

# Saudi Petrochemicals Sector

Petrochemicals –Industrial

Saudi Arabia

4 August 2010

الراجحي المالية  
Al Rajhi Capital



**US\$85.6 bn** Market cap    **27.7%** Free float    **US\$325.1 mn** Avg. daily volume

Target mkt cap **SAR379bn** 18.0% over current  
Consensus mkt cap. **SAR411bn** 27.9% over current  
Current mkt cap. **SAR321bn** as at 04/08/2010

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**Underweight**    **Neutral**    **Overweight**

## Key themes

We expect Saudi petrochemicals suppliers to outperform global rivals with margins driven by cheap feedstock costs and strong demand coming from Asia. We believe a shift towards heavier, more expensive feedstock in plants from now on will not constrain profits growth as improving prices and higher volumes should offset the higher costs.

## Implications

We like SABIC's broad business mix, its low-cost production and its strategy of high investment. SABIC also represents 22% of the TASI index, making it risky to bet against the stock. Sipchem should see a strong recovery as new investment diversifies revenue streams and moves it further up the petrochemicals value chain. Conversely, Saudi Kayan has suffered severe delays in plant construction and we do not expect it to record sales or profits for nearly two years. We do not have ratings on Yansab or Petro Rabigh.

## What do we think?

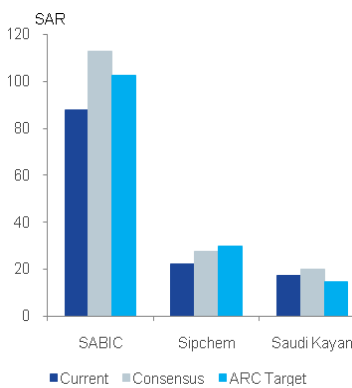
Stock	Rating	Price Target
SABIC	Overweight	SAR102.7
Sipchem	Overweight	SAR29.7
Saudi Kayan	Underweight	SAR14.4
Yansab	No rating	
Petro Rabigh	No rating	

## Why do we think it?

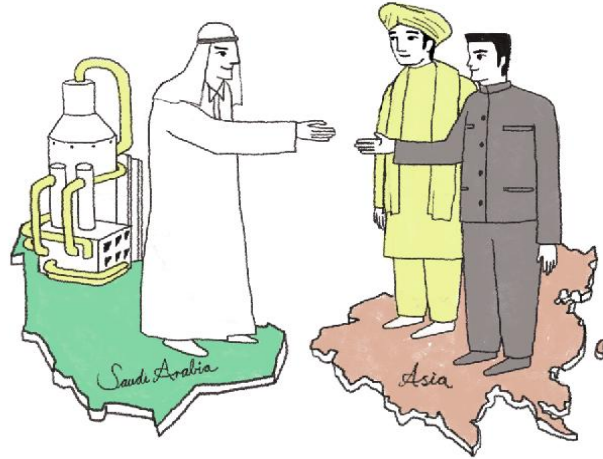
Stock	3 year EBITDA CAGR*	2010 EV/EBITDA
SABIC	10.3%	7.6x
Sipchem	18.0%	10.9x
Saudi Kayan	NA	NA
Yansab	12.5%	13.4x
Petro Rabigh	11.3%	15.9x

\* 2010-2013, ie after strong cyclical recovery in 2009-10

## Where are we versus consensus?



Source Bloomberg, Al Rajhi Capital



# Saudi Petrochemicals Sector: Advantage Saudi Arabia

The combination of the world's lowest feedstock costs and large-scale capacity expansion is transforming the Saudi petrochemicals sector into a formidable force. These strengths provide powerful support for the industry as it strives to meet surging demand in China and Asia. SABIC is attractive as the giant of the sector. Sipchem is a higher-growth alternative with strong recovery potential. Conversely, Saudi Kayan has lost opportunities after major project delays.

**Low input costs the key advantage:** The world's lowest costs for feedstocks such as ethane and naphtha have placed Saudi petrochemicals suppliers in an enviable position and are helping them capture global market share. With no new allocations of ethane since 2006, Saudi petrochemicals players are currently shifting to heavier and more expensive feedstocks. This will result in slightly higher input costs but should not greatly harm the competitiveness of the sector.

**Asia represents a huge opportunity:** China is the primary force driving global petrochemicals demand. While the country is adding significant domestic capacity, we expect demand growth to outpace capacity additions for many years yet. China and other Asian countries are already the key market for the Saudi petrochemicals industry, and we expect the focus on this region to increase.

**Saudi Arabia investing for the future:** Due to major new projects like SABIC's plants at Yanbu and Jubail, Saudi Arabia should account for over 10% of global petrochemicals capacity by 2014. Over-capacity is not a great risk since demand is strong and developed markets are not seeing capacity growth.

**Key driver in the Saudi market:** The petrochemicals sector accounts for 5% of Saudi GDP but 34% of the value of the stock market. SABIC alone represents 22% of the TASI. The large petrochemicals stocks have dominated recent market trading. This makes it hard to bet against the sector, and SABIC in particular.

**Conclusions:** We like SABIC's wide business mix, its low-cost production and its strategy of high investment, while Sipchem's focus on methanol products and gearing to Asia give it strong recovery potential. We rate both stocks Overweight. Saudi Kayan looks overvalued after project delays; our rating is Underweight. Both Yansab and Petro Rabigh (Not Rated) have high debt levels, although Petro Rabigh should benefit from strong parents and its shift to integrated production.

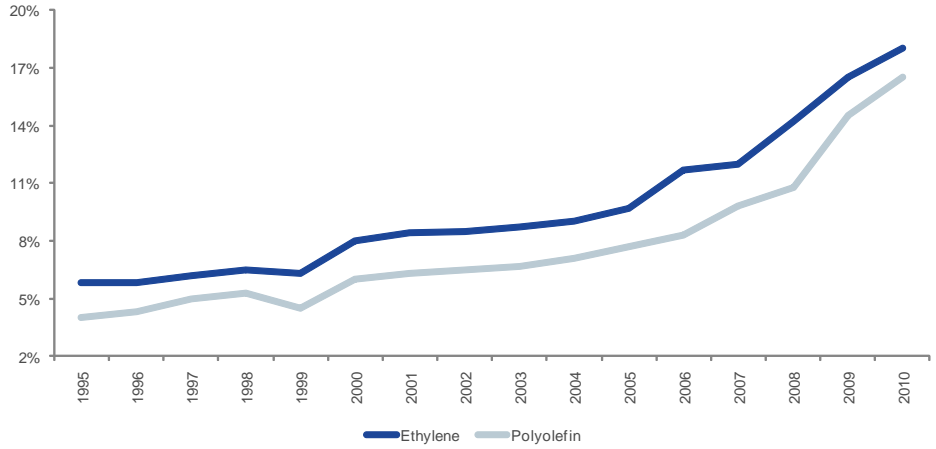
Disclosures Please refer to the important disclosures at the back of this report.

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Middle East has seen rapid petrochemicals capacity growth since 2007

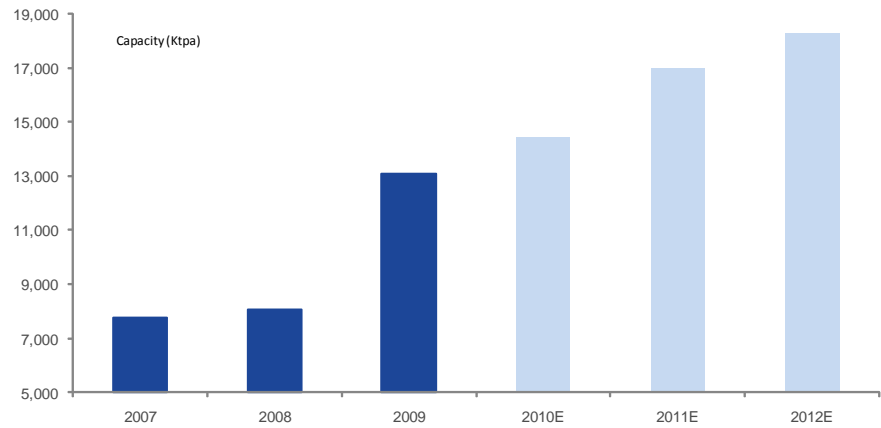
**Figure 1. Share of Middle Eastern capacity in global petrochemicals production**



Source: Industry data, Al Rajhi Capital

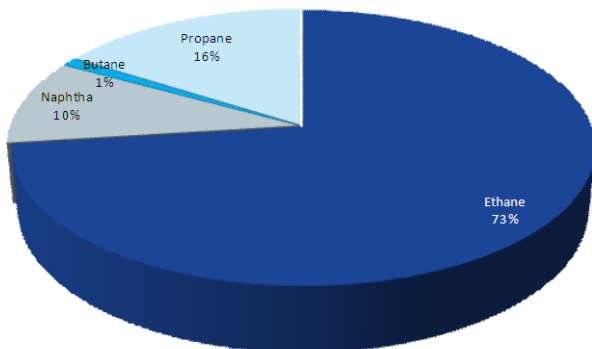
Saudi Arabia is leading capacity additions

**Figure 2. Saudi Arabia ethylene capacity**



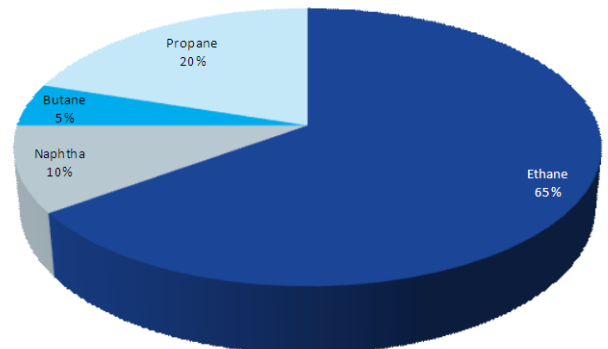
Source: Industry data, Al Rajhi Capital

**Figure 3.1 Saudi Arabia: feedstock composition (2007)**



Source: Industry data, Al Rajhi Capital

**Figure 3.2 Saudi Arabia: feedstock composition (2014e)**



Source: Industry data, Al Rajhi Capital



Page

7 **Saudi petrochemicals: we are positive**

7 **Initiating coverage**

We initiate coverage of the Saudi Arabian petrochemicals sector and include five companies in our report: SABIC, Saudi Kayan, Yansab, Petro Rabigh and Sipchem. We are positive on the sector as feedstock costs for these companies are the lowest in the world while global demand is picking up led by Asia, and particularly China and India.

7 **World-beating feedstock costs catalysts for rapid growth**

We think these lower feedstock costs give Saudi players room to outmanoeuvre high-cost players as ethane has traded at a global average of US\$4/mmbtu for the past few years while naphtha prices have fluctuated in tandem with oil price movements. These cost structures have forced international competitors to cede market share to Saudi petrochemical players.

11 **KSA government keen on developing petrochemicals**

11 **Government wants to boost employment in the Kingdom through petrochemicals industry**

Petrochemicals makes the second biggest contribution to Saudi GDP, but its contribution towards employment pales in comparison to its size. Most plants use ethane as their primary feedstock, which needs a capital-intensive process. A shift towards crackers using heavier feedstocks will boost employment through a labour-intensive process.

11 **Petrochemicals to help government widen the base of Saudi GDP**

Saudi Arabia has vast proven reserves of crude oil but the government recognises the need to diversify the economy away from this finite resource. A focus on petrochemicals represents a logical move towards higher-margin and value added products.

12 **Speciality chemicals diversification is positive for both government and industry**

Within the petrochemicals industry, we see speciality chemicals as a future area of growth. This segment has been growing at a compound annual rate of nearly 7% over the past five years and represents a step further along the petrochemicals value chain.

13 **Emerging markets represent a huge opportunity**

13 **China & India lead the emerging markets pack**

China is the current driver of global petrochemicals demand growth while India and Brazil represent the next big markets which will generate demand over the longer term. In the near term, we expect capacity additions to lag demand growth in all three markets and so believe that a ready market will soak up expansion by the Saudi petrochemical majors.

14 **Chinese state-owned players are boosting petrochemicals capacity...**

Chinese state-owned players like Sinopec and PetroChina are rapidly building new ethylene capacity, aided by favourable government policies for joint ventures with foreign majors. China is also on a propylene capacity build-up which will see the country become the largest producer of the chemical in the world.

17 **...but Chinese capacity could face potential delays...**

Environmental worries, the economically unviable size of scattered petrochemicals plants and the potential threat of overcapacity could delay the commercial start of production.

17 **...and demand is catching up at a faster pace**

Local Chinese demand for petrochemicals is outpacing supply growth. We see China as a net importer of petrochemicals for some time given the size of the supply-demand gap.



- 18 **Potentially detrimental to Saudi Arabia in the long run**  
In the long term, China could be a potential competitor to Saudi petrochemicals players as petrochemical imports from the Kingdom are replaced by local Chinese output.
- 19 **Low ethane availability is a problem**
- 19 **Lower percentage of natural gas in fields**  
The percentage of natural gas in oil fields in Saudi Arabia has been declining steadily. Efforts are underway by Saudi Aramco to boost natural gas production but we believe there will be a near-term ethane shortage.
- 20 **Ethane has alternative uses**  
Ethane has traditionally been allocated for use in petrochemicals. However, with rapid economic growth, it has found alternative uses in power generation and desalination plants for drinking water, thus constraining its availability for petrochemicals crackers. We believe future allocations of ethane will not match current levels and will result in a greater proportion of mixed crackers.
- 23 **But shift towards heavier feedstock won't hurt the sector**
- 23 **Higher proportion of more expensive feedstocks inevitable...**  
With no new allocations of ethane since 2006, we think Saudi petrochemicals players will have no option but to shift to heavier and more expensive feedstocks – partly naphtha, but more importantly propane and butane – by lowering use of ethane. One positive outcome should be the diversity of downstream chemicals produced using mixed feedstock.
- 24 **...but will still leave Saudi players among world's most competitive**  
While lower use of ethane will result in higher input costs, on a net basis, Saudi petrochemical players should still be among the most competitive globally as a result of the price discounts on major feedstocks.
- 25 **Saudi Arabia on a capex spree**
- 25 **Major capacity coming on at Yanbu and Jubail**  
SABIC's facilities at Yanbu (on board from Q1 2010) and Jubail (on board from Q4 2011) account for a great part of planned additions to petrochemicals capacity in the Kingdom. Petro Rabigh opened additional petrochemicals capacity at Rabigh in Q1 2010.
- 26 **Developed markets not witnessing capacity growth**  
High feedstock costs coupled with stagnant demand have depressed capacity growth in developed markets.
- 27 **Global petrochemicals market: opportunities and risks**
- 27 **Ethylene and propylene trends**  
The centre of ethylene production will shift to the MENA region given expected capacity shutdowns in the US and Europe while propylene output in Saudi Arabia will also be boosted by the shift towards heavier feedstock.
- 29 **Shale gas may alter the environment**  
Shale gas reserves in North America present a contingent threat to Saudi petrochemicals players with potentially low cost structures for obtaining natural gas. However, we believe any realistic threat from shale gas is far away in the future.
- 30 **Saudi petrochemicals market: strategy discussion**
- 30 **We prefer SABIC to its affiliates**  
While SABIC has concentrated its expansion plans on basic petrochemicals, its low-cost structure, diverse petrochemicals portfolio and strong R&D capabilities shield it from possible market downturns. We prefer SABIC to Yansab and Saudi Kayan, which are single-project companies that carry a greater level of risk than their parent.



- 32 Petro Rabigh: strong parentage drives competitive advantage**  
Strategically, we are positive about Petro Rabigh as we think the company will benefit from its strong parents (Saudi Aramco and Sumitomo Chemical), and from its strategic shift from being a pure refining operation to an integrated refining and downstream petrochemicals model.
- 34 Sipchem: opportunity for diversification through methanol**  
Sipchem has been a pure bulk chemicals producer with a strong focus on methanol. Sales and profits collapsed in 2009 as the global recession took hold. However, looking forward, we expect diversification to drive a recovery in sales and expect margin to return to previous high levels.
- 35 Petrochemicals: a key driver in the Saudi market**  
The petrochemicals sector accounts for 5% of Saudi GDP but for 34% of the value of the stock market. SABIC alone represents 22% of the TASI. Saudi Kayan, SABIC and other petrochemicals stocks have dominated recent market trading. The Saudi economy looks strong and, driven in part by robust demand for hydrocarbons, we predict 3-4% GDP growth in 2010. In our view, taking a stand against Saudi petrochemicals is equivalent to taking a stand against Saudi Arabia itself.
- 39 Valuations: attractive overall**  
Our key method of valuation for the Saudi petrochemicals players is long-run discounted economic profit (DEP). We assume a 30 year period of competitive advantage for all the stocks in the sector except SABIC, for which we assume 40 years. Based on DEP analysis, we estimate fair value per share for SABIC at SAR102.7, for Sipchem at SAR29.7 and for Saudi Kayan at SAR14.4. We set these fair values as our target prices, implying respectively 17% upside, 33% upside and 17% downside potential.
- 45 General risks for the sector**  
Further significant delays in commissioning of petrochemicals capacity could produce negative surprises. Our analysis assumes an oil price of US\$75 per barrel; prices lower than our assumption would impact profitability. Possible cuts in OPEC oil production quotas would reduce supply of gas, compounding the problem of low availability of ethane.
- 46 Appendices**  
**The petrochemicals value chain**  
**Saudi Arabia and Middle East: production capacity**
- 49 Glossary**
- 50 Company summaries and financial data**



## Ratings and Sharia policy

This report includes five companies: SABIC, Saudi Kayan, Sipchem, Petro Rabigh and Yansab. We provide sales and profit forecasts for all five companies. However, we only give investment ratings and target prices for three of the companies: SABIC, Saudi Kayan and Sipchem.

We do not give investment ratings and target prices for Petro Rabigh and Yansab. The reason for this is that, while their activities are essentially permissible, certain aspects of their business operations, such as prohibited borrowings and prohibited deposits, have caused them to be non-Sharia-compliant by Al Rajhi Capital's definition.



## Saudi petrochemicals we are positive on the sector

### Initiating coverage

We are overweight on the Saudi petrochemicals sector

We initiate coverage of the Saudi petrochemicals sector with a focus on the five largest companies, namely SABIC, Saudi Kayan, Yansab, Rabigh Refining and Sipchem. We find the sector fundamentally attractive as feedstock costs for these companies are the lowest in the world. In our view, this factor more than any other presents a unique opportunity for investors to gain exposure to the lucrative Saudi petrochemicals sector, since a feedstock advantage provides considerable operating flexibility while competitors struggle to adjust operating rates to feedstock cost variations and demand-supply dynamics. While we expect the feedstock mix to change in favour of heavier feedstocks like naphtha, propane and butane due to lack of ethane supply, the underlying discount should ensure that such a move does not dent post-tax profit margins.

Favourable conditions foster broad based growth in Saudi PPC industry

The sector has also been boosted by favourable government initiatives which aim to shift Saudi Arabia from an economy concentrated largely on crude oil exports to an economy with higher value-added, integrated oil and petrochemicals segments. As the Saudi Arabian petrochemicals majors increase production capacity to exploit these advantages, we believe the output from new facilities will find ready demand from the emerging markets of China, India and Brazil. These nations have huge underserved petrochemicals markets which will drive strong volume growth. We do not see local supply outpacing demand in these regions, thus providing a lucrative market for Saudi players.

With such catalysts for growth, the Saudi petrochemicals industry is seeing the emergence of newer players. While SABIC will continue to be the dominant player in the industry, we believe that peers like Petro Rabigh and Sipchem will also establish a strong presence in the sector in future.

