NCB CAPITAL

EQUITY RESEARCH

Petrochemicals Tracker

Natural gas falls sharply

Oil could not sustain the uptrend witnessed in July, as it shed 5.4% during August. Natural gas was the worst hit of the oils/gasses, falling 21.9% during August, and is now down 37.8% on a YTD basis. However, continuing the uptrend in July, petrochemical products posted positive change in prices, apart from MTBE (down 1.5%). Ethylene was the best performer with a 17.5% gain. Fertilizers and base metal prices moved up during the month. Most of the precious metals prices increased, except for Platinum (down 2.9%).

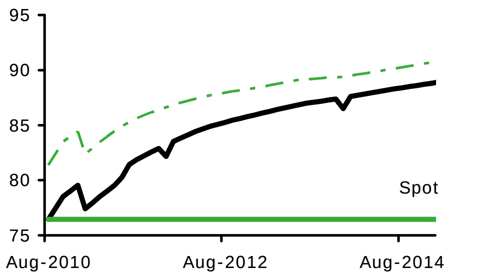
Germany's Lurgi GmbH will offer technical and engineering services to **SABIC** for the production of oleo-chemicals at its **Saudi Kayan** complex. This facility, having annual production capacity of 83,000mt of various distilled natural alcohols, was announced to commence operations by the end of 2013. Operations at a **Petrorabigh** gasoline plant producing 60,000 barrels per day were shut down due to technical difficulties. **SIIG** reported a loss of SR15.3mn in July 2010. Profit for the period January-July 2010 totaled SR153.2mn, almost double the same period last year. In terms of global news, **Tronox** is keen on emerging from bankruptcy by end 2010 and **LyondellBasell** decided to close all of its operations in Iran.

Key benchmark overview

Name	Latest	1 M (%)	QTD (%)	YTD (%)
TASI	6,071.7	(3.1)	(1.0)	(0.8)
TASI Petrochem	5,219.4	(2.6)	(3.0)	(3.3)
Brent ($/brl)	76.5	(3.9)	1.7	(1.8)
Gold ($/oz)	1,237.0	4.7	(0.3)	13.2
Natural Gas ($/MMBtu)	3.7	(21.9)	(22.9)	(37.8)
Ethylene	975.0	17.5	8.3	(13.3)

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 Yield (%)
Tasnee	Overweight	35.3	(9.2)	1.0	-	1.6	2.6
Sipchem	Overweight	27.7	5.5	(4.2)	0.0	1.6	4.4
YANSAB	Overweight	47.6	(8.8)	2.4	-	3.0	0.0
Sahara Petrochemical	Overweight	26.1	(8.9)	(12.9)	0.0	1.5	0.0
Saudi Kayan	Neutral	18.4	0.5	(11.6)	9.6	1.7	0.0
SAFCO	Neutral	122.0	2.2	14.7	10.5	6.4	2.9
Petrochem	Neutral	15.3	3.4	(1.6)	-	1.6	0.0
SABIC	NR	-	(2.0)	2.7	9.5	2.2	4.0
SIIG	NR	-	(3.7)	(22.3)	-	1.4	3.0
Chemanol	NR	-	(4.7)	(14.3)	11.9	1.1	0.0
Nama Chemicals	NR	-	(5.2)	(16.2)	-	0.7	0.0
Alujain	NR	-	11.5	(14.9)	-	2.0	0.0
APPC	NR	-	(6.7)	(27.1)	-	1.5	8.3
PetroRabigh	NR	-	(12.0)	(35.8)	0.0	2.6	0.0

Source: Bloomberg, NCBC Research

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Please refer to the last page for important disclaimer

SABIC signed a technical and engineering license agreement with German-based Lurgi GmbH for the production of oleo-chemicals at its Saudi Kayan complex. This new product line will use feedstock based on renewable oils such as palm and coconut oil. The plant will have annual production capacity of 83,000mt of various distilled natural alcohols and will start operations by the end of 2013. We await further details before we incorporate this plant in our forecasts for **Saudi Kayan**. SABIC prepaid over USD1bn of debt of its affiliate Saudi Innovative Plastics which SABIC acquired from GE for USD11.6bn in 2007.

SIIG (which reports monthly earnings) reported a loss of SR15.3mn for the month of July 2010. Expenses related to maintenance work in the month of June 2010, a loss of SR6.7mn arising from SIIG's share of realized losses in **Petrochem** and lower margins due to weak petrochemical prices impacted SIIG's bottom line for the month of July 2010. The company's total profit for the first 7 months of 2010 amounted to SR153mn versus the SR85.7mn for the same period last year.

