NCB CAPITAL

EQUITY RESEARCH

Petrochemicals Tracker

Natural gas and oil regain

Oil and natural gas prices gained between 2-4% during the month reversing last month's performance. Petrochemical prices followed the upward direction in oil and were up during the month, apart from propylene which fell almost 4%. Ethylene, the best performer, gained up 16%. Fertilizer and metal prices also increased, sustaining last month's gains. Aluminum (up 12%) and Silver (up 14%) were the best performers amongst base metals and precious metals, respectively.

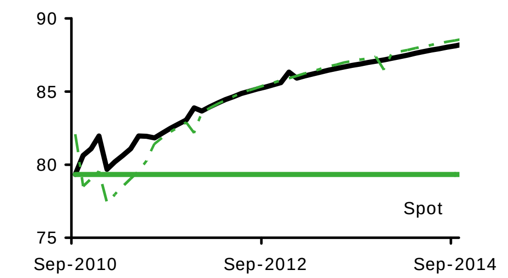
SABIC aims to undertake strategic joint ventures and acquisitions to enhance its presence in value added products. Improved operating performance and strong links with SABIC led Standard & Poor's (S&P) Ratings Services to raise **SABIC Innovative Plastics**' (**SIP**) long term corporate credit rating to BBB- from BB. **Yansab** halted operations at its olefins cracker for 15 days in September due to a technical problem. However, the company stated that delivery to customers were not impacted by this shutdown, given their comfortable inventory levels. **PetroRabigh** will restrict polyethylene export volumes in October as its HDPE and LLDPE plants are running at low operating rates after a shutdown. **SIIG's** profit for the month of August stood at SR37mn, resulting in total income of SR190mn during the January-August 2010 period (up 37% YoY). **Saudi Kayan**'s first shipment of ethylene glycol, from its trial runs, was directed to China. The company expects the complex to start commercially during late 2011.

Key benchmark overview

Name	Latest	1 M (%)	QTD (%)	YTD (%)
TASI	6,403.9	5.5	4.4	4.6
TASI Petrochem	5,650.7	8.3	5.0	4.7
Brent ($/brl)	79.3	3.7	5.5	1.9
Gold ($/oz)	1,309.1	5.8	5.5	19.8
Natural Gas ($/MMBtu)	3.8	1.6	(21.6)	(36.8)
Ethylene	1,130.0	15.9	25.6	0.4

Source: Bloomberg, NCBC Research

Crude oil futures curve – Brent ($/brl)



Source: Bloomberg, NCBC Research

Saudi equities - performance and valuation

Name	Rating	Target Price (SR)	Price chg (%) 1M	Price chg (%) YTD	Valuation P/E-10E	Valuation P/BV	Div yld 10(%)
Tasnee	Overweight	33.9	16.9	19.4	9.3	1.6	3.7
Sipchem	Overweight	27.4	7.4	3.1	12.8	1.3	4.5
YANSAB	Overweight	47.6	10.9	16.2	10.7	2.8	0.0
Sahara Petrochemical	Overweight	25.7	13.3	(1.2)	13.3	1.7	0.0
Saudi Kayan	Neutral	18.4	11.6	(2.5)	0.0	1.7	0.0
SAFCO	Neutral	122.0	3.9	20.0	11.4	4.7	6.9
Petrochem	Neutral	15.3	16.1	13.5	-	1.8	0.0
SABIC	NR	-	6.5	9.7	9.5	2.4	4.0
SIIG	NR	-	9.4	(14.5)	-	1.5	2.7
Chemanol	NR	-	15.0	(0.6)	11.9	1.3	0.0
Nama Chemicals	NR	-	10.9	(6.0)	-	0.8	0.0
Alujain	NR	-	11.2	(4.4)	-	2.3	0.0
APPC	NR	-	10.5	(19.9)	-	1.7	7.5
PetroRabigh	NR	-	8.7	(29.9)	0.0	2.8	0.0

Source: Bloomberg, NCBC Research

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SABIC is keen to expand its presence in value added products such as polyurethane, nylon and synthetic rubber through acquisitions and strategic partnerships. Moreover, SABIC opened a new office in Cape Town (South Africa) complementing its existing storage and distribution centre in Durban. This will enhance SABIC's presence in South Africa and neighboring countries.

Standard & Poor's (S&P) Ratings Services raised **SABIC Innovative Plastics**' (**SIP**) long term corporate credit rating to BBB- from BB. This was on the back of a stable outlook from SIP's improved operating performance and strong support from its parent, SABIC. S&P also upgraded SIP's bank debt and notes ratings to BBB- and BB+, respectively. SIP's external net financial debt reduced in 1H10 backed by subordinated loans and capital injections by SABIC.

Yansab, on 10 September 2010, temporarily halted operations at its olefins complex due to a technical problem. The olefins complex has annual capacity of 1.3mn mt of ethylene and 400,000 mt of propylene, which are used as feeds to produce 770,000 mt of ethylene glycol, 900,000 mt of polyethylene and 400,000 mt of polypropylene. The plant resumed operations on 25 September 2010. However, details regarding current operating rates of the cracker are not available. The company indicated that this shutdown did not impact delivery to customers given their comfortable inventory levels.