### World-beating feedstock costs catalysts for rapid growth

Cheap and secured feedstock gives Saudi players an advantage over global competition

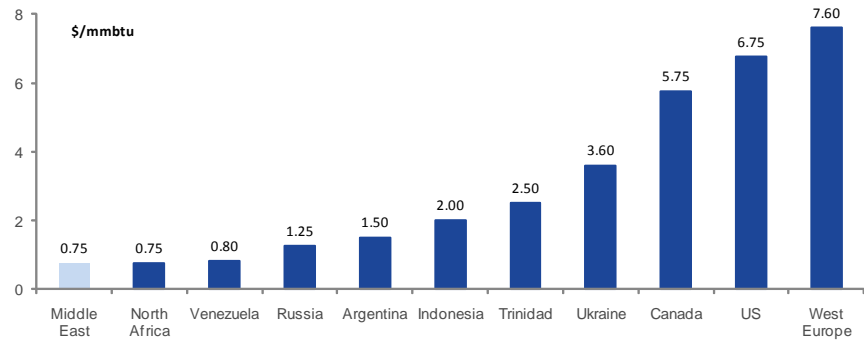
The government of Saudi Arabia provides ethane, a major feedstock for the petroleum and petrochemicals industry, at a price of US\$0.75/mmbtu (compared to the average global market price of US\$4.5/mmbtu) to local petrochemicals companies such as SABIC, Sipchem & Petro Rabigh. Given that feedstock-related costs account for over 50% of the total cash costs of the final output of for petrochemical companies, this feedstock subsidy transforms Saudi Arabian petrochemicals companies into global low-cost producers. Due to the commoditised nature of the basic chemicals business, price is the single most important factor in determining the competitiveness of players in the market place as there is only marginal differentiation between the products of different suppliers. Sharp increases in the prices of natural gas such as those observed in 2003 (US\$18/mmbtu – an increase to this from a five year average of US\$3.7) and more recently in mid-2008 (US\$13/mmbtu– an increase to this from a five year average of US\$7.2) demonstrate the generous feedstock cost advantage enjoyed by the Saudi petrochemicals players. While global majors had to deal with the double blow of rising ethane costs and falling petrochemical prices in 2008 and early 2009, Saudi petrochemicals players were insulated on input costs. This fact partially shielded them from the margin erosion recorded by competitors all over the world.

Therefore, with a higher proportion of ethane in the total feedstock mix of Saudi Arabia's leading petrochemicals players (ethane accounted for over 70% of overall feedstock in 2008), the cost advantage has aided in rapid implementation of new capacity additions and changed the dynamics of the global basic chemicals market. While some countries in North Africa also receive ethane at comparable prices, they lack the scale and political stability to make a significant impact on global petrochemicals markets. The Saudi petrochemicals sector accounts for 7% of the global supply of basic chemicals and we expect this share to increase to 13% by the end of 2011 propelled by ambitious capacity addition plans backed by abundantly available cheap feedstock.



Saudi ethane prices at US\$0.75/mmbtu are lowest in the world

**Figure 4. Ethane prices**



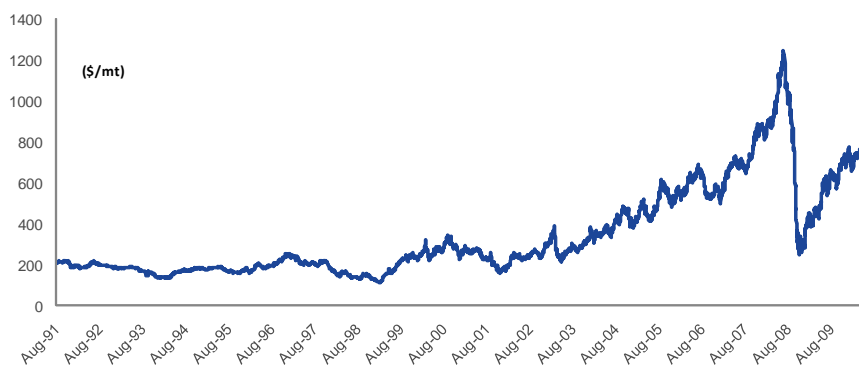
Source: Industry data, Al Rajhi Capital

Saudi petrochemical majors get naphtha at discounted prices

For naphtha-based crackers, Saudi petrochemicals companies receive naphtha at a discount of about 31% (a figure determined by the Saudi authorities) to the prevailing benchmark Japanese naphtha prices as a result of government subsidies. Therefore, even crackers using a greater proportion of naphtha in their feedstock mix in Saudi Arabia have a substantial cost benefit compared to their global peers which pay the market rate for obtaining naphtha. At the height of the oil price boom in 2008, naphtha prices touched US\$1,200/ton. At this time, Saudi petrochemicals majors received naphtha at US\$830/ton (a discount of US\$370/ton). To demonstrate the magnitude of the subsidy, it is worth noting that this cash discount was higher than the spreads achieved by most non-Saudi players in converting naphtha to end-use petrochemicals, giving Saudi petrochemicals firms an advantage over global competitors even before the cracking process.

To our mind, in addition to the substantial discount to market prices, it is the proportion of naphtha and other associated heavy feedstock in Saudi crackers (28% of total feedstock in 2008) which contributes towards keeping the overall feedstock cost volatility low. Thus, less than one-third of the total feedstock-related costs is subject to changes in price, with even that volatility being cushioned by the discount. Naphtha prices are directly linked to oil prices as a result of which, on a stand-alone basis, ethane-based Saudi crackers usually yield better margins (6.5% according to industry data) than naphtha-based crackers due to their fixed input costs.

**Figure 5. Naphtha Japan spot price**



Source: Bloomberg



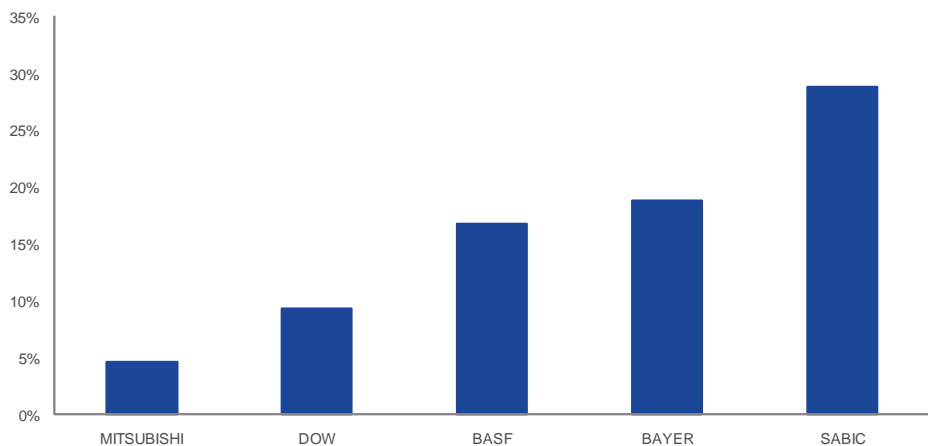
Low- cost feedstock cushions variability in capacity utilisation rates

Therefore, given the considerably higher feedstock costs borne by global competitors, the Saudi petrochemicals industry is emerging as a global leader in this market. In our view, lower feedstock costs and higher operating efficiency enable the petrochemical industry in Saudi Arabia to continue production without being subjected to the vagaries of changing feedstock prices. A significant change in market prices of ethane or naphtha can force global players to mothball their production facilities. This entails maintenance and upkeep charges which are incurred with the aim of recouping such expenses once production recommences. However, we suspect that longer mothballing periods for US and EU petrochemical players are dragging down margins on a net basis. Thus, taken as a whole, Saudi petrochemicals players, whether based on ethane or mixed feedstock, enjoy a material advantage over their competitors which procure feedstock at higher market rates and which are also exposed to the volatility of oil prices. Saudi majors like SABIC thus enjoy high operating margins as the majority of their costs are fixed at very low levels.

Based on our research, we estimate that the feedstock cost advantage has enabled Saudi petrochemicals companies like SABIC to operate at an average capacity utilisation rate of over 85% over the last 3 years while global operating rates have been fluctuating with a lagged correlation to changes in crude oil prices. We believe the cheap feedstock offers a degree of demand inelasticity to the petrochemical products of the Saudi region due to their world-beating low input costs which enable them to outmanoeuvre higher-cost western players. This helps in maintaining the high operating rates.

We believe that access to cheap feedstock gives Saudi petrochemical producers a defensive shield which ensures that production is lowered only in case of a massive drop in demand like the one witnessed in 2009. Thus, looking forward, as the economic recovery gains momentum, we expect capacity utilisation in Saudi cracking plants to remain higher than for global competitors, helping to ensure good growth in sales and profits.

**Figure 6. EBITDA margins in 2009**



Bloomberg, Al Rajhi Capital

SABIC is the biggest petrochemicals company in the GCC region and accounts for around 22% of the total value of the Saudi Tadawul All Share Index (TASI). The company's high operating margins are an indicator of the leverage that the company (together with the industry as a whole) has to oil prices.

Middle East region leads in capacity additions thanks to Saudi capex

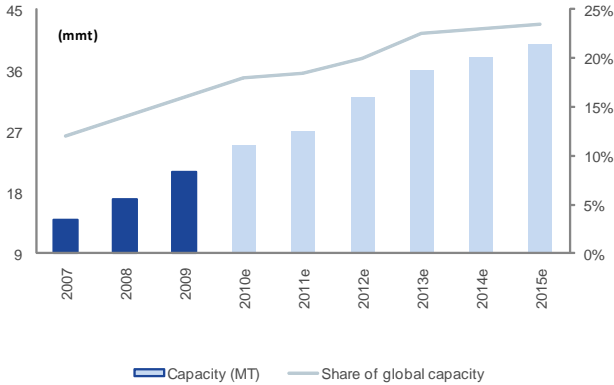
With such cost advantages, coupled with a lower dependence on perennially volatile oil prices and an accommodating governmental policy, we forecast that the Middle East region's share in global petrochemicals capacity will rise from 12.5% in 2007 to 24% by 2015, an increase of almost 100% in a short span of just eight years. It should come as no surprise that Saudi Arabia dominates the planned capacity additions in the region, accounting for over 50% of planned expansion. This is because Saudi Arabia is the largest economy in the Middle East and a dominant player in OPEC. In addition, while Qatar is expanding its petrochemicals business with subsidies, the other countries in the region are focusing more on oil. The large company Industries of Qatar (IQCD) is the only real rival in the region to SABIC.



### Saudi industry focuses on ethylene production

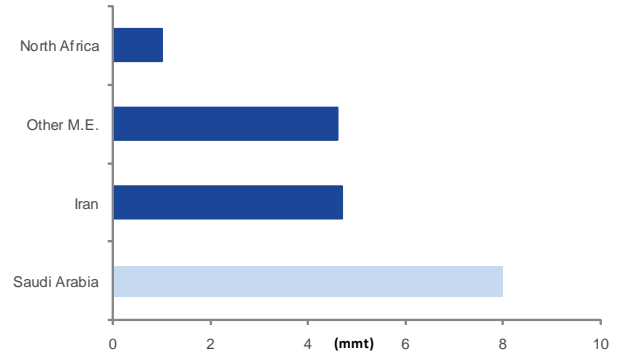
A generous supply of ethane has led to the Saudi petrochemicals industry being concentrated towards production of ethylene, the key derivative of ethane. This situation is illustrated in the charts below

**Figure 7.1 Middle East ethylene capacity**



Source: Industry data, Al Rajhi Capital

**Figure 7.2 MENA capacity additions 2008-13**

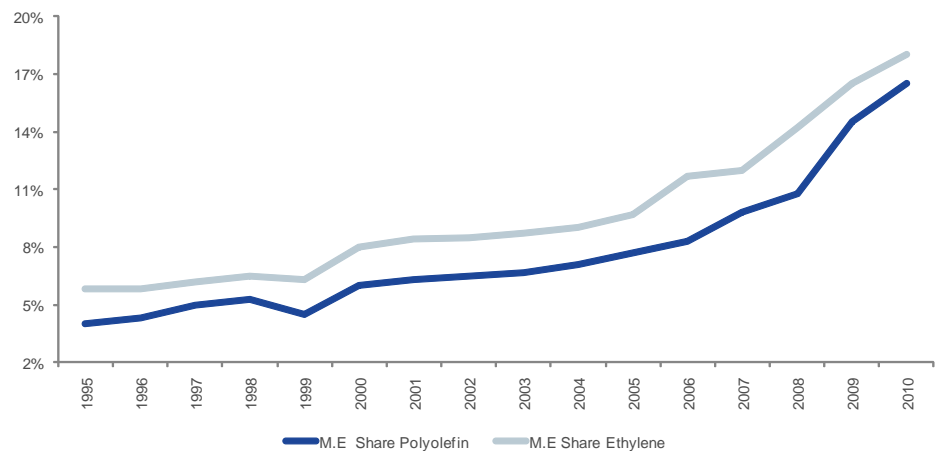


Source: Industry data, Al Rajhi Capital

We see Saudi Arabia emerging as a powerhouse in the global petrochemicals market

The share of the Middle East in global ethylene capacity has increased at a compound annual rate of 7.7% during the period 1995-2010, while from different industry sources we estimate that the region's share of the global polyolefins capacity has shown compound annual growth of 9.9% over the same period. This rapid growth has been made possible by the abundant supply of ethane made available to petrochemical producers. As demand for petrochemicals is growing at a marginally slower pace than global installed capacity, this wave of new capacity has come at the cost of weak petrochemicals capacity growth in US, where in fact there have been no additions to ethylene production capacity since 2001. Given that the US and Europe accounted for a majority of petrochemical capacity additions till the turn of last century, this signifies a tectonic shift in the nucleus of the petrochemicals industry from developed markets to the Middle East and China, which is on a capacity expansion spree of its own.

**Figure 8. Share of Middle Eastern capacity in global petrochemicals production**



Source: Industry data, Al Rajhi Capital



## Government support: KSA keen to develop petrochemicals

### Government wants to boost employment in the Kingdom through the petrochemicals industry

While Saudi Arabia is blessed with huge oil reserves, these reserves are finite. The Saudi government has therefore been careful not to deplete its reserves at an excessive pace in order to prolong the principal competitive advantage of the Kingdom. The government has also recognised the need to capitalise on the country's natural advantage by promoting the value-added and higher-margin petrochemicals sector in order to diversify Saudi Arabia's economy away from one based purely on oil exports. Traditionally, Saudi crackers have operated with predominantly ethane-based feedstock. However, the diversity in petrochemical derivatives from naphtha and associated heavy feedstocks and lack of ethane availability are the reasons why the Saudi government is now promoting the use of naphtha, butane, and propane as alternative feedstocks over ethane.

The processing of naphtha, butane and propane into chemical derivatives lower down the petrochemicals value chain (see Appendix) requires more labour-intensive technology than processing of ethane into derivatives which uses a capital-intensive technology, and which therefore generates higher employment. Analysis of the breakdown of GDP and employment in Saudi Arabia by segment reveals that, while the hydrocarbons industry in aggregate (crude oil and gas, oil refining and petrochemicals) contributed about 61% of national GDP in 2008, it generated far less employment for Saudi nationals than its massive size would suggest – under 5% of the total, in fact. Given the fact that around 50% of Saudi Arabia's population is under 20 years of age, the government is keen to promote sectors which will result in higher job creation to tame unemployment, which is starting to increase in the Kingdom.

Ethane-based petrochemicals sector unable to generate employment proportionate to size

Figure 9.1 Saudi GDP in 2008

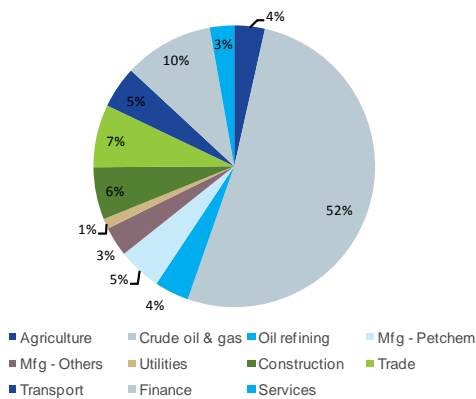
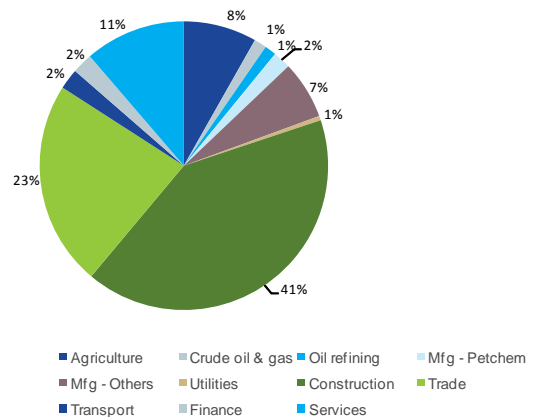


Figure 9.2 Saudi employment breakdown in 2008



Source: Central Department of Statistics & Information, Ministry of Economy and Planning, with calculations by ARC

Source: Central Department of Statistics & Information, Ministry of Economy and Planning, with calculations by ARC

## Petrochemicals to help government widen the base of Saudi Arabia's GDP

As we have already noted, the Saudi economy is heavily dependent on the oil and gas industry. A recent report by Standard & Poor's (S&P) showed that Saudi Arabia's economy ranks second globally in terms of maximum vulnerability to oil price volatility. The index by S&P ranks an oil-exporting country's vulnerability to falls in the global price of oil, taking into account three criteria: the impact of falls in oil prices on economic output, on external balances, and on government finances. The countries in the GCC region are more susceptible to oil price fluctuations than other oil-exporting countries outside the region. Countries where the government has almost total control of the hydrocarbons industry usually tend to be the most vulnerable to a fall in oil prices. The Saudi Arabian economy matches this

Petrochemicals will diversify Saudi GDP away from oil



SABIC aims to generate 14% of its revenues from speciality chemicals by 2020

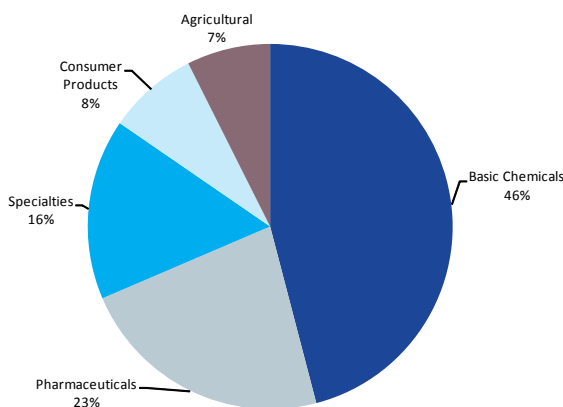
definition to the letter. Considering that Saudi Arabia's GCC neighbours Oman & Kuwait rank lower on the index (at fifth and sixth respectively), this factor has prompted the government to diversify its economy away from basic oil refining.

### Diversification into speciality chemicals is positive for both government and industry

The diversification route of choice for the Saudi government is to promote the development of the downstream petrochemicals industry. This involves a move to speciality chemicals which yield higher margins and are expected to generate greater employment opportunities. In its Vision 2020 statement, SABIC, the industry's dominant player, announced that it aims to generate 20% of its revenues in 2020 from speciality chemicals compared to the current contribution of 14%.

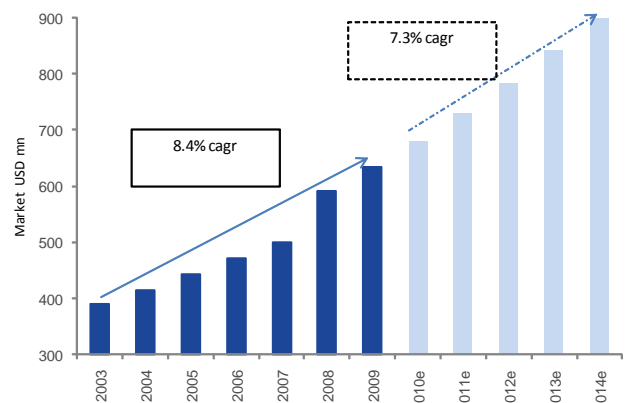
The global speciality chemicals market represents a logical and attractive diversification for Saudi petrochemicals suppliers as it has shown an impressive compound annual growth rate of 8.4% over the period 2003-09 and was worth US\$630bn in 2009 (source: Business Monitor International [BMI]). Looking forward, we expect the speciality chemicals market to grow at a compound annual rate of 7.3% to US\$900bn by 2014, aided by strong growth in emerging markets and recovery in global demand.

Figure 10.1 Global chemical industry breakdown



Source: Industry data, Al Rajhi Capital

Figure 10.2 Global speciality chemicals market growth



Source: Industry data, Al Rajhi Capital

We believe foray into speciality chemicals will be mutually beneficial to producers and to the government

Besides helping the government diversify the economy, we believe that a potential shift towards speciality chemicals will be a positive move for the Saudi petrochemicals sector. In our opinion, Saudi petrochemicals majors like SABIC will have an added advantage in such a growing market through their low feedstock costs. Moreover, considering that the GCC region already has large exports of basic chemicals to the Asia Pacific countries, the Saudi petrochemicals players should be able to capture market share in the speciality chemicals segment in this region effectively.

Speciality chemicals made up 16% of the US\$3.7 trillion global chemicals market in 2008, according to BMI. Entry into this market will help the Saudi petrochemicals majors to become complete integrated chemicals players, present across the whole value chain of products in the industry.

The Saudi government's policies suggest that, in order to enjoy access to cheap feedstock in the future, petrochemicals companies will have to move away from basic petrochemicals to finer, speciality chemicals. If they do so, they will support the government's twin aims of diversifying the GDP of the country and of generating employment. Coupled with the fact that the government is offering incentives for companies entering into this sub-sector with foreign collaboration, this means that there is sufficient incentive for the industry to shift to speciality chemicals.