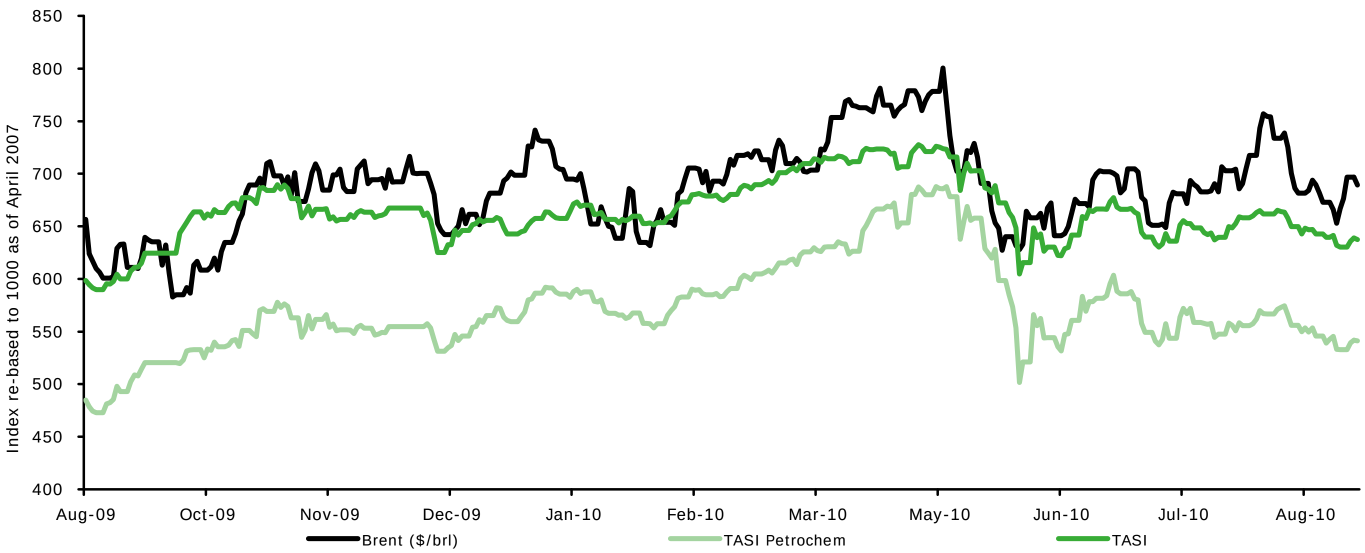
PetroRabigh halted operations at its High Olefin Fluidized Catalytic Cracking Unit (HOFCC) during first week of August 2010 due to some technical difficulties. Later during the month the company announced that the cracking unit had restarted operations. The shutdown was said to have impacted operations at its gasoline and polypropylene plants. PetroRabigh has capacity to produce up to 60,000 barrels per day of high octane gasoline and 700,000 mtpa of polypropylene. PetroRabigh also undertook maintenance work at its Oxygen and Nitrogen production unit during 21-22 August 2010. This halted operations at its Polymers and mono ethylene glycol (MEG) plants. Nevertheless, the company stated that it has sufficient inventories of these petrochemical products to overcome the shortfall due to the maintenance work.

In terms of global news, Tronox plans to emerge from bankruptcy by the end of 2010 under an amended reorganization plan that has won support from its major creditors. According to this plan, Tronox will reorganize its existing businesses and will finance its working capital requirements and fund distributions through a combination of debt and new money equity investments. Moreover, Tronox will form environmental response trusts and a litigation trust to settle the environmental related liabilities. Tronox filed for Chapter 11 bankruptcy protection in January 2009.

LyondellBasell has decided to close all of its operations in Iran in a move to protect itself from any possible penalties that the US can impose on firms violating sanctions against Iran. This decision indicates that it will stop issuing technology and services licenses to Iranian petrochemical companies.

The Indian government is soon to reach a final verdict on the proposed anti dumping duties on Saudi polypropylene imports. In a Gulf Petrochemicals and Chemicals Association press release in August, the Secretary General strongly opposed the decision by India considering the massive investments and employment of Indian nationals in the region. We await further details to study the impact of such duties on the Saudi producers.

Exhibit 1: Index tracker



Source: Bloomberg, NCBC Research

Spot vs. Futures

Natural gas prices fell 21.9% during August, resulting in a YTD drop of 37.8%. Also, oil prices dropped by 5.4% during August, reversing last month's jump of 8.8%. The outlook for natural gas and oil 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 4Q10 are 3.8% and 17.9% higher then the current spot prices of $74.7/brl and $3.7/mmBtu. The oil futures curve for this month remained above last month's curve. However, the natural gas futures curve is broadly in line with last month's curve (Exhibit 3 & 4). The gold futures curve shifted downward as compared with the month before (Exhibit 5).

