	Along with crude oil and naphtha, natural gas is the pillar stone of the chemical industry. It is a colorless and highly flammable gas. Primarily consisting of methane, ethane and small amounts of propane. Ethane and propane, also known as Natural Gas Liquids, are converted into ethylene and propylene by steam cracking
NCP	National Chevron Phillips Company
O&U	Off sites and Utilities
OCU	Olefins Conversion Unit
Olefin	A product with a straight chain of hydrocarbons that may have one or more double bonds conferring reactivity
OPIC	Oman Petrochemical Industries Company
Organic chemicals	Organic chemicals relate to compounds containing carbon and are mostly produced from fossil fuels. These chemicals produced from oil, gas and coal are by far the most significant to the chemical industry as they form the feedstock of upstream products like ethylene, propylene and benzene towards downstream compounds such as paints and plastics
Oxidation	A form of reaction when electrons are removed from a molecule, or where oxygen atoms are added to a molecule
Oz	Ounce
PDH	Propane Dehydrogenation
PE (Polyethylene)	A polymer of ethylene and is used in the production of packaging and insulation
Petrochemical	Any chemical derived from crude oil or natural gas
Petrokemya	Arabian Petrochemical Company
PMC	Project Management Consultancy
PMS	Project Management Services
Polymer	A hydrocarbon chain made by the repetition monomers. Polyethylene is a polymer made by ethylene as a repetitive unit, or monomer
Polystyrene	A solid plastic produced from polymerized styrene. It has many everyday uses including coffee cups and CD jewel boxes
PP	Polypropylene
Propylene	Also known as Propene, is a flammable colorless gas. It is used in manufacturing of resins, fibers and plastics
Propylene Oxide	Used as a monomer in polymer production and as a chemical intermediate in the manufacturing of polyurethane foam
PVC	Polyvinyl Chloride
PVC (Polyvinyl Chloride)	A polymer of vinyl chloride and used to make a variety of cost-effective products. PVC products include medical tubing, blood bags, footwear, electrical cables, stationary and toys
QAFCO	Qatar Fertilizer Company
QAPCO	Qatar Petrochemical Company
QP	Qatar Petroleum
Styrene	A clear, colorless liquid which is a derivative of natural gas by-products. Styrene can also be extracted naturally from the sap of styrax trees. It is generally used to create plastic materials for a wide range of strong, flexible and lightweight products. (eg. food containers, cars and computers)
t/d	tons a day
t/y	tons a year
TDI	Toluene Di-Isocyanate
TEPA	Tetraethylenepentamine
TETA	Tri-Ethylenetetramine
(VAM) Vinyl Acetate Monomer	A colorless and liquid organic chemical used in the production of plastics
(VCM) Vinyl Chloride Monomer	A colorless and flammable gas primarily used in the production of polyvinyl chloride; it finds use in the construction (windows, pipe and siding) and medical industries

Source: Company, NCBC Research

OTHER

Chg	Change	P/E	Price to earnings
Div yld	Dividend yield	QoQ	Quarter on quarter
EBITDA	Earnings before interest, tax, depreciation, and amortization	QTD	Quarter to date
EV	Enterprise value	RoA	Return on assets
M-Cap	Market capitalization	RoE	Return on equity
MoM	Month on month	SR	Saudi Riyal
na	Not Available	YoY	Year on year
nm	Not meaningful	YTD	Year to date
P/BV	Price to book value	1M	1 Month (Last 30 days)

Kindly send all mailing list requests to research@ncbc.com

Brokerage sales	Roger Yeoman	+966 2 690 7851 +966 565 076 302 (mobile)	r.yeoman@ncbc.com
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