## Emerging markets: the opportunity lies here

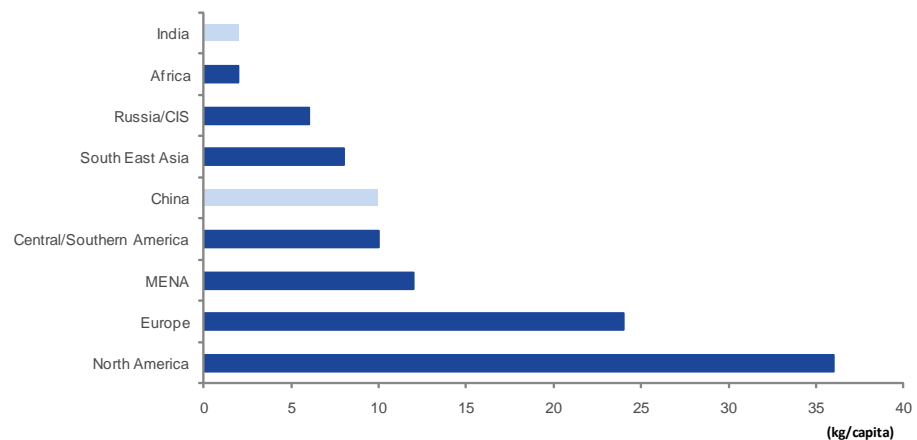
### Demand from China and India to fuel petrochemicals growth

Emerging markets are increasingly becoming the drivers of growth in the global economy as mature and developed markets struggle with slow or even negative growth. This is especially true for the petrochemicals industry, which is banking on emerging markets in Asia and elsewhere absorbing new capacity due to come on stream in the next few years and so avoid a large supply glut. With such feedstock cost advantages as the Saudi petrochemicals players enjoy, the industry has gradually increased its exports to Asia in order to tap the markets of China and India, two of the largest and fastest-growing economies in the world.

Increasing per capita demand for petrochemicals from China and India will be the main growth driver for the industry

Companies from Saudi Arabia currently account for 10% of China's petrochemicals imports. We believe a major chunk of future demand growth will come from this region and should enable the Saudi petrochemicals industry to find a ready market for the output of the aggressive capacity expansion projects currently underway at Yanbu, Jubail, and other locations. As can be seen from the graph depicting per capita petrochemicals consumption, China and especially India have some way to go before being anywhere near the developed markets in terms of per capita petrochemicals consumption. We believe that a narrowing of this gap will be the main growth driver for the petrochemicals sector globally.

Figure 11. Per capita petrochemicals consumption: China and India have some way to go...



Source: Industry data, Al Rajhi Capital

As the global economy recovers, it is widely believed that China will maintain economic growth at a double-digit pace while India will see its GDP growth rise from 6% in 2008 to around 9% in 2010. We believe that this expansion will reduce the gap in petrochemicals consumption between these markets and the developed countries. The end-use of petrochemicals is often in consumer products such as textiles, plastic bottles, etc. These products are considered basic necessities used in everyday life in the developed world and are used by consumers across all economic strata. We believe China and India are at an inflection point following which usage of end products manufactured from petrochemicals will see a very high rate of consumption growth.

While there are certain countries which are growing at rates comparable to China and India, e.g. Azerbaijan (9.3% GDP growth in 2009) and Congo (7.5% GDP growth in 2009), it is the size of the market in China and India with populations of 1.3bn and 1bn respectively which sets them apart. These statistics overwhelm the population figures for the entire European Union, whose population stands at 850mn, and the complete North American continent which has a population of 530mn. These figures, combined with current per capita petrochemicals consumption in the developed world (around 25kg in the EU and around 35kg in North America, based on industry sources), support our view of untapped

Demand from Asia should be backed by strong volume growth



petrochemicals markets in Asia with huge growth potential. With such a favourable demographic profile, we expect that growth in petrochemicals-based product consumption will be accompanied by huge volume growth. We anticipate that this stage of increasing petrochemicals consumption, which should become increasingly evident over the next 10-15 years, will be fed in significant part by Saudi Arabian supply.

Currently, key exports from the Middle East to Asia mainly include basic chemicals which are processed further by Chinese manufacturers and subsequently exported to the US and EU. Such products include PET bottles, cups, textiles, etc. Thus, besides the local demand from the Chinese market, there is derived demand for Middle Eastern petrochemicals which is correlated to developed market economic growth. However, we believe that domestic demand for such products is set to grow strongly from now on.

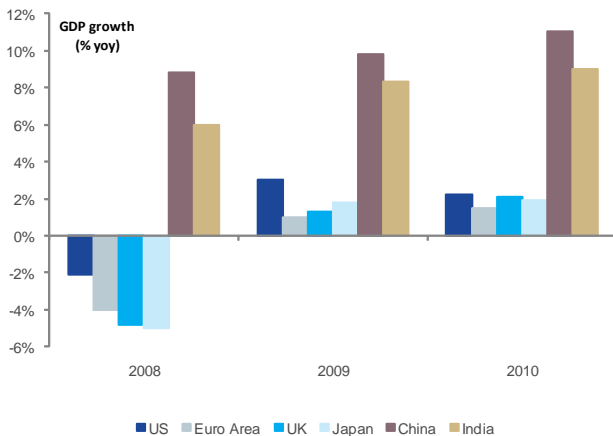
In combination, petroleum and the petrochemicals sector contribute an overwhelming 90% of Saudi Arabia's exports. With Saudi Arabia's huge installed capacity, it accounts for over 80% of petrochemical exports from the GCC countries. In 2008, over half of the Kingdom's petrochemical output was exported to Asia with China retaining its number one position. Thus, the Saudi petrochemicals industry is already significantly geared to Chinese demand. Presently, almost 70% of SABIC's polyethylene output is exported to a single country – China (source: Sinopec PEPRIS, the research subsidiary of Sinopec).

We believe India is also an important market for Saudi petrochemicals players given its burgeoning population, rising middle class and low per capita petrochemicals consumption. Another factor which makes India an attractive destination is the comparatively slow growth of local petrochemicals capacity in the country. Unlike China, which is witnessing massive and rapid capacity additions, the pace of new capacity in India is much slower due to numerous government regulations. Therefore, over the longer term, we think India will remain a key export market as domestic capacity additions will lag petrochemicals demand.

China is already a big market for Saudi PPC exports

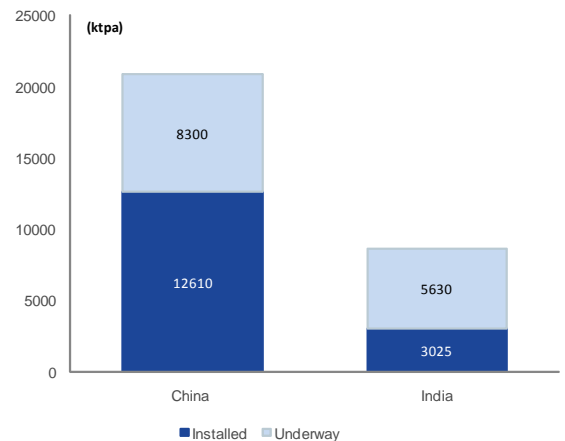
We believe India will continue to be a huge market even in the long term

**Figure 12.1 Global economic growth: China and India lead the way**



Source: IMF, Al Rajhi Capital

**Figure 12.2 China and India: ethylene capacity over 2009-14**



Source: BMI, Al Rajhi Capital

As the graph above shows, India has lower new ethylene capacity under construction than China for projects to be completed by 2014. Looking forward, we believe India will have significantly lower "nameplate" (i.e. nominal) ethylene capacity for a country that is set to overtake China in terms of population by 2025. We believe that Saudi petrochemicals players will fill the demand-supply gap in India's petrochemicals market with their low-cost output.

### Chinese state-owned players are boosting petrochemicals capacity...

In view of China's policy of attaining self sufficiency, Saudi players face a threat of local Chinese output displacing imports in their biggest market over the long term. China's petrochemicals industry is now the third largest in the country's economy, behind textiles and industrial machinery. China's petrochemicals sector has been able to expand at a rapid pace due in part to the government's ninth Five Year Plan (1996-2000) which helped in



China is pushing for self sufficiency with a massive capacity build-up in ethylene

China will increase capacity by 65% between 2010 and 2014, outpaced only by Saudi Arabia on over 95%

US is shedding capacity as Saudi Arabia and China build up

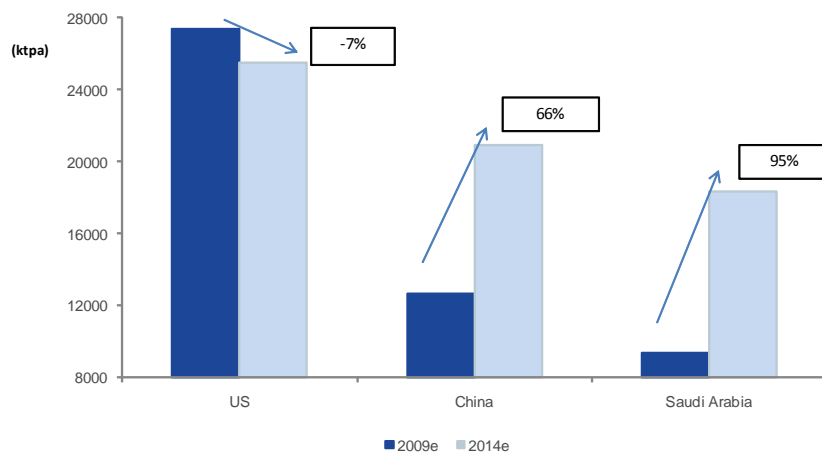
restructuring the industry by allowing the forging of joint ventures with foreign firms for obtaining technological expertise more simply than in earlier periods.

### Ethylene

The Chinese petrochemical industry has been increasing ethylene capacity at a compound annual rate of 14.7% over the last five years according to Sinopec PEPRIS. Taking account t of these additions, Chinese ethylene self-sufficiency could touch 60% in 2010, up from 45% in 2006. To bridge the demand-supply gap through domestic production, the Chinese government has been steadily increasing capacity from 1990 when it stood at 2mtpa to the current 12.5mtpa. According to BMI, China is now the second largest producer of ethylene in the world, after the US, accounting for 10% of the global capacity. Indeed, China has put such pressure on its production facilities that capacity utilisation rates have not dropped below 90% over the last 20 years, and have often risen above 100% to meet increasing demand.

In 2009, China’s ethylene capacity was 12.0mtpa while production was 10.4mtpa. Looking forward, the Chinese government estimates that ethylene capacity will grow by over 100% by 2020 to 26mtpa. The bulk of ethylene production in China comes from Sinopec and PetroChina, the two state-owned players. Sinopec is the dominant producer, accounting for 62% of total ethylene capacity in the country. According to BMI, China will see additions of 7.5mtpa over 2010-2015 and of 5mtpa over 2015-2020. The new capacity additions have come in the form of joint ventures with global majors like BP, Shell and Exxon. According to BMI estimates, 1.65mtpa worth of polyethylene capacity and 1.49 mtpa polypropylene capacity will come on stream in 2010. These forecasts indicate that China will increase capacity by almost 65% between 2010 and 2014, only outpaced by Saudi Arabia which will see capacity increase by over 95%.

**Figure 13. Global ethylene capacity: Saudi Arabia and China are catching up with the US**

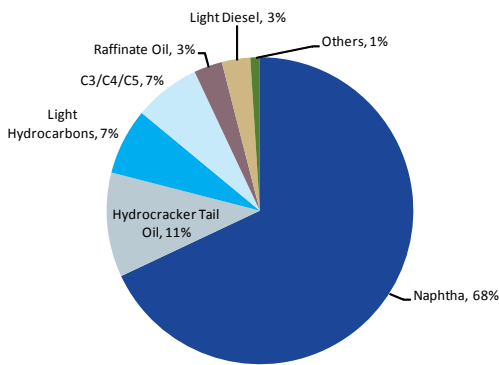


Source: BMI, Al Rajhi Capital

As the chart below illustrates, in 2009, a large portion of China’s ethylene output was produced using naphtha as a feedstock. This exposes the final output to changes in crude oil prices given naphtha’s correlation with oil prices. We expect this trend to continue in the future.

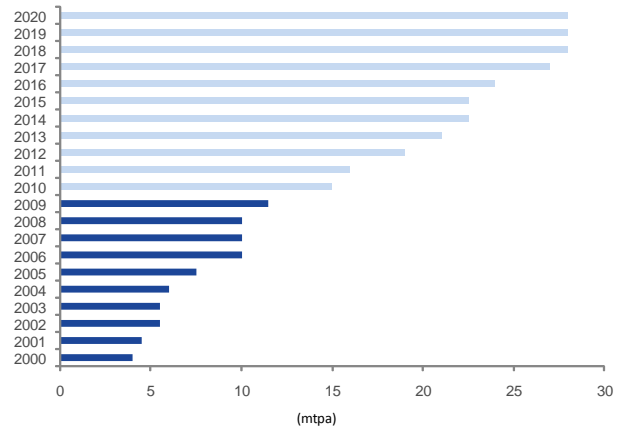


Figure 14.1 China: petrochemicals feedstock analysis



Source: Industry data, Al Rajhi Capital

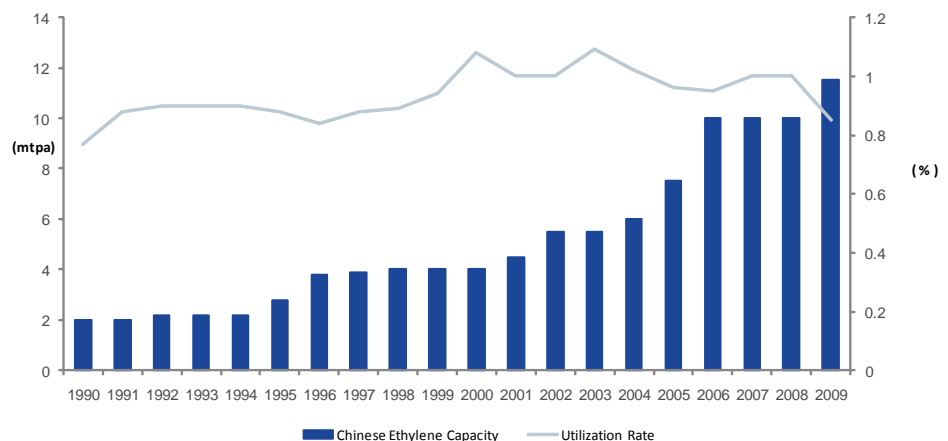
Figure 14.2 China: ethylene capacity outlook



Source: Industry data, Al Rajhi Capital

Chinese operating rates are among the highest in the world

Figure 15. China: ethylene capacity (mtpa) and utilisation rates



Source: Sinopec-PEPRIS

### Polypropylene

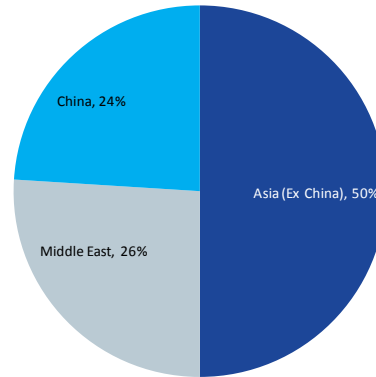
Global installed capacity of polypropylene is around 53mtpa according to BMI. The US is the largest producer of polypropylene with installed capacity of 9.01mtpa, followed by China with almost 6.9mtpa. The Middle East region accounts for just 8.2% of capacity as a result of years spent producing high quantities of ethylene. Global polypropylene demand has been rising at over 7.5% over the past decade. This growth rate is higher than the global GDP growth rate during the same period, signalling a gearing of greater than 1.0 to economic growth. As 67% of propylene is cracked into polypropylene, any increase in underlying propylene capacity will have an immediate effect in polypropylene supply. With propylene capacity expected to reach 88mtpa in 2011 from the current 80mtpa according to BMI, we believe there could be pressure on the supply side, keeping prices of polypropylene in check.

China could turn into a net exporter of propylene in a few years

While China has been a net importer of most petrochemicals including propylene, we believe this situation could reverse in the coming years. China has built significant propylene capacities like the 230,000tpa plant at Xiangshui which was completed in December 2008. According to BMI, 2009 and 2010 will be record years for capacity growth in China, with an expected 3.5mtpa of propylene capacity being added each year. According to BMI estimates, 1.49mtpa of polypropylene capacity will be added to China's already substantial installed capacity in 2010.



Figure 16. Polypropylene new capacities



Source: BMI, Al Rajhi Capital

### ...but new Chinese capacity could face delays

While growing Chinese self-sufficiency in petrochemicals represents the most likely scenario, there are certain factors which could affect the production build-up. Firstly, environmental concerns are being raised about some refining sites which are situated along major river banks and which could potentially pollute the water. Another factor is the sustainability of comparatively small petrochemicals producers in China. There are a few thousand such small producers already producing or setting up petrochemical plants. Given the importance of economies of scale in this business, it remains to be seen whether these producers can withstand the twin dangers of volatility in petrochemicals prices and changing supply-demand economics. A study conducted by the Chinese government and highlighted in BMI's China quarterly report shows that consumption per unit of output for smaller plants was 76% higher than for very large projects. This could potentially make it unviable for smaller producers to continue production. Yet another risk facing our view is the lack of raw materials and energy supply. If producers are unable to acquire the necessary inputs, there may be lower incentives for existing producers to set up capacity.

Delays in Chinese capacity additions would be positive for the Saudi players

In this report, we have assumed that China eventually does achieve self-sufficiency in petrochemicals. However, any significant delays in new capacity additions caused by the factors described above would bode well for Saudi petrochemicals producers and could provide further upside to our valuations.

Chinese demand has been growing faster than supply

### Chinese demand will continue to grow

The bulk of recent consumption growth in petrochemicals has come from one source: China. The Chinese economy has been growing at double-digit figures for the last five years with per capita GDP jumping from US\$1,679 in 2006 to just below US\$3,000 for 2010. This growth has resulted in huge demand for petrochemicals, which so far has mainly been met with imports from countries including South Korea, Taiwan and Saudi Arabia. China's average production of petrochemicals for the period 1990-2009 showed compound annual growth of 8.4% while consumption growth was 9.2% (source: Sinopec PEPRIS). These figures clearly reveal the gap between supply and demand and explain China's status as a net importer of petrochemicals.

We expect Chinese demand for petrochemicals to rise till at least 2020

While the planned capacity additions in China that we discussed earlier are huge, we believe that China's latent petrochemicals demand is so great that the new capacity will only serve the needs of the domestic market, at least in the near term. China's demand for ethylene has been growing consistently and most of this demand is being met by imports. South Korea is the main source of these imports, accounting for 27% of the petrochemical imports while Saudi Arabia supplies 10% of the imports. China's domestic ethylene demand is led by the country's textiles sector, which is the second biggest sector in the economy. The textiles sector is expected to continue its rapid growth and thus ensure that petrochemicals demand remains high. Another factor influencing demand is the fact that China's huge population is increasing personal consumption in areas such as polyethylene bags for foods, styrene cups



for warm liquids and PET bottles for soft drinks. Given that China set to remain as the world's most populous country till around 2025, we believe this demand will continue to rise. China is, after all, still a developing economy, which means there is abundant scope for per capita consumption of petrochemicals to catch up to the levels seen in mature western markets. China's recent double-digit GDP growth has been driven by massive exports. Whether or not China completely shifts from being an export-orientated economy to one led by domestic consumption, we believe that demand for petrochemicals will grow uninterrupted till at least 2020.

### Potentially detrimental to Saudi Arabia in the long run, but India should compensate

A significant part of Saudi Arabia's new petrochemicals production is expected to be exported to emerging markets like China and India. Currently, 10% of China's imports in this market come from Saudi Arabian supply. We expect this figure to rise when the new facilities in Saudi Arabia become operational. Thus, in the short term, China's reliance on Saudi petrochemicals should increase given its huge present mismatch between demand and supply.

However, in the longer run, as China's petrochemical capacities at Dushanzi (1.2mtpa ethylene) and Qinzhou (10mtpa oil refining) come on stream and begin production, the gap between local demand and local supply will come down. Ultimately, this could give rise to oversupply. We believe these fears have already struck a chord with the Chinese government, which started rejecting proposals for petrochemical plant expansions in Q4 2009. The change of stance could impact a few ethylene cracker projects currently being planned and therefore impact the total installed capacity forecasts. The China Petroleum and Chemical Industry Association has also framed guidelines addressing this issue. It calls for total ethylene capacity to be restricted to 21-23mtpa by 2015.