Exhibit 2: Commodity futures

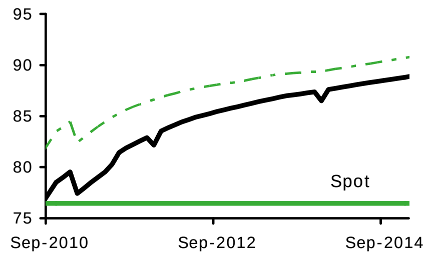
	Spot ($)		3Q10	4Q10	1Q11	2Q11	2010	2011E	2012E	2013E
		Forecast	79.0	80.0	82.0	85.0	80.0	85.0	95.5	97.6
WTI ($/brl)		Future	76.3	77.5	80.1	81.1	76.9	81.8	84.3	85.8
	74.7	Premium/Discount (%)	2.1	3.8	7.2	8.5	2.9	9.5	12.9	14.8
		Forecast	78.0	80.0	81.5	85.0	78.5	85.0	92.0	87.5
Brent ($/brl)		Future	76.5	77.9	79.4	81.6	77.5	82.3	85.2	87.0
	76.5	Premium/Discount	0.0	1.8	3.8	6.7	1.3	7.6	11.4	13.8
Natural Gas Henry Hub ($/MMBtu)		Forecast	4.7	5.3	5.6	5.3	5.0	5.6	6.3	7.0
		Future	4.2	4.4	4.5	4.6	4.3	4.8	5.4	5.7
	3.7	Premium/Discount (%)	12.8	17.9	20.9	21.7	13.9	27.5	43.0	51.6
Gold ($/oz)		Forecast	1,205.0	1,250.0	1,300.0	1,250.0	1,186.5	1,247.5	1,071.3	1,050.0
		Future	1,215.2	1,240.7	1,241.2	1,243.0	1,240.7	1,243.6	1,258.5	1,282.8

Source: Bloomberg, NCBC Research

Futures charts

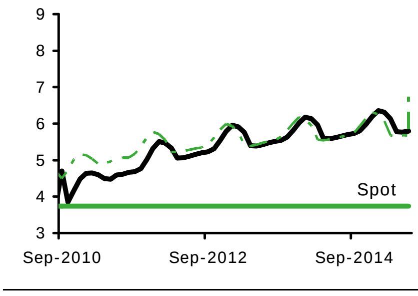
To enable a comparative analysis of the futures curves, last month's data has been included as a dotted line. The black line represents this month's data and the straight line represents this month's spot price.

Exhibit 3: Crude oil – Brent ($/brl)



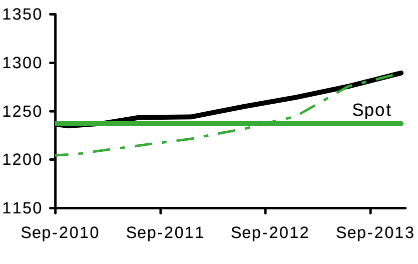
Source: Bloomberg, NCBC Research

Exhibit 4: Natural gas ($/MMBTU)



Source: Bloomberg, NCBC Research

Exhibit 5: Gold ($/troy ounce)

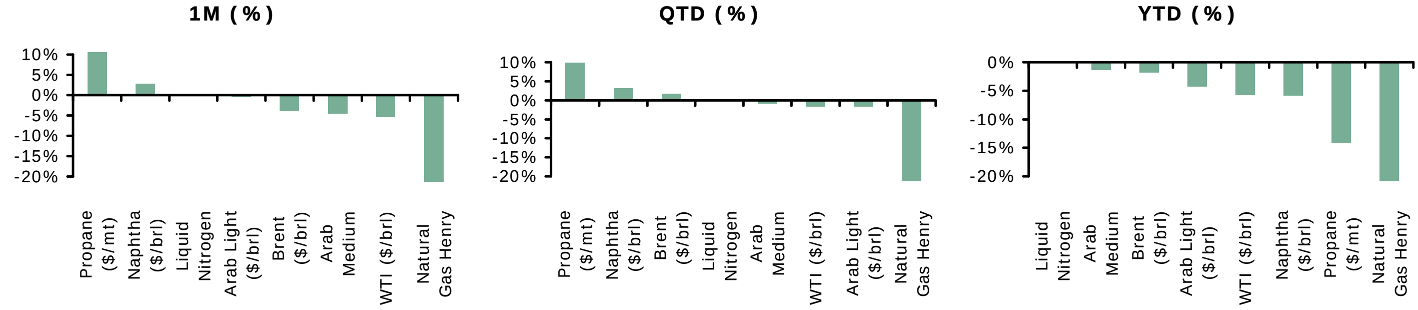


Source: Bloomberg, NCBC Research

Relative performance

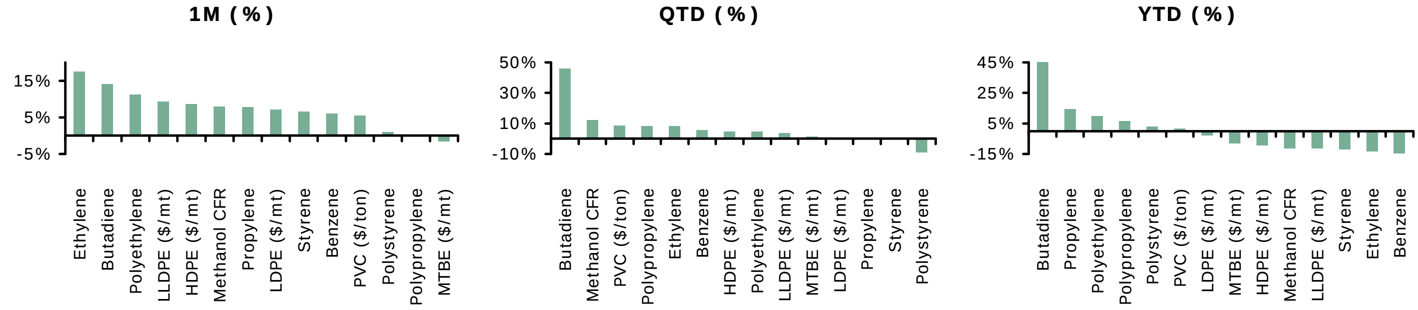
August witnessed poor performance from oil and natural gas prices, with oil down 5.4% and natural gas down 21.9%. Propane continued its uptrend seen in July and was the best performer during August with a gain of 10.5%. Amongst petrochemical products, ethylene reported the highest gain of 17.5% followed by butadiene with a gain of 14.1%. MTBE was the worst performer with a loss of 1.5%. Fertilizer prices moved up during the month of August. Amongst the base metals, tin was the top gainer rising 10.9% followed by steel gaining 9.6%. All precious metals gained during the month, except platinum which fell by 2.9%. The price of silver climbed 5.6% followed by a 4.7% climb in gold.