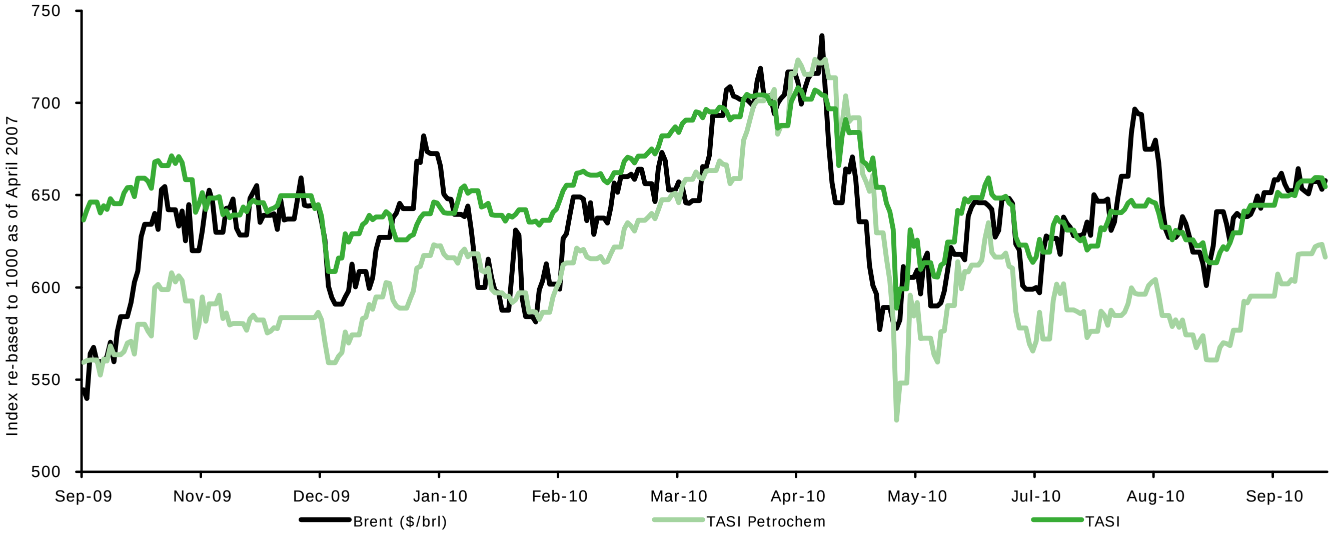
Petrorabigh will limit HDPE and LLDPE exports in October as these plants are running at low operating rates after a shutdown. Polyethylene export volumes in September were also low because HDPE and LLDPE plants were down for several weeks. The company can produce 300,000 mt of HDPE and 600,000 mt of LLDPE annually. Petrorabigh's polypropylene plant resumed operations on 27 August 2010 after a 3 week long shutdown.

SIIG reported a profit of SR37mn for the month of August 2010. This includes a loss of SR7mn arising from SIIG's share of realized losses in **Petrochem,** which is under construction. SIIG's total income for the first 8 months of 2010 stood at SR190mn compared to SR138mn for the same period a year ago.

Saudi Kayan's CFO stated that commercial operations at its complex will start during the later part of 2011. He also stated that Saudi Kayan shipped its first cargo of ethylene glycol to China from its trial operations. He mentioned that Saudi Kayan is in talks with a bank to secure SR4.5bn to fund the project cost escalation requirement.

In a press release dated 15 September, the Secretary General of Gulf Petrochemicals and Chemicals Association opposed anti-dumping duties imposed by the Indian Ministry of Commerce and Industry on polypropylene imports by Saudi producers. He said that it violates WTO's rules and regulations and, India's allegation is not based on the feedstock cost information provided by the Saudi producers.

Exhibit 1: Index tracker



Source: Bloomberg, NCBC Research

Spot vs. Futures

Reversing last month's trend, natural gas prices gained 1.6% in September resulting in a YTD drop of 37%. Oil also gained during the month and was up 2%. Propane was the best performer with a gain of 5%, however down 10%, on YTD basis. The outlook for natural gas and oil prices continues to remain positive as future contract prices are higher than spot prices (Exhibit 2). The futures contracts of oil and natural gas expiring in 1Q11 are 6% and 12% higher than the current spot prices of $79.3/brl and $3.8/mmBtu. The natural gas futures curve for this month moved lower then last months. However, the oil futures curve is broadly in line with last month's curve (Exhibit 3 & 4). The gold futures curve moved upward this month (Exhibit 5).

Exhibit 2: Commodity futures

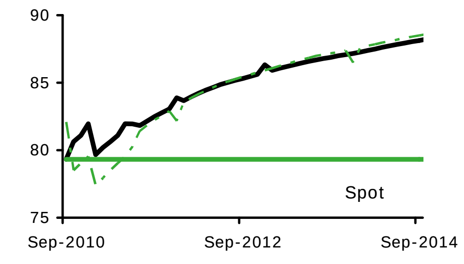
	Spot ($)		4Q10	1Q11	2Q11	3Q11	2010	2011E	2012E	2013E
WTI ($/brl)		Forecast	79.0	81.0	82.0	83.0	78.0	85.0	94.0	105.0
		Future	81.2	83.3	84.5	85.4	77.5	81.7	84.5	85.9
	76.2	Premium/Discount (%)	6.6	9.4	10.9	12.1	1.8	7.2	11.0	12.8
Brent ($/brl)		Forecast	80.0	81.0	83.0	85.0	78.2	85.0	87.0	85.5
		Future	81.9	83.8	85.5	86.1	79.7	82.1	85.1	86.8
	79.3	Premium/Discount	3.2	5.7	7.7	8.5	0.5	3.5	7.3	9.4
Natural Gas Henry Hub ($/MMBtu)		Forecast	5.0	5.2	4.8	5.1	4.8	5.3	5.5	6.0
		Future	4.1	4.3	4.3	4.5	4.1	4.6	5.1	5.3
	3.8	Premium/Discount (%)	8.4	12.1	13.9	18.2	7.6	20.0	34.7	39.7
Gold ($/oz)		Forecast	1,260.0	1,300.0	1,300.0	1,337.5	1,193.0	1,290.0	1,250.0	1,150.0
		Future	1,309.1	1,312.0	1,314.1	1,316.8	1,307.5	1,314.1	1,326.4	1,350.3
	1,309.1	Premium/Discount	0.0	0.2	0.4	0.6	(0.1)	0.4	1.3	3.2