Likely to counterbalance any decline in imports from Saudi Arabia to China is India's growing appetite for petrochemicals. Currently, India imports almost 35% of its PVC consumption. Given the slower pace of capacity build-up by Indian companies, as well as arcane government procedures for foreign asset acquisitions, India should remain a huge importer of petrochemicals even over the longer term. We thus believe that India will be a key export destination for the Saudi petrochemicals industry.

Another avenue for growth is Brazil. The biggest country in the South American continent is one of the BRIC nations expected to grow at a rapid pace over the next two decades. We believe Saudi petrochemicals producers will try hard to increase exposure to Brazil over the coming years.

China could potentially be a competitor to Saudi PPC players in the longer term

We believe exports to India will continue even in the longer term



## Lack of ethane availability: lower percentage of natural gas in fields

Most natural gas in Saudi Arabia is 'associated' gas, which is dependent upon the production of crude oil

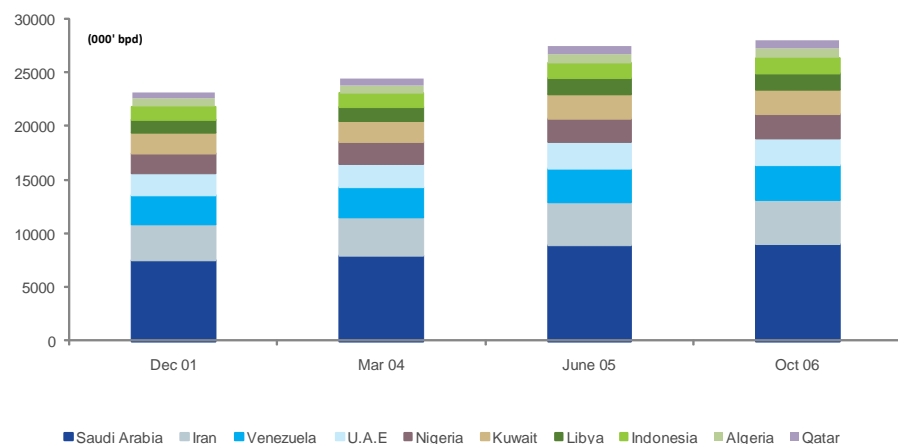
Ethane is derived from natural gas. Compounding the problem of availability of ethane is the lower percentage of natural gas in new gas fields in Saudi Arabia compared to historical averages. Most of the natural gas found in the Kingdom is 'associated' gas, which means that generation of gas is dependent upon the production of crude oil. While the country has the world's largest proven reserves of oil, it can exploit these reserves only within the framework of the oil quotas imposed by OPEC. The OPEC quota is designed to control the price of crude oil in a range that makes it economically viable for all members to earn economic returns without affecting the political equations of the cartel globally. Therefore, a large scale increase in natural gas production hinges on higher OPEC quotas. Given that oil prices have averaged US\$75 per barrel or so over the last few months, we do not expect any substantial increase in OPEC quotas in the near term.

On the other hand, demand for natural gas has been increasing at 7% annually according to the International Energy Agency. The increasing gap between demand for and supply of ethane should result in new crackers having a greater proportion of heavier feedstocks like propane and butane as their primary feedstock. The existing ones, using purely ethane as a feedstock, will be forced to use a greater proportion of mixed feedstock. It is also likely that the Saudi government will increase the supply price of ethane to US\$1.25/mmbtu by 2012 from the current price of US\$0.75/mmbtu. We believe this is plausible on economic grounds as the market price of ethane has diverged considerably upwards since the initiation of ethane supply at the current price (US\$4.00/mmbtu in the US & US\$6.00/mmbtu in Europe as of 2009) compared to US\$0.75/mmbtu in Saudi Arabia. However, for practical purposes, this move is likely to meet resistance given the importance of the petrochemicals industry to Saudi Arabia. Hence, we do not factor in an increase in ethane prices for the near term.

No new allocation of ethane since 2006

As a result of shortage of ethane, Saudi Aramco, the state-owned major oil producer, has denied any additional supply of ethane to Sipchem since 2006. (This was the last guaranteed supply from Saudi Aramco). Even for its own subsidiary formed with Sumitomo Chemicals, Petro Rabigh, the company has guaranteed supply at the current rates only till 2015, beyond which the rates for the contract will be revised.

Figure 17. OPEC quotas



Source: OPEC

As a consequence of limited supply of ethane, we expect the total percentage of ethane in Saudi petrochemicals crackers to come down from the low 70% range in 2008 to around 65% by 2014. This has important implications for the Saudi petrochemicals industry which we will consider over the next few pages of this report.

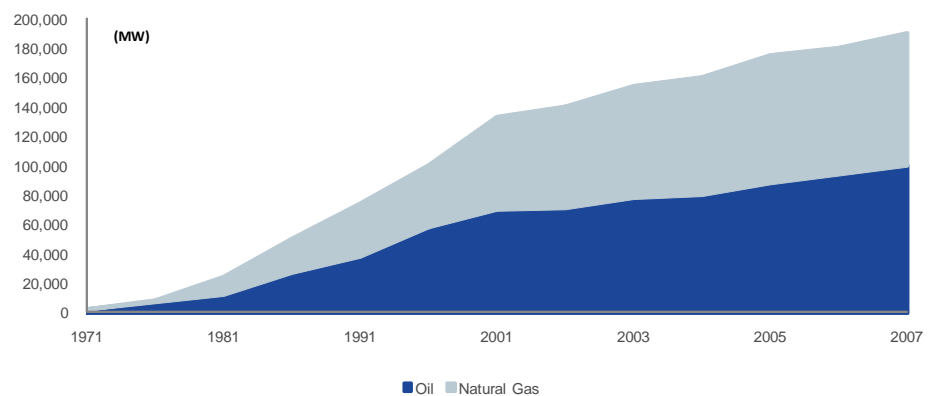


Power and water sectors are competing with petrochemicals for ethane allocations

## Ethane has alternative uses

When the Saudi government initiated the supply of cheap ethane to the petrochemicals industry a couple of decades ago, the market price of ethane was considerably lower (US\$2.00/mmbtu in developed markets) and less volatile than in current global circumstances. Supply was higher than demand, so that prices deviated only marginally and were range-bound. In Saudi Arabia, particularly, ethane had fewer alternative uses at the time. However, this scenario has now changed substantially as the Kingdom has witnessed rapid economic growth led by better utility and infrastructure facilities. The nation's considerable generation of natural gas was sufficient to support the rising demand from utility players till 2008, when Saudi Aramco produced 8.3bn cubic feet per day of gas, which exceeded the existing demand for natural gas at that time. However, 2009 was an inflection point as the situation reversed with demand overtaking supply to such an extent that the country turned into a net importer of natural gas in order to make it available to power companies. The trend in the use of natural gas for electricity generation has been moving upwards. Therefore, in our view, the main reason for the widening of the gap between demand of and supply for ethane has been the growing demand from gas-based power stations.

**Figure 18. Saudi Arabia: electricity generation by fuel**



Source: IEA

Electricity is produced using only oil and natural gas

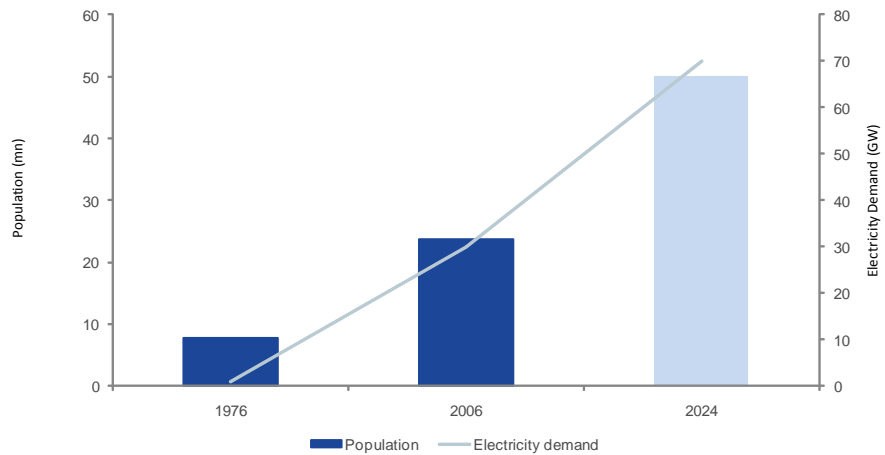
Electricity is generated only from oil and natural gas in Saudi Arabia. Other modes of electricity generation like coal and nuclear power have hardly been adopted so far. This makes power generation completely reliant on oil and natural gas and scarcity of either directly affects power generation. For example, in 2009 demand for natural gas from power stations was so high that the Saudi authorities had to force a temporary shutdown of power stations including the government-owned Saudi Electricity Company for lack of supply.

Electricity production has grown at a CAGR of 7.5% over the last three decades

The usage of natural gas by power stations in Saudi Arabia increased at a compound annual growth rate of 8.4% between 1981 and 2000, according to the IEA. While the proportion of natural gas used in electricity generation has remained steady since 1981 (at nearly 50%), it is the amount of electricity generated that has caused the scarcity of natural gas in the Kingdom. In 1981, a total of 24,000 megawatt hours of electricity was generated with natural gas and oil contributing equally towards the production. By 2009, power generation touched 190,000 megawatt hours, representing compound annual growth rate of 7.5% over the intervening period. With the greater part of natural gas supply being diverted for petrochemicals purposes in recent times, power generation companies have suffered lower growth in output and the country's reserve margin of electricity generation, i.e. the difference between capacity available and expected peak demand, has come down to 3%. This is much lower than our estimate of the global average of 10%. This situation has prompted the Saudi government to provide an impetus to electricity generation, putting it on a par with the petrochemicals industry in allocation of natural gas.



Figure 19. Saudi Arabia population growth versus electricity demand



Source: Saudi Electricity Company, Al Rajhi Capital

Desalination plants mainly operate on natural gas

Besides electricity generation, ethane is also used in desalination of water for drinking purposes in the Kingdom. As Saudi Arabia has no major source of natural water, desalination of sea water is the only real source for obtaining potable water in large quantities. Due to this acute shortage of free water resources, over 20% of the world's desalination plants are currently in Saudi Arabia. The desalination plants in the Kingdom mainly use natural gas. While the total consumption of natural gas in desalination plants is considerably lower than power stations, it is expected to rise rapidly with population growth set almost to double over the next 15 years, requiring an increase of installed desalination capacity. With nuclear-powered desalination plants still to achieve any substantial commercial production, we believe this will exert further pressure on ethane availability for petrochemicals crackers as desalination of water represents almost as important a use of natural gas as power generation.

The Saudi government has allocated over SAR140 for the power and water sectors

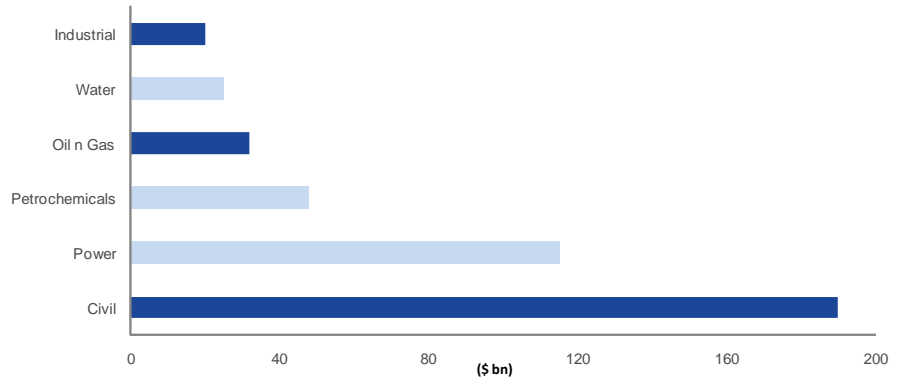
To address this issue, the Saudi government, in its 2010 budget, allocated approximately SAR140bn to the power and water sectors. Of the eight power projects (generating a combined 8,000 megawatts) coming on board in the next few years, five are to be powered by natural gas while two will be mixed and will use natural gas together with steam. This thrust towards power generation is represented by planned investment in the power sector (SAR115bn), which is greater than planned investment in the petrochemicals sector (SAR48bn). The planned investment figure is significant given the difference in the absolute scale of the two sectors as petrochemicals contributes a substantially greater percentage of Saudi GDP than the utilities.

Higher allocation of ethane to alternative uses threatens cheap supply to petrochemicals

We therefore believe that the Saudi government will take concrete steps to allocate a substantial portion of new ethane allocation towards electricity generation and desalination plants. This presents a considerable risk to petrochemicals producers in accessing cheap ethane feedstock in sufficient quantities to maintain the current feedstock mix of roughly 73% ethane for the new production facilities coming on board.



Figure 20. Saudi Arabia: ongoing investment projects



Source: Industry data, Al Rajhi Capital

Efforts are on from Saudi government to increase ethane production

In its effort to address the scarcity of ethane the Saudi government has commissioned agencies to identify potential natural gas reserves in the Rub' al Khali' ("Empty Quarter") desert region in the south of the Arabian peninsula. It also has plans to award contracts for the production of natural gas by 2014, which may lower the currently tight ethane supply situation. On completion of these projects, supply of natural gas is expected to increase from around 9bn cubic feet per day currently to 12-13bn cubic feet per day by 2014. However it is still uncertain whether ethane supply from new production facilities will be made available to petrochemicals companies due to the rise in demand from electricity generation companies. We, therefore, see the percentage of ethane in Saudi crackers declining irrespective of the success achieved by Saudi Aramco in increasing the production of ethane. This trend of moving away from ethane will be carried further as companies diversify through the speciality chemicals route, which requires a higher proportion of heavier feedstock to unlock derivatives for commercial production of speciality chemicals. As a result we see feedstock costs for Saudi petrochemicals producers increasing marginally in the long run, but not at levels that would force us to change our assumptions about their profitability significantly.



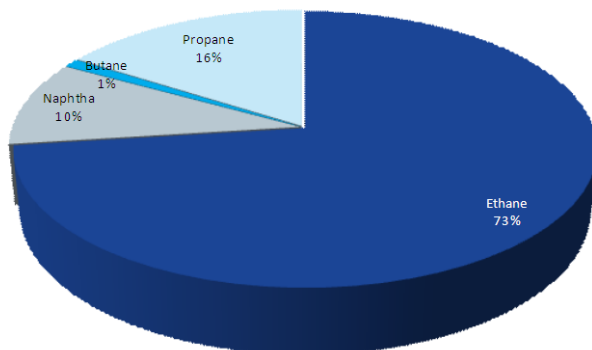
## Shift towards pricier feedstocks: inevitable but won't hurt the sector

### Higher proportion of heavier feedstocks

The move towards speciality chemicals will require greater use of heavier feedstocks

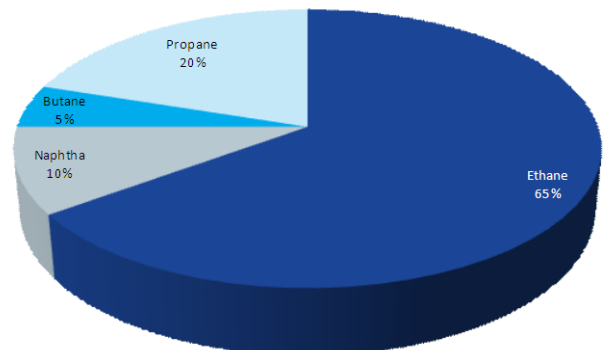
The major feedstocks for petrochemicals companies around the world are ethane and naphtha. (Other basic feedstocks are butane and propane.) Ethane is the lightest and simplest. While both ethane and naphtha generate derivatives that are similar in nature, the quantity of each derivative generated from cracking a fixed amount of feedstock is different. In general terms, ethane generates higher quantities of ethylene while naphtha generates greater amounts of propylene. The other derivatives flowing from both are Crude C4, benzene, pygas and other aromatics. However, ethane generates very low quantities of these subsidiary derivatives while naphtha generates them in much higher proportions. The dominant player SABIC and the industry in general have concentrated on basic chemicals like ethylene and propylene to be exported for further processing. Abundance of natural gas led to a focus on crackers using ethane. However, the higher and differentiated output derived from cracking of naphtha and associated heavy feedstocks such as propane and butane is necessary for producing speciality chemicals, into which area the country plans to diversify. A government initiative is also promoting production of speciality chemicals in order to diversify the Saudi economy and to satisfy local demand for value-added chemicals in industries such as automotive, appliances and consumer products; another intention is to generate higher employment. Therefore, a greater proportion of new crackers looks likely to be set up with mixed feedstocks consisting of naphtha, ethane, propane and so forth.

Figure 21.1 Saudi Arabia: feedstock composition (2007)



Source: Industry data, Al Rajhi Capital

Figure 21.2 Saudi Arabia: feedstock composition (2014e)



Source: Industry data, Al Rajhi Capital

We believe the proportion of ethane in total feedstock will drop from the current 73% to 65% by 2012

With increasing proportions of mixed feedstock in new crackers, we expect the proportion of ethane for Saudi petrochemical sector to decline from the current low 70% range to around 65% by 2012. However, from a cost perspective the Saudi petrochemical sector will still be better-placed in terms of feedstock than the rest of the world, considering that global feedstock composition is predominantly naphtha-based (with a split of naphtha 60%, ethane 28% based on industry data).



Naphtha generates a more diverse slate of derivatives

A shift to naphtha and other heavy feedstocks will expose companies to greater price volatility, and to an extent to changes in the crude oil price

**Figure 22. Derivatives of ethane and naphtha**

Derivative	Ethane (1.3 MT)	Naphtha (3.3 MT)
Ethylene	1.3 MT	1M <sup>1</sup>
Propylene	0.04 MT	0.5M <sup>1</sup>
Crude C4	0.03MT	0.32M <sup>1</sup>
Benzene	0.01MT	0.23M <sup>1</sup>
Pygas	0 MT	0.75 M <sup>1</sup>

Source: Industry Data, Al Rajhi Capital

### ...will result in a marginal increase in feedstock costs

A shift from pure ethane feedstock to mixed feedstock consisting of ethane, naphtha, propane, etc., will result in higher input costs for Saudi petrochemicals suppliers due to the difference in the cost of each feedstock. Saudi companies receive ethane at US\$0.75/mmbtu while the global average price of ethane has averaged around US\$4.00/mmbtu over the last four years. In comparison, the Saudi companies receive naphtha at a discount of around 31% to benchmark Japanese prices. Thus on a relative basis, a shift towards naphtha and other heavy feedstock will expose Saudi petrochemical companies to greater volatility in feedstock prices as the discount will directly vary with the market price of naphtha – unlike in the case of ethane where the market price is not a factor. As naphtha is a by-product of oil refining operations, its price usually follows the price of crude oil closely. Hence we hold the view that the shift to naphtha will expose Saudi petrochemicals players to volatility in the oil price to some degree.

Given the likely move towards a greater number of mixed feedstock crackers from pure ethane crackers, Saudi petrochemicals companies will have their cost advantage reduced. However, on an absolute basis, we believe the region will still have the most competitive prices in the petrochemicals sector globally.

Another factor which will soften the impact of potential increase in feedstock costs is the expected shift towards speciality chemicals. As Saudi petrochemicals players move from being dominant players in basic chemicals to speciality petrochemicals, their selling prices should improve. We expect the higher selling prices partially to offset any increase in the net feedstock costs due to a shift to heavier and more expensive feedstocks.



## Saudi Arabia on a capex spree major new capacity at Yanbu and Jubail

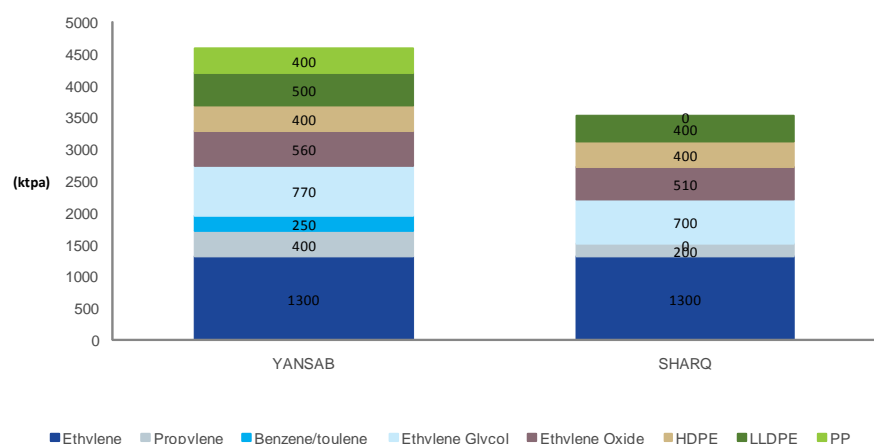
In its effort to diversify the economy, the Saudi government has promoted expansion in the petrochemicals sector on a huge scale. The biggest expansion projects are those currently underway at Yanbu on the west coast and Jubail in the Eastern Region. After the completion of these projects, according to BMI estimates Saudi Arabia will account for a remarkable 33% of additions to global petrochemicals capacity between now and 2014. (Note- Construction of Phase 2 of Petro Rabigh’s investment project at Rabigh on the west coast is yet to begin; completion is targeted for 2014.)