Exhibit 6: Oil and Gas



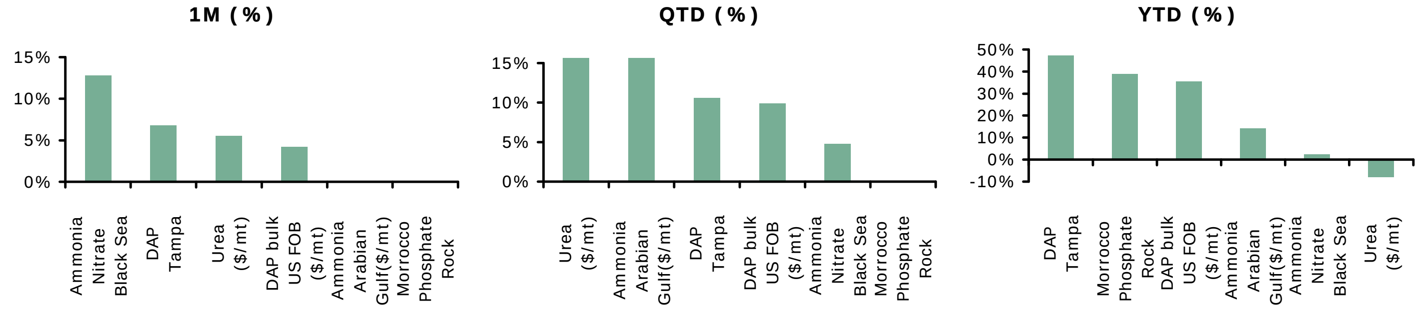
Source: Bloomberg, NCBC Research

Exhibit 7: Petrochemicals



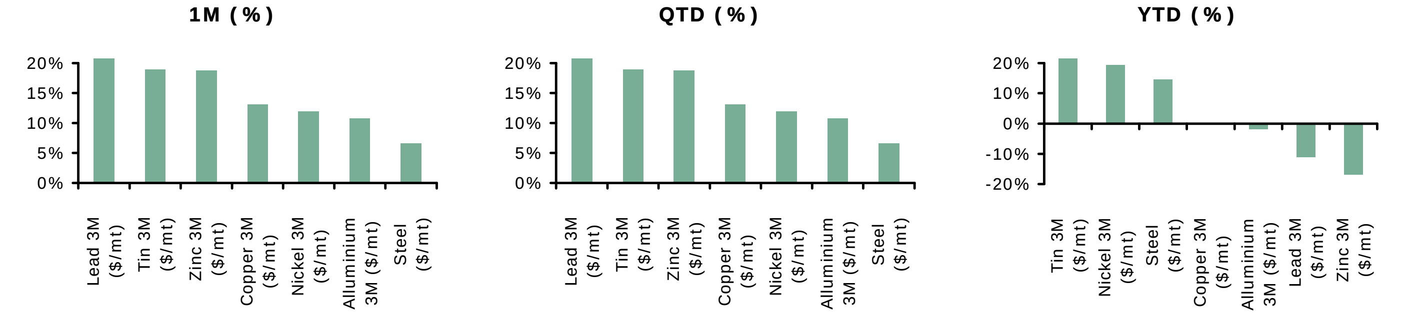
Source: Bloomberg, NCBC Research

Exhibit 8: Fertilizers



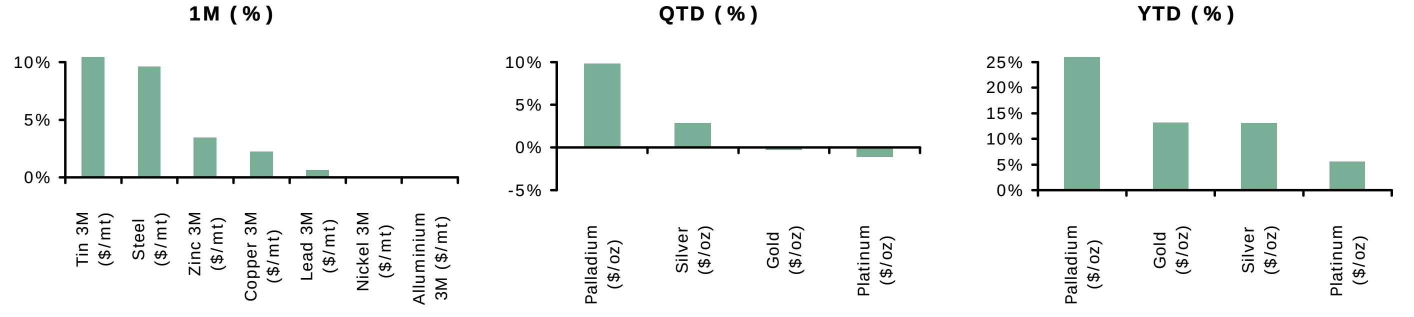
Source: Bloomberg, NCBC Research

Exhibit 9: Base metals



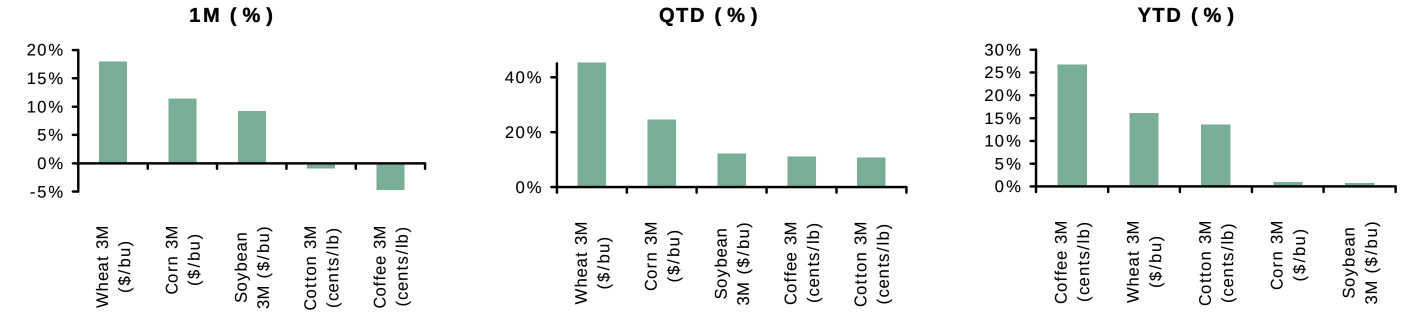
Source: Bloomberg, NCBC Research

Exhibit 10: Precious metals



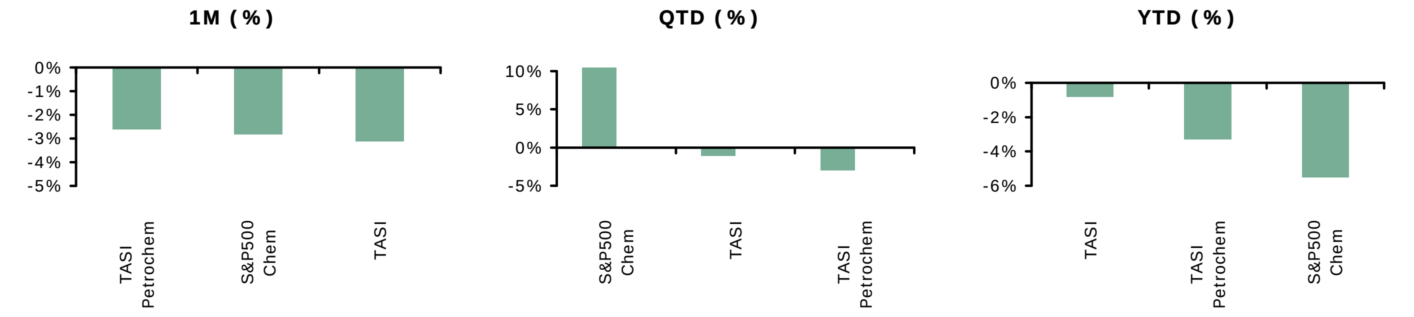
Source: Bloomberg, NCBC Research

Exhibit 11: Agricultural products



Source: Bloomberg, NCBC Research

Exhibit 12: Indices



Source: Bloomberg, NCBC Research

Performance and valuation

During August, prices of most of the Saudi petrochemical stocks were down. Nine of the 14 stocks prices dropped during August, PetroRabigh was the worst performer with a drop of 12.0% during the month. Alujain gained 11.5% followed by Sipchem with a gain of 5.5%. Our ratings and price targets have been added to the below table. On the global front, Industries Qatar was up 2.2%, while Dow Chemical fell 11.0%.