Source: Bloomberg, NCBC Research

Futures charts

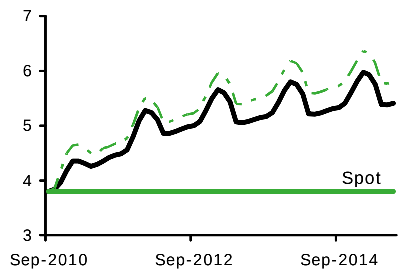
To enable a comparative analysis of the futures curves, last month's data has been included as a dotted line. The black line represents this month's data and the straight line represents this month's spot price.

Exhibit 3: Crude oil – Brent ($/brl)



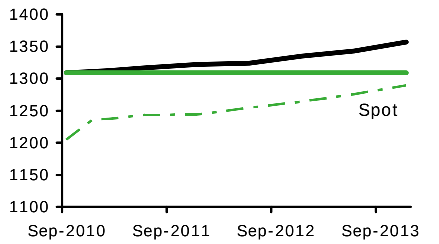
Source: Bloomberg, NCBC Research

Exhibit 4: Natural gas ($/MMBTU)



Source: Bloomberg, NCBC Research

Exhibit 5: Gold ($/troy ounce)

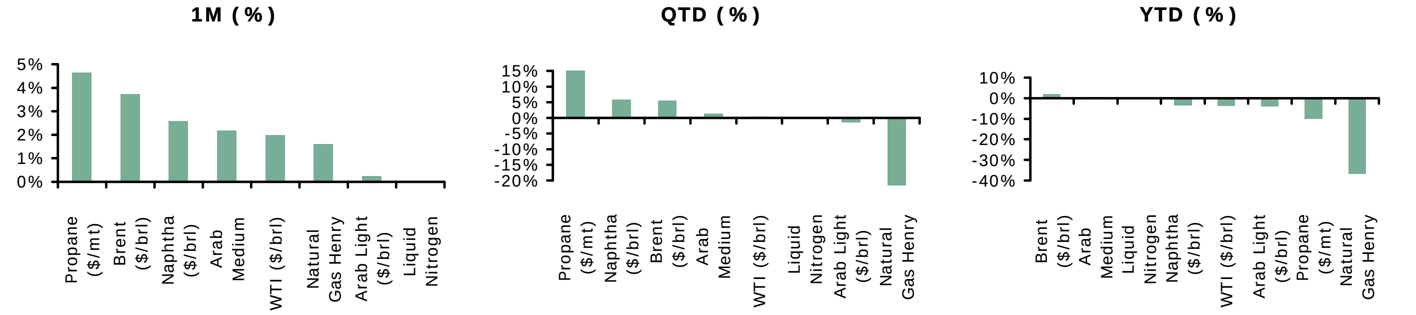


Source: Bloomberg, NCBC Research

Relative performance

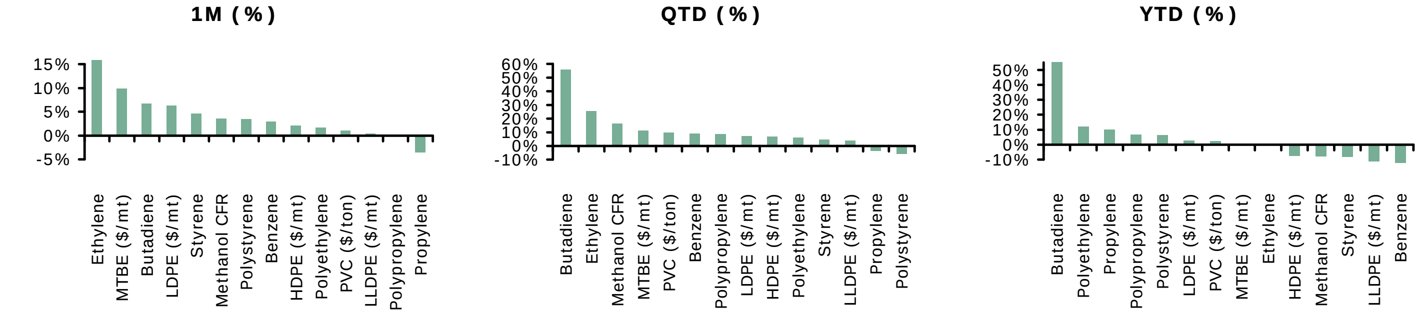
Performance of oil and natural gas improved in September, with oil and natural gas both up between 2-4%. Propane continued its gains for the third consecutive month and was the best performer during September, up 4.6%. Ethylene was the lead gainer amongst petrochemical products and was up 16% during the month, while propylene was the worst performer with a loss of 4%. All fertilizer prices increased, with Ammonia up 18%, leading the gains. All base metals and precious metals were up during the month. Aluminum (up 12%) and Silver (up 14%) were the top gainers in respective groups. Gold climbed 6%.