Saudi Arabia set to account for 10% of global petrochemicals capacity by 2014

The planned expansion of Saudi capacity should push the Middle East’s share of total world supply of petrochemicals to over 10%. According to estimates from BMI, the Saudi petrochemicals industry is set to double its ethylene capacity to 18.2mtpa by 2012 reflecting a compound annual growth rate of 17.7% for the period 2008-2012. At the centre of this capacity expansion are the two new facilities coming up in Yanbu and Jubail. Both of these facilities will be producing intermediate chemicals including fiber intermediates, chemical intermediates, linear alpha olefins and industrial gases along with polymers such as polyethylene and polypropylene. The facility at Yanbu (operated by Yansab) became operational in Q1 2010 while the facility at Jubail (operated by Saudi Kayan) is expected to start commercial production in 2012.

Furthermore, Petro Rabigh has planned a major investment project christened Rabigh 2 to increase the capacity of its existing plants. Due to the downturn in the GCC construction industry, costs for certain new investment projects petrochemicals and other sectors are believed to have dropped over 50% compared to budgeted figures at the initiation of the plans. We expect a similar reduction to apply to Rabigh 2, and therefore believe that eventual investment in the project between now and 2014 will total around US\$7bn rather than original estimates of roughly double that number. We believe this reduction in costs should make economic returns achievable even in the short run as the cost savings should outweigh decreases in the final selling prices of petrochemicals.

Figure 23. YANSAB and SHARQ: capacity breakdown



Source: Company data, Al Rajhi Capital

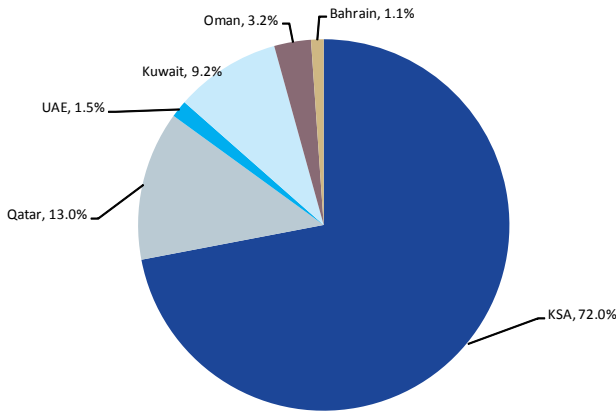
New investment in Qatar will reduce Saudi Arabia’s share of MENA petrochemicals capacity by 2014

With such massive capacity expansion, Saudi Arabia will maintain its position of leadership in the Middle Eastern region’s petrochemical capacity. However, with no new major production facilities planned to come on stream after the projects currently under construction, we expect the Kingdom’s absolute share in Middle Eastern capacity to decrease



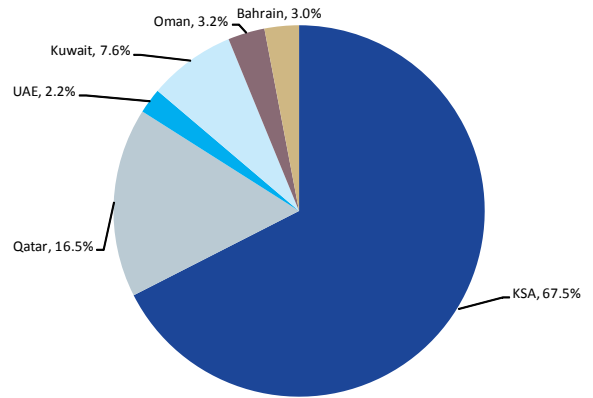
from 72% to 67.5% by 2014. In contrast, Qatar should see its share rise from 13% to 16.5% as a result of substantial capacity additions through the state owned Industries Qatar Company.

**Figure 24.1 Middle East: petrochemicals capacity (2009)**



Source Zawya and Al Rajhi Capital

**Figure 24.2 Middle East: petrochemicals capacity (2014e)**



Source Zawya and Al Rajhi Capital

US and EU crackers no longer able to compete on cost front

### Developed markets not witnessing capacity additions

Developed markets are not witnessing additions to petrochemicals capacity. To give a brief background, the average price of US natural gas was approximately US\$2.5/mmbtu in 2000. While that was still higher than the price of US\$0.75/mmbtu received by Saudi producers, US and EU petrochemicals suppliers achieved considerable savings on transportation costs by consuming domestically produced feedstocks. This allowed them to compete with Saudi rivals using cheaper feedstocks. Given the economies of scale present in the US as well as the latest technology, there was no economic incentive for the Saudi petrochemicals industry to expand up capacity in a big way as the US and Europe were generating enough output to meet local demand and the scale of demand for petrochemicals in emerging markets was considerably smaller than it is today. However, with oil prices rising, US based crackers started procuring natural gas at prices often breaching the \$4.00/mmbtu mark. The rise in oil prices added to the difficulties of petrochemical crackers in the Western economies as rising feedstock costs and flat demand growth dented their competitiveness. With global and particularly Asian demand rising at a rapid pace, the Saudi petrochemicals sector started building up capacity after 2001.

No new ethylene capacity additions in US since 2001

Petrochemicals capacity expansion in the developed markets, especially the US, has been muted since the turn of the century. Natural gas prices which had averaged US\$2/mmbtu throughout the 1990s have shot to highs of over US\$13/mmbtu in 2008 and averaged around US\$6/mmbtu in this decade. With oil prices staying above US\$70 per barrel, naphtha prices have also risen in tandem. As a result, European and US petrochemicals crackers have increasingly found it difficult to compete with low-cost Middle Eastern players. As petrochemicals are commodity products, price is often the single most distinguishing factor. This fact enables low-cost producers to outmanoeuvre high-cost players. In consequence, we expect capacity shutdowns in developed markets such as the US and the EU as companies increasingly try to rationalise their capacity portfolio in order to compete more with the low-cost producers.



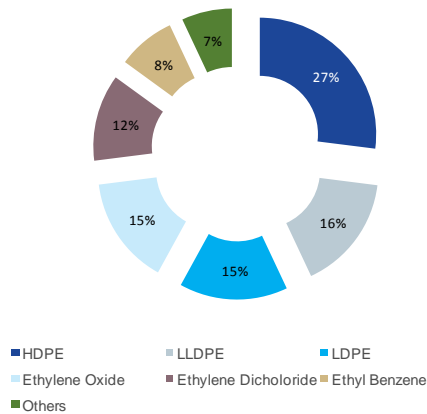
# Global petrochemicals market opportunities and risks

## Ethylene and propylene trends

SABIC is world's second largest producer of ethylene

Ethylene is the most basic petrochemicals product with a wide range of applications from film sheets to PVC pipes. According to BMI, global ethylene capacity was 126.7mn tons compared to consumption of 115.0mn tons in 2009, resulting in excess capacity of 11.7mn tons in 2009. Dow Chemical of the US is the largest producer of ethylene, followed by SABIC and ExxonMobil. The highest ever addition to ethylene capacity in a single year was seen in 2008.

Figure 25.1 Ethylene consumption



Source: Industry Data, Al Rajhi Capital

Figure 25.2 Ethylene spot NWE USD/MT CIF price



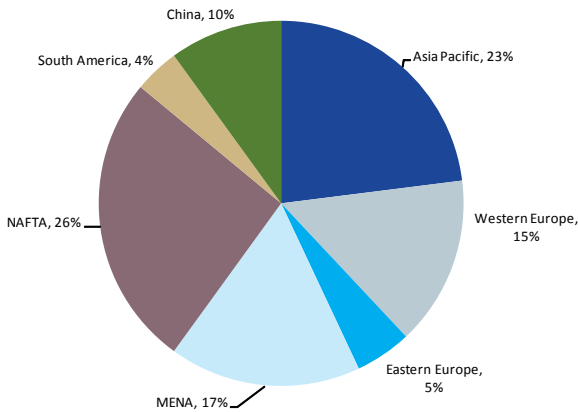
Source: Bloomberg, Al Rajhi Capital

MENA region's global ethylene share to touch 23% by 2012

Currently, North America represents 27% of production of ethylene, Asia Pacific 31%, MENA 16% and Europe 15%, with the balance in the rest of the world. Based on general industry data, driven by Saudi Arabia's investment boom, the MENA region should see its share of global ethylene production increase from 15% to 23% by 2012. Ethylene can be cracked from both ethane and naphtha-based feedstocks. Both of these are made available to Saudi petrochemicals players at discounted rates. As a result, the MENA region has seen a glut of new capacity for ethylene production. We believe further increases in ethylene production capacity besides the projects currently underway will be modest, considering that the MENA should clearly have achieved critical mass following completion of the existing major projects. On the demand side, North America continues to be the largest consumer of ethylene, accounting for over 26% of the total demand, followed by Asia which consumes an equal percentage.

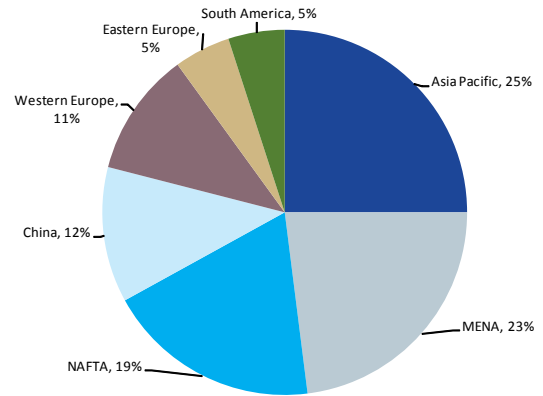


Figure 26.1 Global ethylene capacity breakdown (2009)



Source: BMI, Al Rajhi Capital

Figure 26.2 Global ethylene capacity breakdown (2014e)

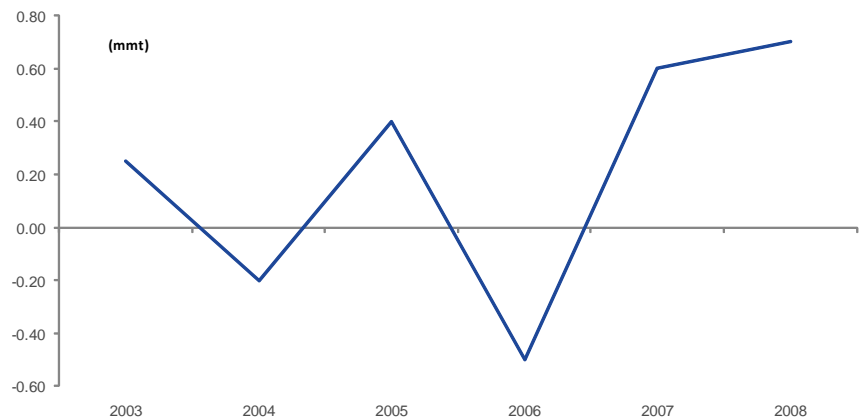


Source: BMI, Al Rajhi Capital

MENA has lagged in propylene production

Propylene ranks alongside ethylene as one of the building blocks for petrochemicals. Propylene is mainly channelled into the production of polypropylene and acrylonitrile which are used for a range of end use products. Total world propylene capacity is estimated at 68mtpa by BMI. This capacity is split as follows: 34% in North East Asia, 21% in Europe, 20% in North America and just 5% in the Middle East. The development of propylene production capacity in the Middle Eastern region has been constrained by the abundance of natural gas feedstock which led to the development and expansion of ethylene-based capacity, particularly in Saudi Arabia.

Figure 27. Propylene surplus-shortage



Source: Industry data, Al Rajhi Capital

Shift to heavier feedstock will boost propylene output

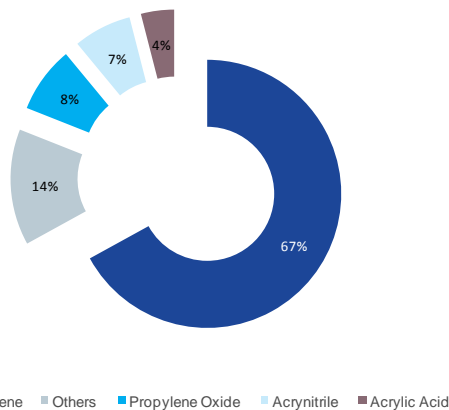
Given lower availability of natural gas in Saudi Arabia, there is a shift towards propane (the feedstock for propylene). Based increasingly on propane, substantial new production capacity for propylene is coming on stream from new investment projects by companies such as Petro Rabigh and Alujain Corporation. This surge of new projects will increase Saudi Arabia's capacity from 1.8mtpa to over 6mtpa in 2011 (source: BMI). These new projects coming on stream also have substantial cost advantages given the discount at which the Saudi government makes naphtha available to domestic companies.

Polypropylene represents the major application of propylene: 67% of propylene output is processed into polypropylene. The major demand for polypropylene comes from North America and Europe, with the two regions combined accounting for 68% of the demand



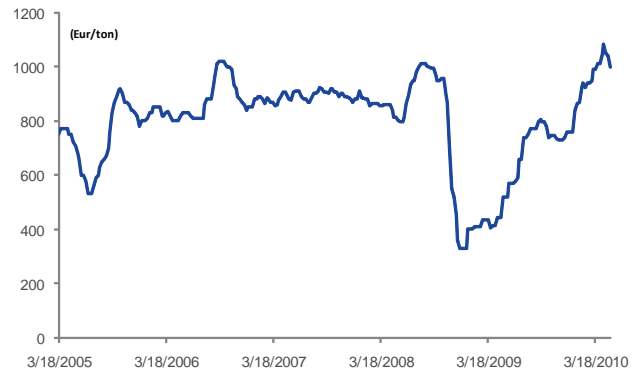
currently. We believe that developed economies will see marginal to flat growth in demand for polypropylene, and that the next wave of demand will come from Asian countries like China and India. We believe that Saudi petrochemicals producers have advantages in the form of cheaper feedstock in exporting to Asian countries.

**Figure 28.1 Propylene consumption breakdown**



Source: Industry Data, Al Rajhi Capital

**Figure 28.2 Propylene spot NWE Euro/MT CIF price**



Source: Bloomberg, Al Rajhi Capital

**Shale gas presents a low-cost option for US markets**

**Shale gas may alter the environment materially**

We believe shale gas is a contingent but important issue that may shape the future of the global petrochemicals industry and hence should be understood in detail. A relatively recent discovery, it is already creating debate about the potential impact that it may have on North American markets, the largest consumer of petrochemicals, as well as the effect on the bargaining power of GCC nations in setting prices for exporting natural gas to the developed markets. Integrated oil and gas companies like ExxonMobil and Royal Dutch Shell have started exploring shale gas in a big way, Exxonmobil’s US\$41bn acquisition of XTO energy and RDS’s US\$4.7bn acquisition of East Resources Inc being cases in point. Shale gas should result in lower natural gas prices as costs of drilling and extraction are lower than the traditional natural gas methods. Based on current estimates, there exist enormous amounts of potential shale gas reserves in the US (approximately 30% of existing natural gas reserves in North America). If the North American petrochemicals industry can speed up the extraction of shale gas, Saudi natural gas exports could face competition from a source which is not cost-competitive against Saudi exports on its own, but could become so given the savings in transportation costs.



## Saudi petrochemicals players strategy discussion

### SABIC group: prefer SABIC to Yansab and Saudi Kayan

#### SABIC has concentrated its expansion plans on basic petrochemicals

Given the feedstock cost advantages enjoyed by the SABIC group (SABIC, Yansab and Saudi Kayan), the company has concentrated its expansion plans on basic petrochemicals. Over half of SABIC's basic petrochemicals output is exported to Asia, with China and India accounting for a major portion. Besides its existing facilities, SABIC is adding production capacity through its expansion at Jubail and Yanbu.

6mtpa Saudi Kayan facility to be largest petrochemical complex in the world

Saudi Kayan, coming on stream at Jubail, will be one of the largest petrochemicals plants in the world with installed capacity of 6.0mtpa of petrochemicals. This capacity will be split into basic chemicals (85% of output including ethylene and propylene) and speciality chemicals (15% including aminoethanols and dimethylformamide). SABIC has a 35% stake in the company with the rest being split between the Al Kayan Company (20%) and the general public (45%) after an IPO for the company in 2008. Saudi Kayan, has however, faced delays with its start-up. From an initial expected startup date in 2009 which was pushed out till Q2 2010, the project now faces a potential delay till Q2 2012, thus delaying the revenue streams and presenting high project risk.

Another facility commissioned by SABIC group at Jubail is SHARQ, a 50:50 joint venture with a consortium led by the Japanese government. This facility will concentrate on the production of basic chemicals such as ethylene and polyethylene and will add 2.8mtpa to SABIC's already huge nameplate capacity. SHARQ has already entered commercial operation.

3.9mtpa Yansab facility has already started production

The second major capex project being undertaken by SABIC group is at Yanbu where SABIC holds 51% of the company Yansab and the rest is owned by public shareholders, after an IPO in 2005. Yansab has an installed capacity of 3.9mtpa and will concentrate fully on production of basic chemicals, helping SABIC meet the demand emanating from Asia and other growth markets like Brazil. The facility at Yansab has already begun commercial production in Q1 2010. We estimate that ethane accounts for 55% Yansab's feedstock while the rest consists of heavier feedstock like propane.

Sinopec Tianjin cements SABIC's China market entry

SABIC has also opted for an overseas joint venture in the form of SABIC SinoPec Tianjin with SinoPec of China. Each company will hold a 50% share in the joint venture. The facility will produce 1.0mtpa of ethylene. Although the facility's installed capacity is substantially smaller than that of Saudi Kayan and Yansab, we believe that this is a very positive development as it moves SABIC's production closer to end-customers, thus saving on transportation costs. This also helps SABIC counter the threat of barriers to entry in the Chinese market by shifting production facilities to the local market. Moreover, a tie up with an influential local player like Sinopec gives SABIC necessary knowhow to access the Chinese market further. We believe SABIC will enter into similar joint ventures in the future as China represents its most important growth market.

The four facilities mentioned above account for the majority of SABIC's aggressive expansion plans undertaken over the last three to four years. These are additional to comparatively smaller expansion projects such as the project undertaken through a joint venture with Exxonmobil to produce 4,00,000tpa of thermoplastics and polymers.

#### Project risk for Yansab and Saudi Kayan

In our view, Sinopec Tianjin and more importantly Saudi Kayan are still exposed to project risk. As Yansab and SHARQ have already begun commercial production, project risks associated with these facilities have been mitigated. There is still no certainty regarding expected start-up by Saudi Kayan.

Yansab and Saudi Kayan are "project companies" which carry a greater level of risk than their parent

Another important feature of these expansion plans is that Yansab and Saudi Kayan are essentially "project companies". To our mind, these companies are formed primarily for the purpose of supplying output to the parent company SABIC, which will market and distribute their products. It is reasonable to expect that Yansab and Saudi Kayan, once mature, will generate higher margins than their global competitors, given the feedstock cost advantage



Speciality chemicals intended to contribute 20% revenue by 2020

SABIC is geared to Asian demand

Asia driving growth in fertilisers business

We find SABIC attractive

enjoyed by all Saudi petrochemicals companies. However, as companies whose entire business plan is focused around a single project, both Yansab and Saudi Kayan will be vulnerable to delays in those projects, or to specific risks affecting them. This means that investors in Yansab and Saudi Kayan will always face a greater degree of risk than investors in the parent company SABIC, which is much more diversified.

### Vision 2020

The SABIC group (including Yansab and Saudi Kayan) has announced a vision statement according to which it aims to generate 20% of its revenue through speciality chemicals by 2020. Currently, speciality chemicals generate 14% of the revenue. Considering the massive capacity expansion coming up in the basic chemicals segment, we believe SABIC will have to scale up its speciality chemicals capacity substantially by 2020 to meet its target. The company SABIC Innovative Plastic (SIP) offers an avenue to help the group achieve this. SIP has been unprofitable and has eroded net profit margins since it was acquired in 2007 from General Electric of the US. However, in our view, the division has contributed towards establishing a base for SABIC in the important North American market, where up till now it has been weak. We also believe that the Saudi government sees SABIC as a key vehicle for achieving diversification and generating employment, and that in line with government policy the company will therefore move towards speciality chemicals swiftly.