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	35.3	25.8	13,074	(9.2)	1.0	7.0	1.7	11.1	-	1.6	2.6
Sipchem	Overweight	27.7	22.9	7,617	5.5	(4.2)	2.8	1.2	27.2	0.0	1.6	4.4
YANSAB	Overweight	47.6	34.2	19,238	(8.8)	2.4	(0.5)	(0.1)	25.7	-	3.0	0.0
Sahara	Overweight	26.1	15.9	23,775	(8.9)	(12.9)	(0.1)	(0.1)	-	0.0	1.5	0.0
Saudi Kayan	Neutral	18.4	18.7	5,470	0.5	(11.6)	3.3	1.5	16.5	9.6	1.7	0.0
SAFCO	Neutral	122.0	138.8	34,688	2.2	14.7	24.0	19.3	14.3	10.5	6.4	2.9
Petrochem	Neutral	15.3	15.3	7,344	3.4	(1.6)	(1.7)	(0.7)	-	-	1.6	0.0
SABIC	NR	-	84.8	254,250	(2.0)	2.7	8.6	3.2	13.6	9.5	2.2	4.0
SIIG	NR	-	16.9	7,605	(3.7)	(22.3)	5.3	2.0	17.7	-	1.4	3.0
Chemanol	NR	-	13.2	1,592	(4.7)	(14.3)	1.6	0.8	72.2	11.9	1.1	0.0
Nama Chemicals	NR	-	9.1	1,163	(5.2)	(16.2)	(1.5)	(1.0)	82.3	-	0.7	0.0
Alujain	NR	-	14.6	1,010	11.5	(14.9)	(5.3)	(0.8)	-	-	2.0	0.0
APPC	NR	-	18.2	2,566	(6.7)	(27.1)	7.7	3.7	20.2	-	1.5	8.3
PetroRabigh	NR	-	22.8	19,973	(12.0)	(35.8)	(16.8)	(2.9)	-	0.0	2.6	0.0
Global												
BASF SE	Germany		41.3	180,083	(7.5)	(5.1)	8.0	2.8	13.0	0.0	2.0	4.1
Dow Chemicals	US		102.0	105,831	(11.0)	(10.6)	2.2	0.6	17.5	0.0	1.7	2.5
Industries Qatar	Qatar		102.0	57,795	2.2	(10.6)	26.2	17.9	11.5	0.0	3.0	4.9
Sumitomo	Japan		345.0	25,393	(8.0)	(14.8)	2.6	0.7	38.7	0.0	1.0	2.6
Eastman	US		60.2	16,302	(3.9)	(0.1)	8.9	2.5	10.1	0.0	2.6	2.9

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	17.5	(13.3)
	Methanol	4.129	on-stream	7.8	(11.3)
	Gases	4.100	on-stream		
	Polyethylene	4.095	on-stream	11.1	10.0
	Monoethylene Glycol (MEG)	3.505	on-stream		
	Methyl Tertiary Butyl Ether (MTBE)	3.308	on-stream	(1.5)	(8.4)
	Urea	3.105	on-stream	5.6	(8.1)
	Long Steel	2.702	on-stream		
	Ammonia	2.451	on-stream	0.0	14.2
	Flat Steel	1.154	on-stream		
	Styrene	1.074	on-stream	6.6	(12.2)
	Propylene	0.870	on-stream	7.8	14.4
	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	5.5	1.6
	Benzene	0.374	on-stream	6.0	(14.8)
	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	0.9	2.9
	2-Ethylene Hexanol (2EH)	0.166	on-stream		
	Butene	0.151	on-stream		
	Butadiene	0.121	on-stream	14.1	45.4
	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	7.1	(3.2)
	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	17.5	(13.3)
	Propylene	0.900	on-stream	7.8	14.4
	LDPE	0.350	on-stream	7.1	(3.2)
	LLDPE	0.250	on-stream	9.3	(11.6)
	HDPE	0.300	on-stream	8.6	(9.5)
	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	5.6	(8.1)
	Ammonia	2.098	on-stream	0.0	14.2
	Sulphuric Acid	0.130	on-stream		
Saudi Kayan (Saudi Kayan Petrochemical Company)					
	Ethylene	1.478	3Q-10	17.5	(13.3)
	Propylene	0.630	3Q-10	7.8	14.4
	LDPE	0.300	2011	7.1	(3.2)
	HDPE	0.400	3Q-10	11.1	10.0
	Ethylene Glycols	0.537	3Q-10		
	Polypropylene	0.350	3Q-10	0.0	6.6
	Polycarbonate	0.260	3Q-10		
	Acetone	0.133	3Q-10		
	Benzene	0.109	3Q-10	6.0	(14.8)
	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	17.5	(13.3)
	Propylene	0.400	on-stream	7.8	14.4
	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	8.6	(9.5)
	LDPE	0.400	on-stream	7.1	(3.2)
	Benzene	0.170	on-stream	6.0	(14.8)
	Butene	0.115	on-stream		
	Benzene-Toulene and Xylene (BTX)	0.070	on-stream		
	Methyl Tertiary Butyl Ether (MTBE)	0.020	on-stream	(1.5)	(8.4)
Sipchem (Saudi International Petrochemical Company)					
	Methanol	1.000	on-stream	7.8	(11.3)
	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	6.6	(12.2)
	Propylene	0.145	on-stream	7.8	14.4
	Ethylene	1.165	3Q-11	17.5	(13.3)
	HDPE/LLDPE	1.100	3Q-11	8.6	(9.5)
	Propylene	0.445	3Q-11	7.8	14.4
	Polypropylene	0.400	3Q-11	0.0	6.6
	Polystyrene	0.200	3Q-11	0.9	2.9
	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	17.5	(13.3)
	Polyethylene	0.800	on-stream	11.1	10.0
	Propylene	0.460	on-stream	7.8	14.4
	Polypropylene	0.450	on-stream	0.0	6.6
	Caustic Soda	0.250	2Q-11		
	Ethylene Dichloride (EDC)	0.245	2Q-11		
APPC (Advanced Petrochemicals Company)					
	Propylene	0.455	on-stream	7.8	14.4
	Polypropylene	0.450	on-stream	0.0	6.6
Chemanol (Methanol Chemicals Company)					
	Methanol	0.231	on-stream	7.8	(11.3)
	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