Exhibit 6: Oil and Gas



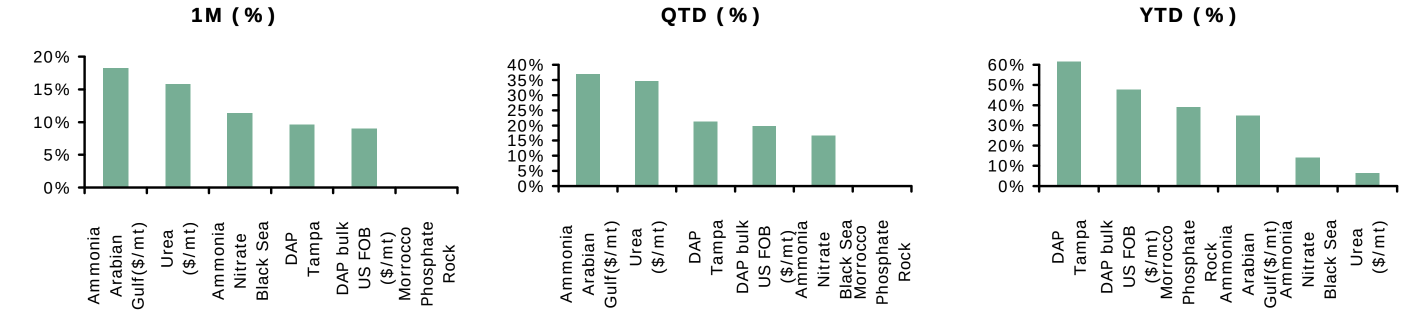
Source: Bloomberg, NCBC Research

Exhibit 7: Petrochemicals



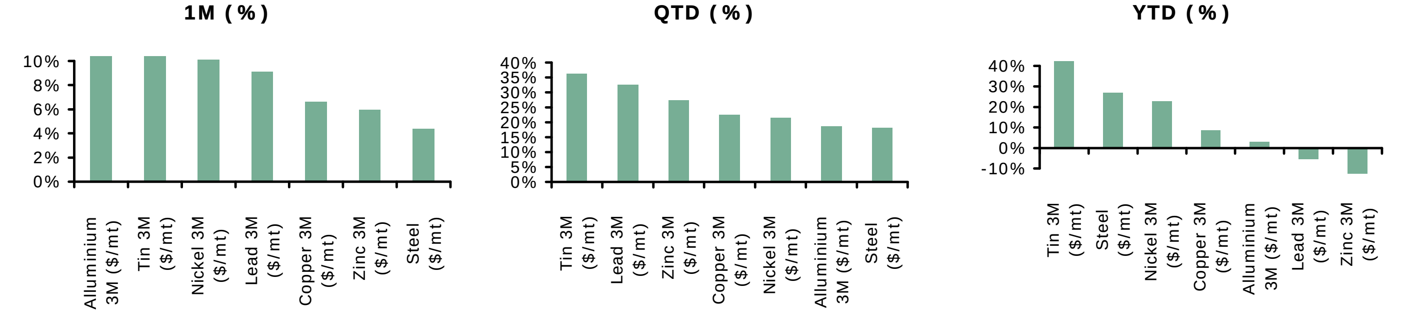
Source: Bloomberg, NCBC Research

Exhibit 8: Fertilizers



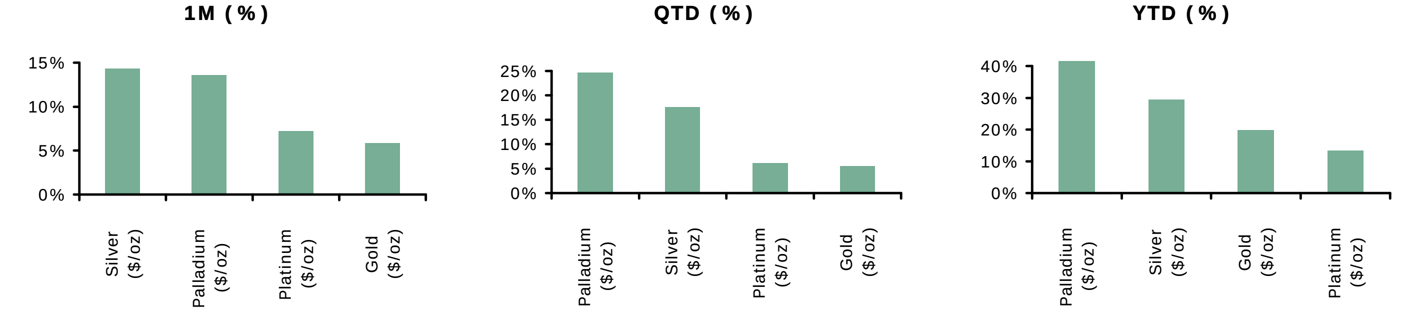
Source: Bloomberg, NCBC Research

Exhibit 9: Base metals



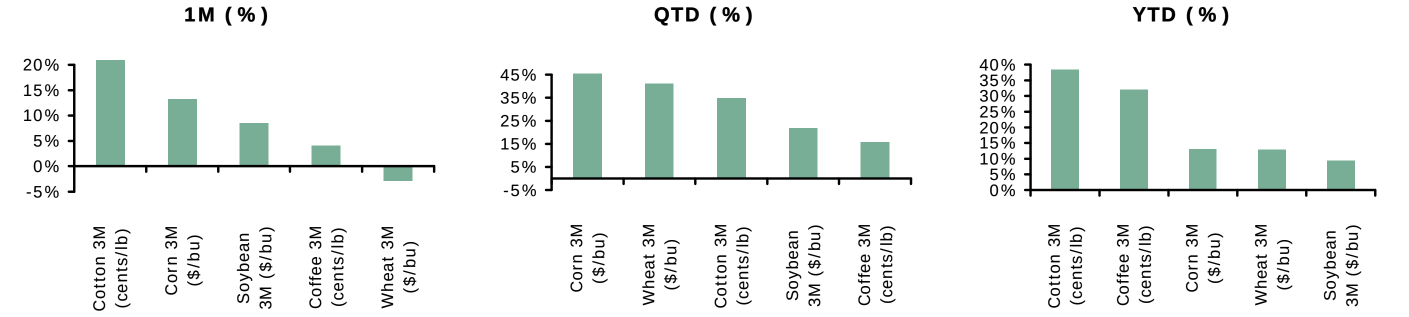
Source: Bloomberg, NCBC Research

Exhibit 10: Precious metals



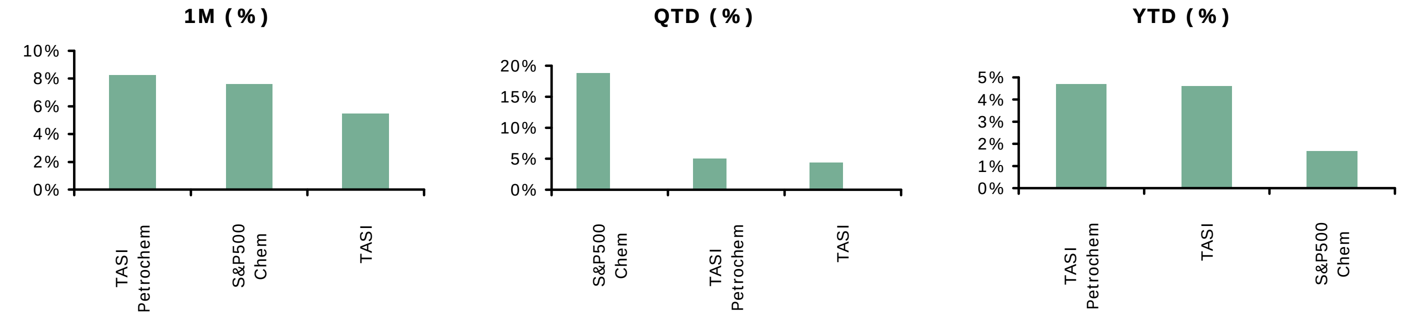
Source: Bloomberg, NCBC Research

Exhibit 11: Agricultural products



Source: Bloomberg, NCBC Research

Exhibit 12: Indices



Source: Bloomberg, NCBC Research

Performance and valuation

All Saudi petrochemical stocks climbed during the month. Tasnee was the lead gainer with a rise of 17%. SAFCO witnessed the lowest growth of 4% amongst its Saudi peers. Our ratings and price targets have been added to the table below. On the global front, petrochemical players ended in gains. Eastman was up 20%, while Dow Chemical gained 13%.

Exhibit 13: Industry - performance and valuation

Name	Rating	Target price (SR)	Last traded price (LC)	Mkt cap (SR mn)	Price chg (%) 1M	Price chg (%) YTD	TTM (%) ROE	TTM (%) ROA	Valuation P/E-TTM	Valuation P/E-10E	Valuation PBV	Div yld 10(%)
Saudi Arabia												