### Much depends on Asian economic growth

Long term sustainability of the massive capacity coming on board is mainly associated with prospective demand emanating from Asia. In simple terms, new demand for the entire petrochemicals market is concentrated in Asia. The SABIC group is heavily exposed to the region, with more than half of its petrochemical exports going to Asia. Besides Saudi Tianjin in China, we believe SABIC will also be looking for an alliance in India, which will help the company get a strong foothold in the second fastest growing major economy in the world. We believe such a move would be beneficial for the company in the long run as China builds up its local petrochemical capacity.

### Metals will remain a regional business

SABIC's metals segment is focused primarily on supplying the local and regional demand for long and flat-rolled steel products. It currently accounts for 10% of revenues. We do not think, realistically, that SABIC aspires to be a global leader in metals, as it is in petrochemicals; rather, it will focus on the MENA region as far as the metals business is concerned. We believe this approach will help the company concentrate on its core strength i.e. petrochemicals where it enjoys competitive advantages not available in the metals business.

### Fertilisers outlook positive

Fertilisers represent the third largest segment of the company. SABIC exports almost its entire quantity of output in this segment to Asian countries like India and Thailand. Prospects for this segment seem to be positive given that Asian economies have high populations which will generate proportionate demand for agricultural output, thus necessitating a higher usage of fertilisers. Even in this segment, SABIC enjoys the advantages of a low-cost player due to the cheap underlying feedstock cost. Thus, SABIC is able to compete on costs effectively with local fertiliser producers in Asia.

### Summary: strategic advantages of SABIC

Broadly, we like SABIC for its very low-cost structure, its diverse petrochemicals portfolio, the company's strategy of expanding its petrochemicals and fertiliser operations and strong research and development capabilities. The company's proximity to its main target market in Asia also means that other competitors incur higher costs of transportation, further boosting SABIC's case. Given SABIC's size and economies of scale, we do not envisage significant competition emerging from either existing or new local players which might have similar feedstock cost advantages. Given rising demand for speciality chemicals, we expect SIP to contribute towards SABIC's profitability. SABIC also benefits from low debt and tax rates at about 4%. Along with low interest rates, SABIC potentially has access to a vast supply of funds as a result of the Saudi government's substantial stake in the company (70% through the Public Investment Fund). We believe this gives added impetus for expansion and acquisitions to capitalise on its low cost base.

The above advantages give SABIC a unique opportunity to consolidate its position as a global leader in petrochemicals by tapping the growing Asian demand with its low-cost output. The



company is less subject to profitability cycles driven by supply and demand than its smaller rivals and so presents a strong investment case.

### Risks for SABIC

The risk of overcapacity lingers in the petrochemicals market globally due to the huge expansion in production facilities in the GCC region and China. However, we do not believe that SABIC is seriously threatened in view of its market-leading position and its very low-cost structure. In addition, we believe SABIC already has a substantial presence in China to tap new petrochemicals demand effectively. SABIC's low cost feedstock consistently contributes to EBITDA margins that are above the industry average: 35% for SABIC versus 15% for the industry globally. Note: Dow Chemical achieves an EBITDA margin of 14.7%, while BASF achieves a margin of 17.9%.

Another risk factor that merits mention is the tariffs being imposed on certain SABIC chemicals. Based on our discussions with the companies, we know that certain governments, including those in China and India, have imposed duties on petrochemicals imports from Saudi Arabia, on the grounds that the feedstock discounts given to the Saudi suppliers are excessive. While there is a risk that this issue will worsen, for the moment we regard the instances of imposition of duties as isolated, and do not believe that the duties are significant. We are therefore not assuming a significant impact on SABIC's company's revenues or margins in a significant way.

### Petro Rabigh: strong parentage drives competitive advantage

Petro Rabigh was established in 2005 as a joint venture between Saudi Aramco and Sumitomo Chemical. Following the IPO in 2008, the share of each promoter came down to 37.5%. The company has two business segments: oil refining and Petrochemicals. In refining, the company has a capacity of 400,000 barrels per day of Arabian Light crude oil and in the petrochemicals business it has a capacity of 2.4mtpa. The two segments are highly integrated in order to enable the company to convert low-value crude oil into higher-margin products.

#### Strong ties with Saudi Aramco ensure feedstock availability

Like SABIC, Petro Rabigh benefits from a cheap and secure source of feedstock made available to it by the Saudi government (ethane at US\$0.75/mmbtu). Saudi Aramco, the state-owned oil company which owns 37.5% of Petro Rabigh, has guaranteed supply of ethane to its affiliate for a period of 30 years till 2038. Even though the pricing of the contract will be revised in 2015, the security of ethane supply assumes importance in a scenario of declining ethane use in Saudi petrochemical crackers. Petro Rabigh also has competitive advantages stemming from its strong parentage, the other major shareholder being Sumitomo Chemical of Japan (also with a 37.5% holding). Both major shareholders are global leaders with a strong operating history: Saudi Aramco in upstream operations and refining and Sumitomo in petrochemicals. Besides benefiting from technical knowhow, this also gives Petro Rabigh access to financing at favourable terms and rates.

#### Distribution and marketing agreements with parent companies

##### Sumitomo Chemical

Petro Rabigh has an agreement with Sumitomo Chemical, whereby the Japanese company will handle the distribution and marketing of Petro Rabigh output (both refining and petrochemical) outside of the GCC region – especially, we think, in Asia. We believe that the marketing margin on petrochemicals revenues to be paid to Sumitomo will be in the range of 3-4%.

##### Saudi Aramco

Within the Middle Eastern region, Saudi Aramco will handle the distribution and marketing functions for the refining output while Petro Rabigh will itself manage the functions for the petrochemicals output. The agreement stipulates that Saudi Aramco will receive a margin ranging between US\$0.25 and US\$0.40 per barrel for marketing of Petro Rabigh's refining output.

We believe the distribution and marketing arrangements with its strong parents will clearly benefit Petro Rabigh in two of the world's most dynamic regions, considering that its parents are much better known than it is. Thus, Petro Rabigh enjoys strong backing that is not available to most start-up competitors globally.

Petro Rabigh has assured ethane supply

Agreements will be clearly beneficial for the company



Phase 2 will give long-run top-line boost

### Phase 2 expansion will substantially boost profits

Petro Rabigh has aggressive expansion plans to capitalise on the advantages provided for it by its strong parent companies. The Petro Rabigh Phase 2 plant is underway and slated for commissioning in 2014. The Phase 2 project involves scaling up ethane production capacity by 30mn standard cubic feet (sfc) per day and construction of a new aromatics complex using 3mtpa of naphtha. The facility will also produce higher value-added output such as low density polyethylene and acrylic acid. We believe this expansion provides a good long run earnings boost to Petro Rabigh by increasing not only the volume of petrochemicals output but also by widening the diversity of its product portfolio.

Moreover, the investment cost associated with this project has reportedly come down from US\$14bn (projected at initiation) to US\$7bn. This is mainly due to lower costs overall in the current environment compared to 2008 when the project was conceived. At that time, the global economy and the GCC real estate sector were at their peak. The recession dampened new construction activity, as a result of which contractors and materials are available at substantially lower costs currently.

### Asia is Petro Rabigh's biggest market

According to company filings, 96% of Petro Rabigh's petrochemicals output is exported outside Saudi Arabia, with Asia accounting for 84% of the total. In contrast, only 35% of refined oil output is exported, with the rest consumed within the Kingdom. We believe the high concentration of exports in the petrochemicals business is beneficial for Petro Rabigh as demand from Asia is rising rapidly and, in our view should be able to absorb the company's output. Considering that the refining operations of the company operate at very low single-digit margins, we believe a big foray into petrochemicals could add substantial value to the company.

96% of petrochemicals exported to Asia

**Figure 29. PetroRabigh segmental assumptions**

	2010e	2011e
GRM (\$/bbl)	1.30	1.37
Petchem(EBITDA%)	45.00%	45.00%

GRM = "gross refining margin"  
Source: Al Rajhi Capital

### Summary: strategic advantages of Petro Rabigh

Strategically, we are positive about Petro Rabigh as we think the company will benefit from its strong parentage, its expansion into petrochemicals, efficient transportation systems and a strong demand from Asia. Its connection with Saudi Aramco and Sumitomo lends an air of credibility to the company. Petro Rabigh has also ventured from being a pure refining operation to one integrated with a downstream petrochemical cracker. Lastly, with a bulk of the demand for petrochemicals coming from Asia, Petro Rabigh is in a position of strength to capitalise on all these factors.



## Sipchem: opportunity for diversification through methanol derivatives

Phase 2 output includes several different products

### Phase 2 commercial production diversifies revenues

Sipchem's Phase 2 plant has recently come on stream and started commercial production. The new facility will produce 345,000tpa of carbon monoxide, 460,000tpa of acetic acid and 330,000tpa of vinyl acetate monomer (VAM) through the International Acetyl Company (IAC), International Vinyl Acetate Company (IVAC) and International Gases Company (IGC) (Note: these companies are not all wholly owned by Sipchem, but it is the majority holder.) The Phase 2 plant has an operating structure such that one-half of production of acetic acid will be used as a feedstock for the production of VAM, thus ensuring in-house supply of feedstock at cost price. We believe this will contribute towards high margins while also ensuring availability of feedstock. Moreover, Phase 2 will also diversify Sipchem away from pure reliance on methanol. The dynamics of supply and demand in the acetic acid market suggest that it offers a shield during times of downturn. For example, the profits of suppliers such as Celanese and Eastman remained relatively strong during the recent downturn.

The new plant also allows waste products to be reused

The Phase 2 acetyls complex has been constructed using technology from DuPont and Eastman Chemicals, players which have advanced technological expertise in the business. The on-time commissioning of the acetyls complex demonstrates that the company has the ability to conceive and implement expansions in an orderly manner, amidst the spate of delays associated with other petrochemical plants in the GCC region. In November 2009, as one of the plants came on stream, Sipchem was able to reduce feedstock costs further as material which had earlier been wasted could now be used as feedstock for other production processes.

Phase 3 represents long-term diversification

### Phase 3 will enable Sipchem to move up the value chain

In the long term, Sipchem plans to construct and operate a third petrochemicals facility by 2014 (Phase 3) with capacity of 800,000tpa, which will produce ethylene and propylene. We believe this will further diversify Sipchem's product portfolio away from methanol. This facility is expected to be completed at a cost of US\$0.8bn. The company has already entered into an agreement with SABIC whereby it will supply SABIC with carbon monoxide in return for ethylene and propylene. We believe this co-operative agreement will allow both companies to concentrate on their core areas of competence, and hence that it will generate competitive advantages and cost savings for both. This move will reduce the company's dependence on methanol which at current high oil prices faces the risk of increasing substitution by coal.

China is biggest methanol consumer

### China is Sipchem's largest market

The major market for Sipchem's products is Asia, which accounts for almost 50% of its sales whereas the EU region accounts for around 38%. The greater part of Asian exports is directed to China. China has long been a net importer of methanol and we do not see this changing in the near term. In our view, Sipchem, with its low-cost methanol output, will continue to expand its exports to the Asian region. The company has virtually no competition in BDO (butanediol) and acetic acid and these segments should help in generating high margins.

Anti-dumping duties could erode margins

### Anti-dumping duties pose greatest risk

Certain factors that pose risks to our views about Sipchem are the potential imposition of duties in end-markets, potential delays in the commissioning of the Phase 3 facility and changes in feedstock prices. Sipchem's products are facing anti-dumping duties in Asian markets where it is perceived that costs have been subsidised by the government in spite of WTO sanctions. Another factor that could derail our view is the change in feedstock prices. Sipchem is a private-sector player and could be affected more than government-sponsored competitors in the event of unfavourable movements in feedstock prices. Lastly, commissioning of the Phase 3 plants could go beyond the expected date of 2014, thereby complicating the revenue stream expected to be generated from the facility.

Results collapsed last year but should recover

### Sipchem presents a good diversification play in petrochemicals

Sipchem was adversely affected by the global financial downturn as revenues collapsed by 51% year-in-year in 2009 while the net profit margin slid from 31% to 16%. However, looking forward, we see margins getting back to previous high levels as the last effects of the credit crisis wither away. We are broadly positive on Sipchem given the diversification that it offers through methanol and methanol-based derivatives. We also view commencement of commercial production from the Phase 2 plants as a significant event which will contribute substantially to top-line growth.



## Petrochemicals sector key driver in the Saudi market

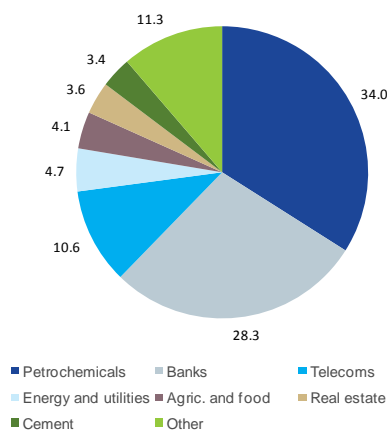
The oil sector dominates the Saudi economy, but is hardly represented in the stock market

The Saudi economy is dominated by two key sectors: oil and petrochemicals. The oil and gas sector is the undisputed king of the economy, accounting for about 56% of GDP (crude oil and gas and refining operations only, with petrochemicals excluded). However, the oil and gas industry is essentially controlled by one company, the giant state-owned Saudi Aramco, which has the largest proven reserves and the highest production of any oil company in the world. As Saudi Aramco is unlisted, the oil sector is – to the surprise of many – only indirectly represented in the national stock market, e.g. through Saudi Aramco’s affiliate Petro Rabigh.

The petrochemicals sector accounts for 34% of the TASI index

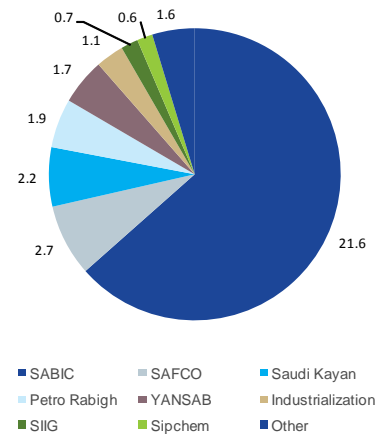
Petrochemicals manufacturing accounts for only about 5% of Saudi GDP. However, in contrast to the oil sector, there are numerous players and many of the companies are listed. At present petrochemicals is the single largest sector in the Saudi TASI stock market, accounting for 34% of the total market. (Petrochemicals vies with banks for dominance of the index. The banking sector was larger over the recessionary year of 2009, but was overtaken by petrochemicals early this year.) Within the sector, however, one company is dominant: SABIC, which is both the largest stock in the TASI and the largest listed company in the Middle East.

Figure 30.1 Saudi TASI index: sectors as % of total market cap.



Source: Tadawul, as at 21 July 2010

Figure 30.2 Petrochemicals stocks as % of total TASI market cap.



Source: Tadawul, as at 21 July 2010

SABIC alone represents 22% of the stock market

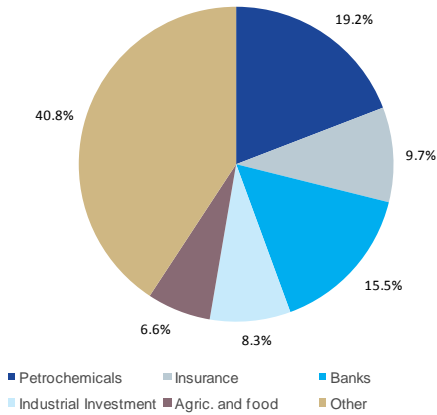
As the charts above show, SABIC alone represents 21.6% of the market capitalisation of the TASI index (and 64% of the market value of the petrochemicals sector). The next largest stock in the market, Al Rajhi Bank, accounts for 9.4% of the market, while the third biggest, STC, accounts for 6.5%. SABIC is thus larger than the two next biggest companies in the TASI combined. There are few stock markets in the world where one listed company is so dominant.

The petrochemicals sector also accounts for a high proportion of market trading

The petrochemicals sector and SABIC do not simply dominate the stock market in terms of size; they are also important in terms of trading volume. In 2009, the petrochemicals sector accounted for 19.2% of the total volume of shares traded in the Saudi stock market, and for 23.7% of the total value of shares traded. By Q2 2010, those figures had risen to, respectively, 36.2% and 44.7%. Since the petrochemicals sector is deeply cyclical, revenues and profits for the Saudi players turned down sharply in 2009; but they are now recovering strongly. It should come as no surprise, therefore, that trading volumes in the sector have risen in tandem.

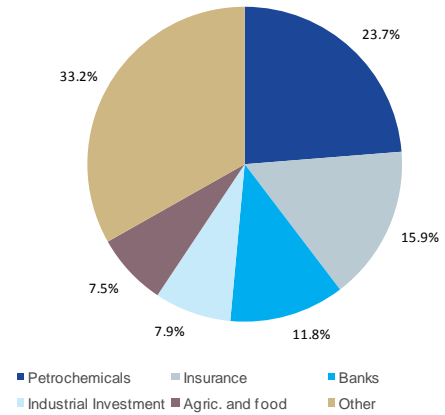


**Figure 31.1 Breakdown of total TASI traded volume (mn of shares) by sector in 2009**



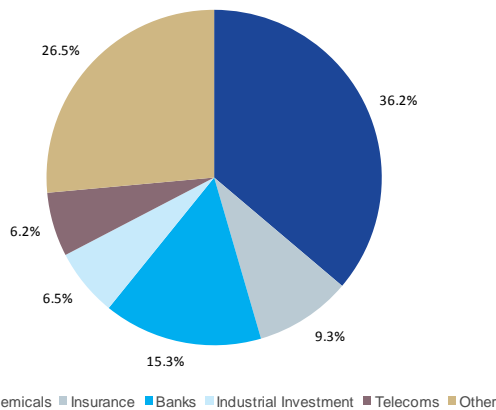
Source: Tadawul

**Figure 31.2 Breakdown of TASI total traded value (SAR mn) by sector in 2009**



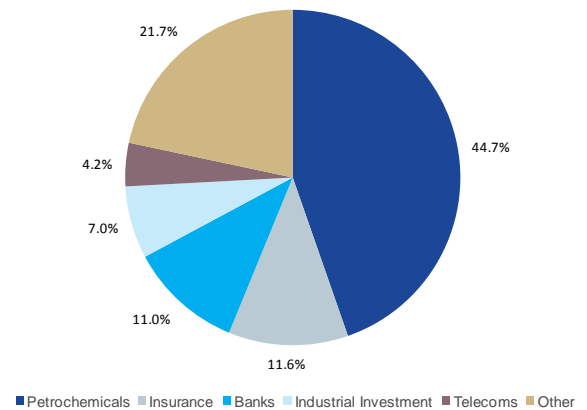
Source: Tadawul

**Figure 32.1 Breakdown of total TASI traded volume (mn of shares) by sector in Q2 2010**



Source: Tadawul

**Figure 32.2 Breakdown of TASI total traded value (SAR mn) by sector in Q2 2010**



Source: Tadawul

**SABIC ranked no.5 by traded volume and no.1 by traded value on the TASI in 2009**

SABIC itself, of course, stands out as one of the most heavily traded stocks in the market. The retail investors who dominate the Saudi stock market are particularly enamoured of one company, Alinma Bank, which in 2009 accounted for a remarkable 13.3% of the total volume of shares traded in the market. SABIC was actually only no.5 on this measure, ranking behind Alinma Bank, Emaar, Zain KSA and Ma'aden; however, it was easily no.1 when measured by the total value of shares traded, SAR143.2bn or 7.3% of the total for the market. In Q2 2010, SABIC ranked no.6 by volume of shares traded, behind Saudi Kayan (an interesting stock for first position), Alinma Bank, Zain KSA, Ma'aden and Saudi Electricity. This time, SABIC was no.2 by value of shares traded, on SAR35.2bn or 13.3% of the total for the market, again behind Saudi Kayan.

**Saudi Kayan was the most heavily traded stock in the market by both volume and value in Q2 2010**

The fact that Saudi Kayan was the most heavily traded company in the Saudi stock market in Q2 is also compelling evidence of the significance of the petrochemicals sector. As we have noted, Saudi Kayan is a "project company" which will not generate revenues or profits for several quarters yet. Nevertheless, investors are clearly so convinced of the importance of the sector overall that they are willing to trade heavily in a stock for which earnings visibility is minimal compared to the more established companies in the market.