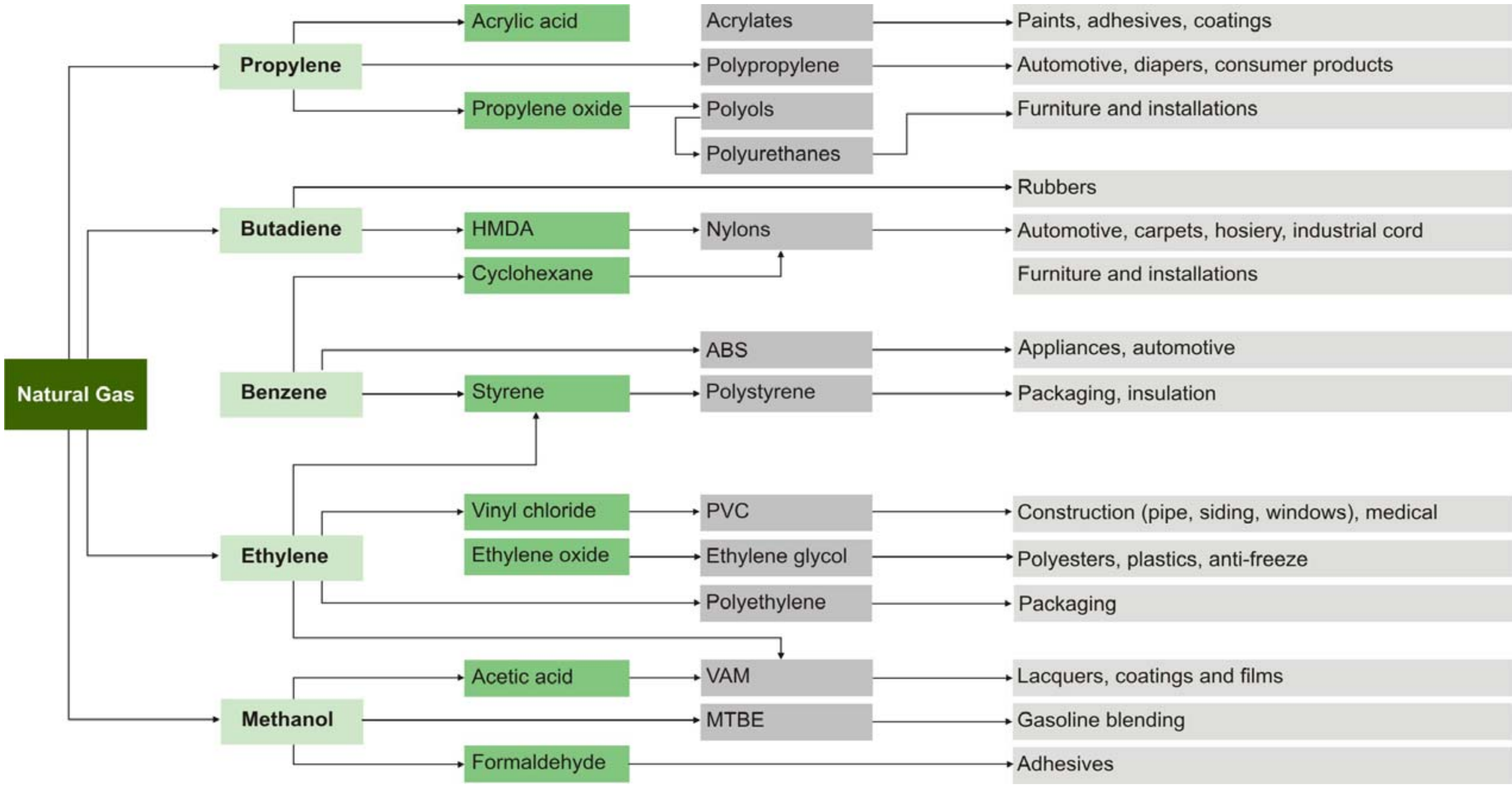
Appendix

Exhibit 15: Commodity wrap-up

Name	Latest	1 wk (%)	1M (%)	QTD (%)	YTD (%)	TTM (%)	5yr high	5yr low
Oil and Gas								
WTI ($/brl)	74.70	2.8	(5.4)	(1.6)	(5.8)	6.8	145.3	31.4
Brent ($/brl)	76.47	3.5	(3.9)	1.7	(1.8)	10.5	145.9	33.8
Arab Light ($/brl)	74.31	4.1	(0.3)	(1.7)	(4.3)	1.6	143.0	32.7
Arab Medium ($brl)	73.81	3.0	(4.5)	(0.8)	(1.4)	12.2	137.6	30.5
Natural Gas Henry Hub ($/MMBtu)	3.74	(10.7)	(21.9)	(22.9)	(37.8)	49.6	15.4	1.9
Naphtha ($/brl)	73.45	1.9	2.8	3.1	(5.9)	5.3	135.5	25.3
Propane ($/mt)	635.50	4.9	10.5	9.9	(14.2)	13.3	995.0	320.5
Liquid Nitrogen	109.00	0.0	0.0	0.0	(0.2)	(0.6)	134.4	109.0
Petrochemicals								
Methanol CFR China ($/ton)	275.0	1.9	7.8	12.2	(11.3)	5.8	580.0	165.0
MTBE ($/mt)	767.0	4.2	(1.5)	1.2	(8.4)	(5.0)	1,360.0	439.0
Benzene ($/gallon)	298.5	0.3	6.0	5.7	(14.8)	(7.0)	457.5	82.5
Ethylene ($/mt)	975.0	4.8	17.5	8.3	(13.3)	(0.5)	1,670.0	330.0
Polystyrene ($/mt)	1,345.0	0.0	0.9	(9.0)	2.9	5.5	2,137.5	837.5
Polyethylene ($/mt)	1,177.5	2.8	11.1	4.4	10.0	6.9	1,887.5	612.5
Polypropylene ($/mt)	1,197.5	0.0	0.0	8.4	6.6	8.1	2,162.5	587.5
Propylene ($/lb)	55.5	0.0	7.8	0.0	14.4	30.6	82.5	14.5
PVC ($/ton)	965.0	0.0	5.5	8.4	1.6	2.7	1,325.0	580.0
Butadiene ($/lb)	81.0	0.0	14.1	45.9	45.4	57.3	142.5	14.5
Styrene ($/lb)	48.5	0.0	6.6	0.0	(12.2)	(4.9)	82.5	22.5
LDPE ($/mt)	1,355.0	3.4	7.1	0.7	(3.2)	2.7	1,950.0	810.0
LLDPE ($/mt)	1,180.0	3.1	9.3	3.5	(11.6)	(9.9)	1,860.0	710.0
HDPE ($/mt)	1,140.0	1.3	8.6	4.6	(9.5)	(11.6)	1,830.0	750.0
Fertilizers								
Ammonia Arabian Gulf($/mt)	330.0	0.0	0.0	15.8	14.2	42.9	860.0	120.0