Tasnee	Overweight	33.9	30.5	15,456	16.9	19.4	7.0	1.7	13.1	9.3	1.6	3.7
Sipchem	Overweight	27.4	24.6	8,200	7.4	3.1	2.8	1.2	29.3	12.8	1.3	4.5
YANSAB	Overweight	47.6	38.8	21,825	10.9	16.2	(0.5)	(0.1)	29.2	10.7	2.8	0.0
Sahara	Overweight	25.7	20.9	6,114	13.3	(1.2)	3.3	1.5	18.4	13.3	1.7	0.0
Saudi Kayan	Neutral	18.4	17.8	26,625	11.6	(2.5)	(0.1)	(0.1)	-	0.0	1.7	0.0
SAFCO	Neutral	122.0	145.3	36,313	3.9	20.0	24.0	19.3	14.9	11.4	4.7	6.9
Petrochem	Neutral	15.3	17.7	8,472	16.1	13.5	(1.7)	(0.7)	-	-	1.8	0.0
SABIC	NR	-	90.5	271,500	6.5	9.7	8.6	3.2	14.5	9.5	2.4	4.0
SIIG	NR	-	18.6	8,370	9.4	(14.5)	5.3	2.0	19.5	-	1.5	2.7
Chemanol	NR	-	15.3	1,845	15.0	(0.6)	1.6	0.8	83.7	11.9	1.3	0.0
Nama Chemicals	NR	-	10.2	1,304	10.9	(6.0)	(1.5)	(1.0)	92.3	-	0.8	0.0
Alujain	NR	-	16.4	1,135	11.2	(4.4)	(5.3)	(0.8)	-	-	2.3	0.0
APPC	NR	-	20.0	2,820	10.5	(19.9)	7.7	3.7	22.2	-	1.7	7.5
PetroRabigh	NR	-	24.9	21,812	8.7	(29.9)	(16.8)	(2.9)	-	0.0	2.8	0.0
Global												
BASF SE	Germany		46.6	218,266	10.6	7.3	8.0	2.8	14.7	0.0	2.3	3.6
Dow Chemicals	US		108.7	121,186	12.7	(4.7)	2.2	0.6	19.6	0.0	2.0	2.2
Industries Qatar	Qatar		108.7	61,594	7.7	(4.7)	26.2	17.9	12.3	0.0	3.2	4.6
Sumitomo	Japan		383.0	28,443	7.6	(5.4)	2.6	0.7	42.9	0.0	1.1	2.3
Eastman	US		73.5	19,905	20.2	22.0	8.9	2.5	12.3	0.0	3.2	2.4