**Figure 33. Trading of popular stocks (2009)**

Company	Volume (mn of shares)	% of total	Value (SAR mn)	% of total
Alinma	7,628	13.3%	95,767	4.9%
Emaar	3,195	5.6%	31,597	1.6%
ZAIN KSA	3,005	5.2%	34,194	1.7%
MA'ADEN	2,737	4.8%	38,743	2.0%
<b>SABIC</b>	<b>2,443</b>	<b>4.3%</b>	<b>143,156</b>	<b>7.3%</b>
<b>Market total</b>	<b>57,338</b>	<b>100.0%</b>	<b>1,962,946</b>	<b>100.0%</b>

Source: Tadawul

**Figure 34. Trading of popular stocks (Q2 2010)**

Company	Volume (mn of shares)	% of total	Value (SAR mn)	% of total
<b>Saudi Kayan</b>	<b>1,886</b>	<b>16.6%</b>	<b>37,733</b>	<b>14.2%</b>
Alinma	1,500	13.2%	17,578	6.6%
ZAIN KSA	546	4.8%	4,990	1.9%
MA'ADEN	474	4.2%	9,064	3.4%
Saudi Electricity	435	3.8%	5,511	2.1%
<b>SABIC</b>	<b>376</b>	<b>3.3%</b>	<b>35,206</b>	<b>13.3%</b>
<b>Market total</b>	<b>11,380</b>	<b>100.0%</b>	<b>265,678</b>	<b>100.0%</b>

Source: Company data, Al Rajhi Capital

The Saudi petrochemicals sector is very hard to ignore

The importance of the petrochemicals sector within the Saudi stock market makes it very difficult to ignore. As noted above, the petrochemicals sector represents 34% of the TASI index, while SABIC alone represents 22%. Any investor focused on Saudi Arabia or GCC countries who holds no Saudi petrochemicals stocks – and, in particular, no SABIC – in his portfolio is therefore implicitly taking a significant bet against the index.

As we see it, holding an underweight or zero weight position in the Saudi petrochemicals sector might be justified if one held a highly negative view about the direction of both the global economy and the Saudi economy. It is undeniable that the petrochemicals sector is both cyclical and highly dependent on external demand. If the global economy experiences a severe renewed contraction (e.g. in the form of a so-called double dip recession), then it is reasonable to expect revenues and earnings for the Saudi petrochemicals companies to turn downwards again. In such a scenario, it is also reasonable to believe that the oil price would weaken, with adverse implications for growth in the oil-dependent Saudi economy.

The Saudi economy is strong, and we expect expansion in hydrocarbons and other sectors to fuel growth of 3-4% in 2010-2011

However, the evidence that we see does not lead us to predict a renewed downturn in Saudi Arabia. The country is the largest economy in the GCC, and is structurally on a strong footing with a low public debt to GDP ratio (16% of GDP in 2009) and current account balance in surplus. The strength of the economy is further supported by the fact that the Saudi Arabia received US\$36bn as foreign direct investment (the ninth greatest total in the world) last year. Global economic recovery so far in 2010 has helped stabilise demand for crude oil and so has supported the price at an average of US\$75 per barrel over H1. Our economic view is that the oil price will rise above US\$75 per barrel as global recovery continues, driven by demand from emerging markets. (Note. For the purposes of this report, we have assumed a constant oil price of US\$75n looking forward.) It was demand from emerging markets that led exports from Saudi Arabia to rise by 23% year-on-year in Q1 2010, led by hydrocarbons and related products. Exports of petrochemicals rose by 30% whereas those of plastics surged by 104% in the same period. Rising demand for exports has driven the continuous increase in hydrocarbons production since H2 last year: average crude oil production was about 200,000 barrels per day higher in Q2 2010 than in Q2 2009. Looking at the non-hydrocarbons sectors, heavy government infrastructure spending has been supporting construction, while all sectors should benefit from the fact that banks have slowly started extending credit again. Given the backdrop of improving global and domestic prospects and structural strength, we expect the Saudi economy to grow by 3-4% in 2010-11 compared to 0.6% last year.

Taking a strong stand against Saudi petrochemicals is equivalent to taking a strong stand against Saudi Arabia

Our overall view on the Saudi economy provides justification for a positive stance on the petrochemicals sector. At the present stage in the global economic recovery, we would argue that to take a stand against the Saudi petrochemicals sector – which represents, as we have noted, about 17% of national GDP – is equivalent to taking a stand against Saudi Arabia itself.



This is a position that investors who do not have high weightings in the region are free to take without threat of damage to their performance. However, for investors focused on Saudi Arabia and GCC countries, taking a strong bet against Saudi Arabia – the strongest economy in the region – carries a certain degree of risk.



## Valuation attractive overall

We use long-run DEP valuation in which all excess returns fade to the cost of capital...

...and assume a 30 year period of competitive advantage (40 for SABIC)

We are only giving target prices for three of the companies in this report

SABIC suffered in 2009, but we expect recovery up to our assumed economic peak year of 2014, and then a slowdown to an economic trough in 2019

We expect investment activity to slow down sharply from now on

Our key method of valuation for the Saudi petrochemicals players is long-run discounted economic profit (DEP), sometimes also called discounted long-run EVA (economic value added). This is a simple variation on discounted cash flow and is mathematically equivalent. In our models, we make explicit forecasts for income statement, balance sheet and cash flow out to 2021. We then assume a steady fading of return on invested capital, i.e. excess return, down to the cost of capital over a period of up to 30 years from the present (40 years for SABIC). This approach avoids a common problem in long-run modelling: namely, that the analyst stops forecasting at some arbitrary point when the company in question is still generating high returns. In terms of financial theory this is implausible, and excess returns will eventually disappear through competition, regulation or some other means.

Our DEP valuations are sensitive to many factors, including assumed revenue growth, EBITDA margin and capex/sales ratio in 2021, i.e. the last year of explicit forecasting. Another important variable is the assumed duration of the period of competitive advantage remaining at current levels, i.e. the period during which the company generates returns above weighted average cost of capital (WACC). Deciding on the length of the period of the competitive advantage is naturally a subjective exercise involving many variables and scenario. We have assumed 30 years for all but one of the petrochemicals players, SABIC, for which we assume a period of 40 years. This assumption reflects SABIC's huge scale and increasing global presence, which we do not expect any of its domestic or regional competitors to rival for the foreseeable future.

However, as with any DCF-based approach, the factor to which the DEP valuation is most sensitive is WACC. For SABIC, we have assumed a WACC of 8.9% based on an estimation of risk-free rate of return and market risk premium in Saudi Arabia and adjusting for our estimated target debt levels and a measure of the company's systematic risk, i.e. its beta. For Saudi Kayan and Sipchem, we have assumed WACCs of 8.3% and 8.6% respectively. Our WACCs for Petrorabigh and Yansab are slightly lower than for the other three companies due to their higher debt levels, which we expect to persist; this has led us to assume a higher terminal debt structure.

Below we discuss our long-run assumptions for all five companies in turn. However, please note that we are only giving fair values and target prices for three of the companies in this report, SABIC, Saudi Kayan and Sipchem. Please refer to the note on our Sharia policy on page 6 of this report for further details.

### SABIC

#### Long-run assumptions

As for all the other companies in this report, we make explicit revenue and profit forecasts for SABIC until 2021. After the recession year of 2009, in which sales fell by 31% and return on invested capital (ROIC) fell to just 7.4% by our estimate, we expect SABIC to achieve a strong recovery in 2010. For this year we forecast revenue growth of 32%, EBITDA growth of 76% and a recovery in ROIC to 12.9%. We assume steady growth up to our assumed economic peak year of 2014, followed by a gradual slowdown to an economic trough in 2019. We expect peak ROIC of 16.6% in 2014, trough ROIC of 7.1% in 2019, and gradual recovery thereafter. We assume that SABIC's production volumes remain steady throughout the coming decade except in 2019, for which we assume a decline of 5%. Given SABIC's strong feedstock cost advantage, we have built our model assuming an EBITDA margin of around 38% for the next few years. (While above the level of global peers, note that SABIC's EBITDA margin is only about two-thirds of the margin of Sipchem, which is focused on one family of products based on methanol.) However, we expect that the margin will drop to 31.5% in our assumed economic trough year of 2019 before recovering.

SABIC is engaged in massive capacity expansion at Jubail and Yanbu. Once these projects are completed, we do not expect SABIC to engage in major capacity expansion for some years. Hence we assume a sharp decline in the capex/sales ratio from 23% in 2009 to 17% in 2010, followed by a decline by to 14% in 2011. We expect this level to be maintained for the rest of the decade. Note: our assumed long-run capex/sales ratio of 14% may appear high by the



We assume a period of competitive advantage of 40 years for SABIC

standards of global peers such as BASF and Dow Chemical, which over the past couple of years have invested around 5% of sales. However, firstly, these companies' capex/sales ratios may pick up as global economic recovery continues. Secondly, we expect strong gearing to Asian demand to boost investment spending by the Saudi petrochemicals companies. Thirdly, Al Rajhi Capital assumes above-consensus long-run capex levels in many industries, partly in order to reflect probable future acquisition activity, which is almost impossible to predict accurately.

### DEP forecasting

Regarding our long-run DEP model, we assume a steady fading of economic returns from 2021 until 2049, by which time we assume that ROIC falls to equal weighted average cost of capital (WACC). Given SABIC's dominant position in the Middle Eastern petrochemicals market and its increasing global presence, we assume a longer period of competitive advantage, i.e. period over which ROIC exceeds WACC, for SABIC than for its peers: 40 years for SABIC versus 30 for the rest. We calculate a WACC for SABIC of 8.9%.

Figure 35. SABIC: estimation of WACC (%)

Risk-free Rate	3.8%
Market Risk Premium	6.7%
Adjusted Beta	1.22
Cost of Equity	11.9%
Pre-tax Cost of Debt	4.8%
Effective Tax rate	4.0%
After-tax Cost of Debt	4.6%
Target debt/(debt + equity)	40.0%
<b>WACC</b>	<b>8.9%</b>

Source: Company data, Al Rajhi Capital

In DEP forecasting, appraised fair enterprise value may be broken down into two elements: opening invested capital, i.e. the debt and equity capital that has already been deployed in the business, and discounted economic profit, i.e. the present value of future economic returns (returns above cost of capital). As the table below shows, on the basis of our 40 year model we estimate fair enterprise value for SABIC at SAR381.2bn. By our estimate, 68% of this total lies in invested capital, and 32% lies in discounted economic profit. From appraised fair enterprise value, we subtract net debt and minority estimates to give estimated fair equity value of SAR308.1bn. On this basis we estimate fair value per share for SABIC at SAR102.7. This implies 17% upside from the current share price.

Figure 36. SABIC: estimation of fair value

(SAR mn)	
Opening invested capital	259,645
Discounted present value of future economic profits	121,504
<b>Appraised value of enterprise</b>	<b>381,149</b>
Value of non-core assets	0
Value of debt	-28,708
Value of minorities	-44,375
<b>Appraised value of the equity</b>	<b>308,065</b>
No. of shares (mn)	3,000.0
<b>Appraised share price (SAR)</b>	<b>102.69</b>

Source: Company data, Al Rajhi Capital

The table below shows fair value for SABIC at different assumed periods of competitive advantage (but with all other assumptions unchanged):



**Figure 37. SABIC: fair value at different assumed periods of competitive advantage**

Years	Fair value per share (SAR)
25	97.7
30	99.6
35	101.2
<b>40 (core scenario)</b>	<b>102.7</b>
45	104.0
50	104.6

Source: Al Rajhi Capital

## Saudi Kayan

### Long-run assumptions

We are pessimistic about Saudi Kayan due to the delays associated with commissioning of its new production facilities. From an expected initial start-up date in Q4 2009 which was originally delayed until Q2 2010, we think the project now faces a potential delay till Q2 2012, thus delaying the revenue stream associated with the company. Once production has started, we make explicit forecasts for Saudi Kayan's production volumes and realised prices between then and 2021; these assumptions drive our revenue forecasts. We assume a global economic peak in 2014 followed by a gradual decline till 2019 when we assume an economic trough. In 2019, we have assumed that capacity utilisation declines by 10% and that realised prices fall by 5% year-on-year.

It is Saudi Kayan which is responsible for the SABIC group's huge expansion at Jubail. Once the Jubail project is completed, one could reasonably assume a sharp drop in Saudi Kayan's capital expenditure levels. However, bearing in mind the sharp cost overrun on the project to date (see the company section on Saudi Kayan), we have deliberately been conservative and have assumed a capex/sales ratio of 15% for several years after Saudi Kayan launches operation in 2012. As noted above, we expect strong gearing to Asian demand to boost investment spending by the Saudi petrochemicals companies. Moreover, Al Rajhi Capital assumes above-consensus long-run capex levels in many industries, partly in order to reflect probable future acquisition activity, which is almost impossible to predict accurately.

### DEP forecasting

Under the DEP method, we use fading assumptions from 2021 till 2039 based on an assumed 30 year period of competitive advantage. 2039 is the year in which ROIC (return on invested capital) falls to WACC (weighted average cost of capital). Between now and 2021, we expect Saudi Kayan to achieve an economic profit, i.e. a ROIC above WACC, in all years except our assumed trough year of 2019. For 2021, we predict ROIC of 10.3%, which then fades gradually to WACC of 8.3% by 2039.

**Figure 38. Saudi Kayan: estimation of WACC (%)**

Risk-free Rate	3.8%
Market Risk Premium	6.7%
Adjusted Beta	1.05
Cost of Equity	10.7%
Pre-tax Cost of Debt	4.8%
Effective Tax rate	4.0%
After-tax Cost of Debt	4.6%
Target debt/(debt + equity)	40.0%
<b>WACC</b>	<b>8.3%</b>

Source: Bloomberg, Al Rajhi Capital

As the table below shows, on the basis of our 30 year model we estimate fair enterprise value for Saudi Kayan at SAR38.3bn. By our estimate, 90% of this total lies in invested capital, and 10% lies in discounted economic profit. From appraised fair enterprise value, we subtract net debt to give estimated fair equity value of SAR21.6bn. On this basis we estimate fair value per share for Saudi Kayan at SAR14.4. This implies 17% downside from the current share price.



**Figure 39. Saudi Kayan: estimation of fair value**

<b>(SAR mn)</b>	
Opening invested capital	34,591
Discounted present value of future economic profits	3,730
<b>Appraised value of enterprise</b>	<b>38,321</b>
Value of non-core assets	0
Value of debt	-16,759
Value of minorities	0
<b>Appraised value of the equity</b>	<b>21,562</b>
No. of shares (m)	1,500.0
<b>Appraised share price (SAR)</b>	<b>14.37</b>

Source: Company data, Al Rajhi Capital

Saudi Kayan will generate economic profit – but not enough to justify the current share price

We should note that the stock market values Saudi Kayan at a premium to its invested capital: hence the enterprise value/invested capital (EV/IC) ratio of 1.3x. This suggests that the stock market expects Saudi Kayan economic profits over time. (Note: the EV/IC ratio may be thought of as a more sophisticated price/book value ratio; and Saudi Kayan's EV/IC ratio of 1.3x is accompanied by a price/book value ratio of 1.7x, suggesting in the same way that the company deserves to trade at a premium to the stated value of its assets.) While we agree that Saudi Kayan will generate economic profits over time, we do not expect the company to generate a sufficient level of economic profit to justify the current share price.

The table below shows fair value for Saudi Kayan at different assumed periods of competitive advantage (but with all other assumptions unchanged):

**Figure 40. Saudi Kayan: fair value at different assumed periods of competitive advantage**

<b>Years</b>	<b>Fair value per share (SAR)</b>
25	13.8
<b>30 (core scenario)</b>	<b>14.3</b>
35	14.8
40	15.3
45	15.7
50	15.7

Source: Al Rajhi Capital

Sipchem's increasing diversification should reduce its sensitivity to the economic cycle

## Sipchem

### Long-run assumptions

Currently, Sipchem's business portfolio is very dominated by methanol. Looking forward, however, the company will move into derivatives of methanol which will generate new revenue streams. Sipchem's increasing diversification should sharply reduce its sensitivity to the economic cycle, which cut the company savagely in 2009 when sales dropped by 51% and EBITDA by 69%. Looking forward, we thus assume healthy prices growth for the company over the next decade barring 2019, which we assume will mark the trough of the next economic downturn. Given Sipchem's niche, we see capacity utilisation holding steady at 95%, except for 2019, where we assume a drop to 85%. We assume a boost to overall production as the Phase 3 facility comes on board in 2014. As Sipchem is one of the lowest cost producers, we assume an EBITDA margin of over 60% over the next ten years except in the assumed economic downturn of 2018-19. As the company will soon begin construction of its Phase 3 plant, we assume heavy capex in the period leading up to 2014. Beyond that period, we expect capex to moderate and assume that the company will increase its the dividend payout.

ROIC is far lower than the high EBITDA margin would suggest, reflecting low asset turnover

Sipchem's high capex means that asset turnover is low: we estimate only 0.2-0.3x over the next ten years. This helps explain why return on invested capital (ROIC) is far lower than the high EBITDA margins would suggest; we estimate ROIC in a range of 8-11% over the coming decade. However, in all years except over the next downturn we expect Sipchem to achieve ROIC above cost of capital, so the company should generate respectable economic returns over time.



## DEP forecasting

Under the DEP method, we use fading assumptions from 2021 till 2039 based on an assumed 30 year period of competitive advantage. 2039 is the year in which ROIC (return on invested capital) falls to WACC (weighted average cost of capital). Between now and 2021, we expect Sipchem to achieve an economic profit, i.e. a ROIC above WACC, in all years except our assumed trough year of 2019. For 2021, we predict ROIC of 10.5%, which then fades gradually to WACC of 8.6% by 2039.

**Figure 41. Sipchem: estimation of WACC (%)**

Risk-free Rate	3.8%
Market Risk Premium	6.7%
Adjusted Beta	1.1
Cost of Equity	11.1%
Pre-tax Cost of Debt	4.8%
Effective Tax rate	4.0%
After-tax Cost of Debt	4.6%
Target debt/(debt + equity)	37.5%
<b>WACC</b>	<b>8.6%</b>

Source: Bloomberg, Al Rajhi Capital

As the table below shows, on the basis of our 30 year model we estimate fair enterprise value for Sipchem at SAR14.7bn. By our estimate, 90% of this total lies in invested capital, and 27% lies in discounted economic profit. From appraised fair enterprise value, we subtract net debt and minority interests to give estimated fair equity value of SAR9.9bn. On this basis we estimate fair value per share for Saudi Kayan at SAR29.7. This implies 33% upside from the current share price.

**Figure 42. Sipchem: estimation of fair value**

(SAR mn)	Sipchem
Opening invested capital	10,757
Discounted present value of future economic profits	3,920
<b>Appraised value of enterprise</b>	<b>14,677</b>
Value of non-core assets	0
Value of debt	-3,855
Value of minorities	-910
<b>Appraised value of the equity</b>	<b>9,912</b>
No. of shares (m)	333.3
<b>Appraised share price (SAR)</b>	<b>29.74</b>

Source: Company data, Al Rajhi Capital

The table below shows fair value for Sipchem at different assumed periods of competitive advantage (but with all other assumptions unchanged):

**Figure 43. Sipchem: fair value at different assumed period of competitive advantage**

Years	Fair value per share (SAR)
25	26.0
<b>30 (core scenario)</b>	<b>29.7</b>
35	33.1
40	36.6
45	38.6
50	38.9

Source: Al Rajhi Capital



We expect Yansab to achieve an EBITDA margin of around 41% over the next decade except in 2018-19

## Yansab

### Long-run assumptions

We make explicit forecasts for Yansab for eleven years, i.e. till 2021. Now that commercial launch has begun, we expect the company's capacity utilisation and production volumes to stay essentially constant over the coming decade except in our assumed recession year of 2019. Regarding selling prices, we assume a steady annual growth rate up to our assumed economic peak year of 2014, followed by a steady slowdown in growth up to 2019, in which year prices decline. We expect Yansab to report EBITDA of SAR2.54bn and an EBITDA margin of 38.5% in 2010. Thereafter we believe that the EBITDA margin will rise to around 41%, taking account of the company's sizable advantage in terms of feedstock costs. We expect that Yansab will be able to maintain that margin level except during our assumed downturn of 2018-19.

Although Yansab has already incurred very high capex in the construction of the Yanbu plant, bearing in mind both strong demand from Asia and the cost overruns on investment projects seen in the sector, as in the case of Saudi Kayan have assumed a capex/sales ratio of 15% for several years into the future. Yansab has relatively high gearing (we estimate the net debt/EBITDA ratio at 4.8x for the end of 2010), and so we do not expect the company to pay its first dividend until 2015.

## Petro Rabigh

### Long-run assumptions

We make explicit forecasts for Petro Rabigh for eleven years, i.e. till 2021. Following full operational start-up of the company's petrochemicals operations, we assume that production volumes will remain steady till 2015 when we have modelled a 30% increase in petrochemicals production on account of the launch of the company's Phase 2 petrochemicals investment project. However, in 2019, our assumed year of recession, we assume that capacity utilisation will drop from 95% to 85% and production volumes decline. Regarding realised prices in petrochemicals, we assume a steady growth rate till 2014 after which we expect a gradual decline till 2018 and a decline of 5% in 2019. For Petro Rabigh's refining segment, we have conservatively assumed an average crude oil price for the next three years of US\$65 per barrel. Thereafter we have assumed that the price rises by US\$2 every year to US\$77 per barrel in 2018 and for 2019 we have assumed that crude oil collapses to USD50 per barrel before swinging back towards previous highs in 2020 and 2021.