Ammonia Nitrate Black Sea ($/mt)	220.0	0.0	12.8	4.8	2.3	41.9	815.0	142.0
DAP Tampa	497.5	0.0	6.8	10.6	47.4	n/a	1,220.0	265.0
DAP bulk US FOB ($/mt)	500.0	0.0	4.2	9.9	35.5	58.7	1,225.0	250.0
Urea ($/mt)	285.0	0.0	5.6	16.3	(8.1)	7.5	815.0	142.0
Morrocco Phosphate Rock	297.6	0.0	0.0	0.0	38.9	38.9	1,023.8	100.0
Base Metals								
Steel ($/mt)	598.8	(1.0)	9.6	13.2	21.6	17.7	1,530.0	393.8
Alluminium 3M ($/mt)	2,058.0	0.9	(5.4)	5.7	(8.2)	8.3	3,317.0	1,288.0
Copper 3M ($/mt)	7,459.0	2.8	2.2	14.9	1.8	15.2	8,730.0	2,845.0
Lead 3M ($/mt)	2,090.0	2.1	0.6	21.5	(13.3)	(0.8)	3,890.0	839.0
Nickel 3M ($/mt)	21,050.0	(0.7)	(0.5)	10.4	11.4	10.6	51,600.0	9,050.0
Tin 3M ($/mt)	21,640.0	5.8	10.9	23.0	29.6	54.0	25,300.0	6,000.0
Zinc 3M ($/mt)	2,095.0	2.5	3.5	20.2	(18.0)	11.4	4,515.0	1,065.0
Precious metals								
Gold ($/oz)	1,237.0	0.9	4.7	(0.3)	13.2	30.0	1,256.8	429.8
Silver ($/oz)	19.0	5.7	5.6	2.8	13.2	27.6	20.8	6.7
Platinum ($/oz)	1,527.3	1.1	(2.9)	(1.1)	5.6	23.3	2,250.5	771.0
Palladium ($/oz)	496.8	2.8	(0.2)	9.8	26.1	70.3	580.0	164.5
Agricultural products								
Corn 3M ($/bu)	467.3	1.8	8.2	24.5	1.0	16.2	667.0	375.3
Soybean 3M ($/bu)	1,022.5	1.7	1.7	12.1	0.7	10.4	1,555.5	812.0
Wheat 3M ($/bu)	704.5	(2.9)	1.5	45.2	16.1	20.5	1,030.0	475.0
Cotton 3M (cents/lb)	86.4	2.8	9.7	10.6	13.6	28.5	101.7	53.5
Coffee 3M (cents/lb)	181.4	(1.0)	2.6	11.0	26.8	35.7	192.8	123.3
Indicies								
TASI Petrochem	5,219.4	(0.8)	(2.6)	(3.0)	(3.3)	13.1	10,675.0	2,600.0
TASI	6,071.7	(0.6)	(3.1)	(1.0)	(0.8)	7.3	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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IMPORTANT INFORMATION