Source: Bloomberg, NCBC Research
LC = Local currency

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 14: 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	15.9	0.4
	Methanol	4.129	on-stream	3.6	(8.1)
	Gases	4.100	on-stream		
	Polyethylene	4.095	on-stream	1.7	11.9
	Monoethylene Glycol (MEG)	3.505	on-stream		
	Methyl Tertiary Butyl Ether (MTBE)	3.308	on-stream	9.9	0.7
	Urea	3.105	on-stream	15.8	6.5
	Long Steel	2.702	on-stream		
	Ammonia	2.451	on-stream	18.2	34.9
	Flat Steel	1.154	on-stream		
	Styrene	1.074	on-stream	4.6	(8.1)
	Propylene	0.870	on-stream	(3.6)	10.3
	Ethylene Dichloride (EDC)	0.827	on-stream		
	Polypropylene	0.774	on-stream	0.0	6.6
	Caustic Soda (NaOH)	0.632	on-stream		
	Vinyl Chloride Monomer (VCM)	0.434	on-stream		
	Polyvinyl Chloride (PVC)	0.415	on-stream	1.0	2.6
	Benzene	0.374	on-stream	3.0	(12.3)
	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	3.5	6.5
	2-Ethylene Hexanol (2EH)	0.166	on-stream		
	Butene	0.151	on-stream		
	Butadiene	0.121	on-stream	6.8	55.3
	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	6.3	2.9
	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	15.9	0.4
	Propylene	0.900	on-stream	(3.6)	10.3
	LDPE	0.350	on-stream	6.3	2.9
	LLDPE	0.250	on-stream	0.4	(11.2)
	HDPE	0.300	on-stream	2.2	(7.5)
	Mono Ethylene Glycol	0.600	on-stream		
	Polypropylene	0.700	on-stream	0.0	6.6
	Polypropylene Oxide	0.200	on-stream		

Exhibit 14: 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	15.8	6.5
	Ammonia	2.098	on-stream	18.2	34.9
	Sulphuric Acid	0.130	on-stream		
Saudi Kayan (Saudi Kayan Petrochemical Company)					
	Ethylene	1.478	3Q-11	15.9	0.4
	Propylene	0.630	3Q-11	(3.6)	10.3
	LDPE	0.300	3Q-11	6.3	2.9
	HDPE	0.400	3Q-11	1.7	11.9
	Ethylene Glycols	0.537	3Q-11		
	Polypropylene	0.350	3Q-11	0.0	6.6
	Polycarbonate	0.260	3Q-11		
	Acetone	0.133	3Q-11		
	Benzene	0.109	3Q-11	3.0	(12.3)
	Ethanolamines	0.100	3Q-11		
	Bisphenol A	0.240	3Q-11		
	Dimethyl Formamide	0.050	3Q-11		
	Ethoxylates	0.040	3Q-11		
	Choline Chloride	0.020	3Q-11		
	Cumene	0.325	3Q-11		
	Ethylene oxide	0.550	3Q-11		
	Ethylamines	0.135	3Q-11		
Yansab (Yanbu National Petrochemicals Company)					
	Ethylene	1.300	on-stream	15.9	0.4
	Propylene	0.400	on-stream	(3.6)	10.3
	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	0.0	6.6
	HDPE	0.400	on-stream	2.2	(7.5)
	LDPE	0.400	on-stream	6.3	2.9
	Benzene	0.170	on-stream	3.0	(12.3)
	Butene	0.115	on-stream		
	Benzene-Toulene and Xylene (BTX)	0.070	on-stream		
	Methyl Tertiary Butyl Ether (MTBE)	0.020	on-stream	9.9	0.7
Sipchem (Saudi International Petrochemical Company)					
	Methanol	1.000	on-stream	3.6	(8.1)
	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	4.6	(8.1)
	Propylene	0.145	on-stream	(3.6)	10.3
	Ethylene	1.165	3Q-11	15.9	0.4
	HDPE/LLDPE	1.100	3Q-11	2.2	(7.5)
	Propylene	0.445	3Q-11	(3.6)	10.3
	Polypropylene	0.400	3Q-11	0.0	6.6
	Polystyrene	0.200	3Q-11	3.5	6.5
	1-Hexene	0.100	3Q-11		
Tasnee (Tasnee and Sahara Olefins Company)					
	Ethylene	1.000	on-stream	17.5	(13.3)
	Titanium Dioxide	0.790	on-stream		
	Polypropylene	0.450	on-stream	0.0	6.6
	HDPE	0.400	on-stream	8.6	(9.5)
	LDPE	0.400	on-stream	7.1	(3.2)
	Propylene	0.285	on-stream	7.8	14.4

Exhibit 14: Product portfolio and capacities

Company	Product	Capacity (mn mt)	Planned commissioning of capacity	Price 1M (%)	Price YTD (%)
Sahara Petrochemicals (Sahara Petrochemical Company)					
	Ethylene	1.000	on-stream	15.9	0.4
	Polyethylene	0.800	on-stream		
	Propylene	0.460	on-stream	0.0	6.6
	Polypropylene	0.450	on-stream	2.2	(7.5)
	Caustic Soda	0.250	2Q-11	6.3	2.9
	Ethylene Dichloride (EDC)	0.245	2Q-11	(3.6)	10.3
APPC (Advanced Petrochemicals Company)					
	Propylene	0.455	on-stream	(3.6)	10.3
	Polypropylene	0.450	on-stream	0.0	6.6
Chemanol (Methanol Chemicals Company)					
	Methanol	0.231	on-stream	3.6	(8.1)
	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	0.0	6.6
Nama Chemical Company					
	Epoxy resins	0.060	4Q-11		

Source: Company, NCBC Research

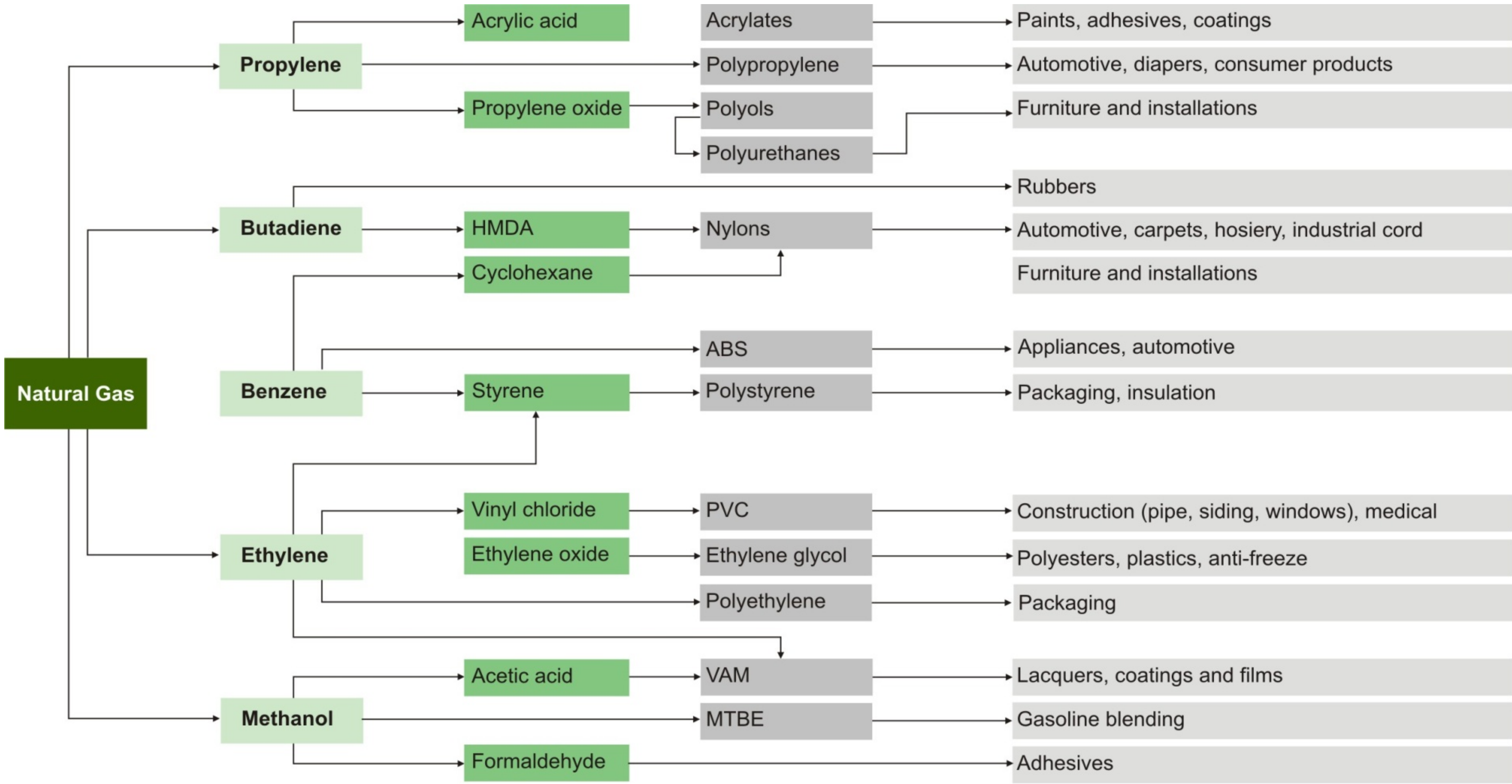
Appendix

Exhibit 15: Commodity wrap-up

Name	Latest	1 wk (%)	1M (%)	QTD (%)	YTD (%)	TTM (%)	5yr high	5yr low
Oil and Gas								
WTI ($/brl)	76.2	3.6	2.0	0.3	(3.9)	14.2	145.3	31.4
Brent ($/brl)	79.3	0.7	3.7	5.5	1.9	21.9	145.9	33.8
Arab Light ($/brl)	74.5	(2.3)	0.2	(1.4)	(4.0)	15.0	143.0	32.7
Arab Medium ($brl)	75.4	3.3	2.2	1.3	0.8	16.6	137.6	30.5
Natural Gas Henry Hub ($/MMBtu)	3.8	(5.0)	1.6	(21.6)	(36.8)	7.6	15.4	1.9
Naphtha ($/brl)	75.4	(0.5)	2.6	5.8	(3.5)	20.3	135.5	25.3
Propane ($/mt)	665.0	1.2	4.6	15.0	(10.2)	19.5	995.0	320.5
Liquid Nitrogen	109.0	0.0	0.0	0.0	(0.2)	(0.6)	134.4	109.0
Petrochemicals								
Methanol CFR China ($/ton)	285.0	0.0	3.6	16.3	(8.1)	9.6	580.0	165.0
MTBE ($/mt)	843.0	(3.8)	9.9	11.2	0.7	22.0	1,360.0	439.0
Benzene ($/gallon)	307.5	2.2	3.0	8.8	(12.3)	16.3	457.5	82.5
Ethylene ($/mt)	1,130.0	8.7	15.9	25.6	0.4	32.2	1,670.0	330.0
Polystyrene ($/mt)	1,392.5	0.0	3.5	(5.8)	6.5	15.1	2,137.5	837.5
Polyethylene ($/mt)	1,197.5	1.7	1.7	6.2	11.9	3.7	1,887.5	612.5
Polypropylene ($/mt)	1,197.5	0.0	0.0	8.4	6.6	0.8	2,162.5	587.5
Propylene ($/lb)	53.5	1.9	(3.6)	(3.6)	10.3	3.6	82.5	14.5
PVC ($/ton)	975.0	0.0	1.0	9.6	2.6	10.8	1,325.0	580.0
Butadiene ($/lb)	86.5	0.0	6.8	55.9	55.3	61.7	142.5	14.5
Styrene ($/lb)	50.8	0.5	4.6	4.6	(8.1)	10.7	82.5	22.5
LDPE ($/mt)	1,440.0	0.7	6.3	7.1	2.9	17.1	1,950.0	810.0
LLDPE ($/mt)	1,185.0	(0.4)	0.4	3.9	(11.2)	2.2	1,860.0	710.0
HDPE ($/mt)	1,165.0	(0.4)	2.2	6.9	(7.5)	0.4	1,830.0	750.0
Fertilizers								
Ammonia Arabian Gulf($/mt)	390.0	0.0	18.2	36.8	34.9	56.0	860.0	120.0
Ammonia Nitrate Black Sea ($/mt)	245.0	0.0	11.4	16.7	14.0	54.1	815.0	142.0
DAP Tampa	545.0	3.3	9.5	21.1	61.5	n/a	1,220.0	265.0
DAP bulk US FOB ($/mt)	545.0	0.0	9.0	19.8	47.7	71.4	1,225.0	250.0
Urea ($/mt)	330.0	0.0	15.8	34.7	6.5	29.9	815.0	142.0
Morrocco Phosphate Rock	297.6	0.0	0.0	0.0	38.9	38.9	1,023.8	100.0
Base Metals								
Steel ($/mt)	625.0	0.4	4.4	18.2	26.9	26.6	1,530.0	393.8
Alluminium 3M ($/mt)	2,309.0	6.2	12.2	18.6	3.0	24.7	3,317.0	1,288.0
Copper 3M ($/mt)	7,951.0	3.5	6.6	22.4	8.5	33.1	8,730.0	2,845.0
Lead 3M ($/mt)	2,281.0	4.9	9.1	32.6	(5.4)	2.2	3,890.0	848.0
Nickel 3M ($/mt)	23,175.0	3.7	10.1	21.5	22.6	35.2	51,600.0	9,050.0
Tin 3M ($/mt)	24,000.0	4.3	10.9	36.4	43.7	66.1	25,300.0	6,000.0
Zinc 3M ($/mt)	2,220.0	3.6	6.0	27.4	(13.1)	17.9	4,515.0	1,065.0
Precious metals								
Gold ($/oz)	1,309.1	1.7	5.8	5.5	19.8	31.9	1,310.7	431.6
Silver ($/oz)	21.7	3.7	14.3	17.6	29.4	34.6	21.9	6.7
Platinum ($/oz)	1,637.8	0.8	7.2	6.1	13.3	29.0	2,250.5	771.0
Palladium ($/oz)	564.0	5.4	13.5	24.6	43.1	96.5	580.0	164.5
Agricultural products								
Corn 3M ($/bu)	500.0	(1.0)	13.3	45.3	13.1	28.4	695.0	344.0
Soybean 3M ($/bu)	1,110.0	2.8	8.6	21.7	9.4	24.2	1,555.5	812.0
Wheat 3M ($/bu)	684.8	(4.6)	(2.8)	41.1	12.9	27.8	1,030.0	475.0
Cotton 3M (cents/lb)	105.2	4.4	21.8	34.7	38.3	54.9	105.2	53.5
Coffee 3M (cents/lb)	189.0	3.3	4.2	15.6	32.0	38.2	195.3	123.3
Indicies								
TASI Petrochem	5,650.7	(0.3)	8.3	5.0	4.7	10.0	10,675.0	2,600.0
TASI	6,403.9	(0.5)	5.5	4.4	4.6	2.0	20,634.9	4,130.0
S&P500 Chem	248.9	(0.4)	(2.8)	10.4	(5.5)	2.8	348.5	153.6

Source: NCBC Research; Please note that YTD calculation uses 31 January 2010 prices

Exhibit 16: 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)

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