We expect Petro Rabigh's EBITDA to swing handsomely positive in 2010 on account of the contribution from petrochemicals division, and expect the company to achieve an EBITDA margin of around 8% this year. Note: Petro Rabigh's oil refining operations carry far lower margins than petrochemicals. We expect the capex/sales ratio to swing up from 4-5% to around 12% of sales over 2011-14 ahead of the launch of the Phase 2 project. Following that, we expect the capex/sales ratio to drop to about 5% and maintain that level till 2021.



## General risks for the sector

Saudi Kayan's plant has been delayed by three years

### Commissioning risks a major hurdle

A considerable part of our investment thesis is based on the potential of the additional capacity coming on through the facilities at Yanbu and Jubail. There is a risk that unforeseen circumstances could hamper the start-up activities and thus delay the initiation of production at these facilities. This could affect our revenue projections as the planned exports of petrochemicals would be delayed. What gives substance to our risk view is the fact that Saudi Kayan has cancelled an EPC order for LDPE and amine facilities and the project which was originally scheduled for start in 2009 is now expected to commence commercial production in 2012. Another case in point is the delay in starting up of the facility at Yanbu due to floods in November 2009.

The key risk for the Saudi petrochemicals industry would be a sustained downturn in oil prices

### Petrochemical prices susceptible due to declining crude oil prices

The entire petrochemical industry's fortunes are ultimately based on the price of crude oil, from which the petrochemicals are derived. Natural gas (ethane) prices are directly correlated to crude oil prices. High crude oil prices force producers to substitute natural gas for petroleum products, which increases the demand for natural gas, and therefore its price. As discussed at various points in this report, Saudi petrochemical companies use ethane as their major feedstock (72% of total feedstock in 2008), which they receive at a heavily discounted price of \$0.75/mmbtu, thus insulating them from any price shocks.

However, for Saudi petrochemicals companies, what varies with changes in oil prices is the quantum of their operating margins. As these companies get access to cheap ethane, their input cost curve remains stagnant without being influenced by oil prices. Any increase in oil price translates into higher selling prices (with the feedstock costs not increasing) and thus higher profits. The key source of risk, therefore, for the Saudi petrochemicals industry would be a sustained decline in oil prices worldwide, which would push down their profit margins. This is because the ultimate selling price of petrochemicals globally would be forced down as their competitors would also have lower feedstock costs. Thus, a sustained decline in oil prices can prove detrimental to our valuations and target prices.

Note. All our research in this report assumes a constant oil price of US\$75 per barrel.

### Cut in OPEC oil production quotas would reduce supply of gas

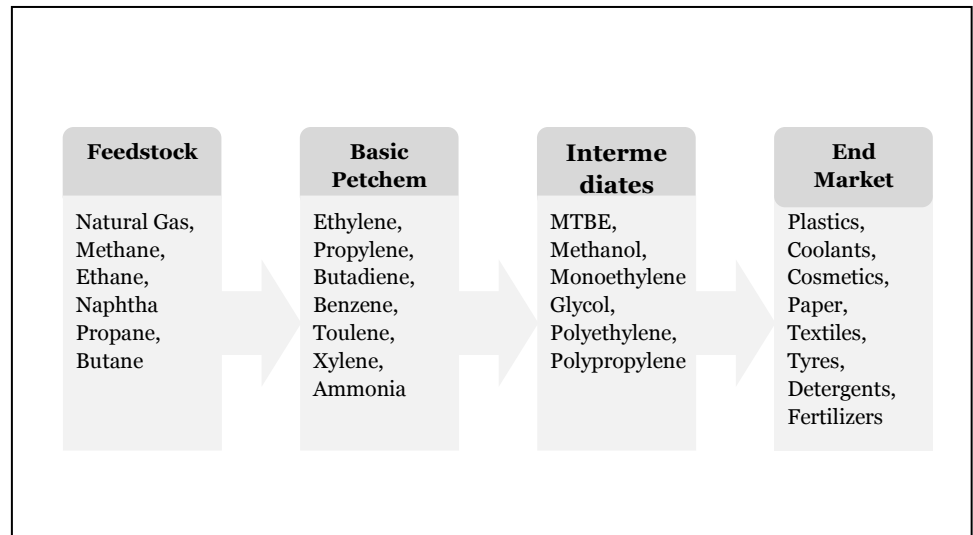
Saudi Arabia is the largest exporter of petroleum and has been a prominent member of OPEC since its inception. The OPEC countries follow a production allocation system whereby each nation is given a specific allocation which is the maximum amount of oil that the country can produce daily. Saudi Arabia currently has a limit of 8.8mn barrels per day. This is lower than its capacity of 10.5mn barrels per day. An important risk facing the Saudi petrochemicals sector is the possibility that OPEC may decide to cut production allocations below current levels. Besides resulting in additional overcapacity, this would also decrease the availability of already scarce natural gas to be used as feedstock in petrochemical crackers in the country due to reduced availability of associated gas. As we have highlighted earlier, the government has been unable to guarantee supply of new ethane since 2006. A production allocation cut by OPEC would compound this situation and decrease availability of ethane for Saudi petrochemical players.



## Appendices

### The petrochemicals value chain

Figure 44. Petrochemicals value chain.



Source: Al Rajhi Capital

The petrochemicals production chain begins with the raw materials i.e. feedstock. Feedstock can take various forms such as natural gas, ethane and propane. The dominant feedstock in KSA crackers is ethane while globally naphtha forms the bulk of the feedstock input. The feedstock (hydrocarbons) is then broken down (cracked) into smaller components called basic chemicals which include ethylene, propylene and butadiene. Ethylene is the most important of basic chemicals as it can be used as a base for producing a wide variety of derivatives. As Saudi crackers currently mainly have ethane-based feedstock, the capacity and use of ethylene overshadows other basic chemicals in the region.

These basic chemicals can be further processed to generate polymers such as polyethylene and monomers like MEG. Petrochemicals producers in Saudi Arabia are usually present up to this stage of the petrochemicals value chain. Much of the output from this stage is exported to China, Europe and other regions where it is processed further to manufacture end-products such as plastic bags, tyres and paints.



## Saudi Arabia and Middle East: production capacity

**Figure 45. Saudi Arabia: total cracker capacity (ktpa)**

	2007	2008	2009e	2010e	2011e	2012e	2013e
Kemysa (Sabic/ExxonMobil), Jubail	810	810	810	810	810	810	810
Arabian Petrochem, Jubail (1)	800	800	800	800	800	800	800
Arabian Petrochem, Jubail (2)	800	800	800	800	800	800	800
Arabian Petrochem, Jubail (3)	830	830	960	960	960	960	960
National Chevron/Phillips, Jubail	na	na	na	na	1,200	1,200	1,200
Saudi Chevron/Phillips, Jubail	na	300	300	300	300	300	300
Sipchem	na	na	na	na	1,350	1,350	1,350
Sharq, Jubail	na	na	1,300	1,300	1,300	1,300	1,300
Saudi Kayan	na	na	na	1,350	1,350	1,350	1,350
JUPC, Jubail	1,450	1,450	1,450	1,450	1,450	1,450	1,450
Sadaf (Sabic/Shell), Jubail	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Yanpet (Sabic/ExxonMobil), Yanbu (1)	860	860	860	860	860	860	860
Yanpet (Sabic/ExxonMobil), Yanbu (2)	920	920	920	920	920	920	920
Yanbu National Petrochemical (YanSab)	na	na	1,300	1,300	1,300	1,300	1,300
Petro Rabigh	na	na	1,300	1,300	1,300	1,300	1,300
Saudi Ethylene and Polyethylene Co (SEPC)	na	na	1,000	1,000	1,000	1,000	1,000
Arabian Petrochemical, Jubail (4)	na	na	na	na	na	1,300	1,300
<b>Total ethylene capacity</b>	<b>7,770</b>	<b>8,070</b>	<b>13,100</b>	<b>14,450</b>	<b>17,000</b>	<b>18,300</b>	<b>18,300</b>

Source: BMI, Al Rajhi Capital

**Figure 46. Middle East: total ethylene capacity**

Company	Country	Location	Capacity (tpa)
Abu Dhabi Polymers (Borouge)	UAE	Ruwais	600,000
<b>Al-Jubail Petrochemical (Kemysa)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>810,000</b>
<b>Arabian Petrochemical (Petrokemysa)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>800,000</b>
<b>Arabian Petrochemical (Petrokemysa)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>800,000</b>
<b>Arabian Petrochemical (Petrokemysa)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>830,000</b>
Equate Petrochemical	Kuwait	Shuaiba	850,000
<b>Jubail Chevron Phillips (JCP)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>300,000</b>
<b>Jubail United Petrochemical Company (JUPC)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>1,450,000</b>
Qatar Chemical (Q-Chem)	Qatar	Mesaieed	500,000
Qatar Petrochemical Company (Qapco)	Qatar	Mesaieed	720,000
<b>Rabigh Refining and Petrochemical (Petro-Rabigh)</b>	<b>Saudi Arabia</b>	<b>Rabigh</b>	<b>1,300,000</b>
<b>Saudi Ethylene and Polyethylene Company (SEPC)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>1,000,000</b>
<b>Saudi Petrochemical (Sadaf)</b>	<b>Saudi Arabia</b>	<b>Jubail</b>	<b>1,300,000</b>
<b>Saudi Yanbu Petrochemical (Yanpet)</b>	<b>Saudi Arabia</b>	<b>Yanbu</b>	<b>860,000</b>
<b>Saudi Yanbu Petrochemical (Yanpet)</b>	<b>Saudi Arabia</b>	<b>Yanbu</b>	<b>920,000</b>
The Kuwait Olefins Company (TKOC)	Kuwait	Shuaiba	850,000

Source: BMI, Al Rajhi Capital

**Figure 47. Saudi Arabia: ethylene capacity**

Company	Location	Capacity (tpa)
Al-Jubail Petrochemical Co (Kemysa)	Jubail	810,000
Arabian Petrochemical Co (Petrokemysa)	Jubail	800,000
Arabian Petrochemical Co (Petrokemysa)	Jubail	800,000
Arabian Petrochemical Co (Petrokemysa)	Jubail	830,000
Jubail United Petrochemical Co (JUPC)	Jubail	1,450,000
Saudi Petrochemical Co (Sadaf)	Jubail	1,300,000
Saudi Yanbu Petrochemical Co (Yanpet)	Yanbu	860,000
Saudi Yanbu Petrochemical Co (Yanpet)	Yanbu	920,000

Source: BMI, Al Rajhi Capital



**Figure 48. Saudi Arabia: polyethylene capacity**

Company	Product	Location	Capacity (tpa)
Arabian Petrochemical Co (Petrokemya)	HDPE	Jubail	450,000
Saudi Yanbu Petrochemical Co (Yanpet)	HDPE	Yanbu	960,000
Al-Jubail Petrochemical Co (Kemya)	LDPE	Jubail	220,000
Al-Jubail Petrochemical Co (Kemya)	LLDPE	Jubail	850,000
Arabian Petrochemical Co (Petrokemya)	LLDPE	Jubail	450,000
Eastern Petrochemical Co (Sharq)	LLDPE	Jubail	750,000
Saudi Yanbu Petrochemical Co (Yanpet)	LLDPE	Yanbu	400,000

Source: BMI, Al Rajhi Capital

**Figure 49. Saudi Arabia: polyethylene projects Underway**

Company	Product	Location	Capacity (tpa)	Onstream
Eastern Petrochemical Co (Sharq)	HDPE	Jubail	400,000	Q308
National Chevron Phillips (NCP)	HDPE	na	na	2011
Rabigh Refining and Petrochemical Co (Petro-Rabigh)	HDPE	Rabigh	na	Post-2009
Saudi Ethylene and Polyethylene Co (SEPC)	HDPE	na	300,000	H109
Saudi Kayan Petrochemical Co	HDPE	na	400,000	H208
Yanbu National Petrochemical Co (YanSab)	HDPE	Yanbu	400,000	2010
Rabigh Refining and Petrochemical Co (Petro-Rabigh)	LDPE	na	na	2009
Saudi Ethylene and Polyethylene Co (SEPC)	LDPE	na	400,000	H208
Saudi Kayan Petrochemical Co	LDPE	na	325,000	Q110
Arabian Petrochemical Co (Petrokemya)	LLDPE	Jubail	450,000	2012
Eastern Petrochemical Co (Sharq)	LLDPE	Jubail	400,000	Q308
Rabigh Refining and Petrochemical Co (Petro-Rabigh)	LLDPE	Rabigh	250,000	H109
Rabigh Refining and Petrochemical Co (Petro-Rabigh)	LLDPE	Rabigh	350,000	H109
Saudi Kayan Petrochemical Co	LLDPE	na	300,000	2010
Yanbu National Petrochemical Co (YanSab)	LLDPE	Yanbu	500,000	2009

Source: BMI, Al Rajhi Capital

**Figure 50. Saudi Arabia: polypropylene capacity**

Company	Location	Capacity (tpa)
Advanced Polypropylene Co (APPC)	Jubail	450,000
Saudi Polyolefins Co (SPC)	Jubail	450,000
Saudi Yanbu Petrochemical Co (Yanpet)	Yanbu	260,000
Saudi-European Petrochemical Co (Ibn Zahr)	Jubail	320,000
Saudi-European Petrochemical Co (Ibn Zahr)	Jubail	320,000

Source: BMI, Al Rajhi Capital

**Figure 51. Saudi Arabia: polypropylene projects underway**

Company	Location	Capacity (tpa)	Onstream
Al-Waha Petrochemical Co	Jubail	450,000	Q109
Rabigh Refining and Petrochemical Co (Petro-Rabigh)	Rabigh	700,000	H109
Saudi Kayan Petrochemical Co	na	450,000	Q409
Saudi Polyolefins Co (SPC)	Jubail	na	Q109
Saudi-European Petrochemical Co (Ibn Zahr)	Jubail	500,000	Q308
Teldene	Yanbu	420,000	H108
Yanbu National Petrochemical Co (YanSab)	Yanbu	400,000	2009

Source: BMI, Al Rajhi Capital



## Glossary

**Aromatics:** An organic compound that has a hexagonal ring of carbon atoms, e.g. benzene.

**Base chemical:** Chemical building blocks from which many downstream products are made, e.g. ethylene.

**Crackers:** Production facilities for the manufacture of large volumes of petrochemicals from either oil or gas feedstocks.

**Cracking:** The process of splitting long chains of organic molecules into smaller molecules, eg ethylene from ethane.

**Derivative:** Chemical compound derived or made from other chemicals. Polyethylene is an ethylene derivative.

**Downstream:** Processing of hydrocarbons such as crude oil and natural gas into compounds that form petrochemical feedstocks or other usable products.

**Ethylene:** A two carbon molecule with a reactive double bond, that is, C=C (C<sub>2</sub>H<sub>4</sub>).

**Feedstock:** Basic raw material that is converted into another product in a chemical process.

**HDPE:** high density poly ethylene: A thermoplastic resin made from ethylene. Commonly used for grocery bags.

**Hydrocarbons:** Compounds containing only hydrogen and carbon atoms. Hydrocarbons are the basic materials in the oil, gas and chemical industries.

**LDPE:** low density poly ethylene: A thermoplastic resin made from ethylene. Commonly used for packaging and plastic coatings for paper products.

**Methanol:** Simplest form of alcohol used in diverse applications, including formaldehyde.

**Nameplate:** As stated, usually referring to amount capacity as stated by company.

**Naphtha:** One of the main feedstocks for a petrochemical cracker. It is obtained by the fractional distribution of crude oil.

**Natural gas:** One of the main feedstock for a petrochemical cracker.

**Petrochemical:** Any chemical derived from crude oil, crude products or natural gas. Petrochemicals are used in the manufacture of numerous products such as synthetic rubber, synthetic fibres, plastics, etc.

**Polyolefins:** A polyolefin is a polymer produced from a simple olefin (also called an alkene) as a monomer.

**Polypropylene:** A polymer with properties making it extremely versatile and able to be used in substitution for wood, metal, glass and plastics.

**Propylene:** A three carbon molecule with a reactive double bond, that is C=C=C (C<sub>3</sub>H<sub>6</sub>).

**Speciality chemicals:** Chemicals produced in small tonnage, having higher unit and used for critical applications requiring stringent performance criteria.

**Upstream:** The searching for and the recovery and production of crude oil and natural gas. The upstream oil sector is also known as the exploration and production (E&P) sector.

**mmbtu:** “million metric British thermal units” – a traditional measure of energy

**mtpa:** “million tonnes per annum”

**ktpa:** “thousand tonnes per annum

**scf:** “standard cubic feet”



**US\$70.40bn** Market cap    **22.6%** Free float    **US\$153.9mn** Avg. daily volume

Target price **102.7** 16.7% over current  
 Consensus price **113.0** 28.4% over current  
 Current price **88.00** as at 3/8/2010

Research Department

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Underweight

Neutral

**Overweight**

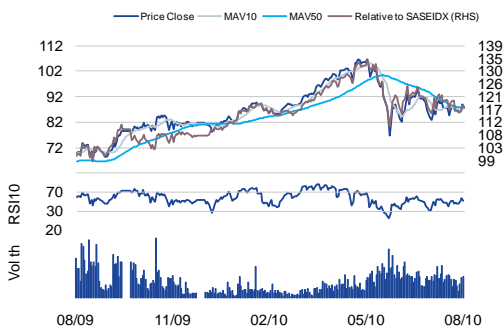
**Key themes**

We expect Saudi petrochemicals suppliers to outperform global rivals with margins driven by cheap feedstock costs and strong demand coming from Asia. We believe a shift towards heavier, more expensive feedstock in plants from now on will not constrain profits growth as improving prices and higher volumes should offset the higher costs.

**Implications**

We like SABIC's broad business mix, its low-cost production and its strategy of high investment. SABIC also represents 22% of the TASI index, making it risky to bet against the stock.

**Performance**



**Earnings**

Period End (SAR)	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	103,062	136,438	156,280	172,340
Revenue Growth	-31.7%	32.4%	14.5%	10.3%
EBITDA (SARmn)	29,577	52,256	59,855	66,006
EBITDA Growth	-36.6%	76.7%	14.5%	10.3%
EPS	3.02	7.08	8.94	9.81
EPS Growth	-58.8%	134.0%	26.2%	9.8%

Source: Company data, Al Rajhi Capital

**Valuation**



Source: Company data, Al Rajhi Capital

# SABIC

## Giant of the sector

*We like SABIC for its diverse business portfolio, its low-cost production, its ambitious strategy of heavy investment which should capitalise on robust Asian demand, and its strong R&D capability. Given SABIC's size and huge economies of scale, we expect it to remain very dominant within the Saudi petrochemicals market. SABIC alone represents 22% of the TASI index, making it risky to bet against the stock. SABIC is one of the more modestly valued Saudi petrochemicals stocks on a 2010 PE of 12.2x. We see 17% upside to fair value and launch coverage with an Overweight rating.*

**Market scenario and current business structure:** The Saudi petrochemicals sector is focused on exports. The sector benefits from low feedstock costs, favourable government policies and rising demand from Asia, especially China. SABIC, one of the world's largest petrochemicals groups, is divided into various strategic business units (SBUs). The three petrochemicals SBUs are basic chemicals, intermediates and polymers, which together constitute 83% of sales; the three additional SBUs are fertilisers, metals and speciality chemicals. The latter is SABIC's newest division and reflects the group's intention to move into a high value-added market segment currently dominated by European players.

**Very low-cost feedstock:** While all Saudi petrochemicals suppliers obtain access to low-cost feedstock (ethane at US\$0.75/mmbtu and naphtha at a discount of about 31% to the international market price), we believe SABIC has an edge over local rivals as it has a greater number of crackers operating on pure ethane feedstock. This reflects SABIC's ownership of older crackers which use a higher proportion of ethane as a result of contracts agreed upon before the scarcity of ethane forced a move towards heavier and more expensive feedstock.

**Capacity expansion will capitalise on firm demand:** SABIC has undertaken massive capacity expansion over the past three to four years through its listed and unlisted subsidiaries Yansab, Saudi Kayan and SHARQ, as well as its joint venture SABIC SinoPec Tianjin in China. We think this capacity expansion will pay off, partly because it will replace output from North American and European rivals (which have not been increasing capacity), but more importantly because it will allow SABIC to capture a high share of the strong growth in demand for petrochemicals in China and Asia.

**Hard to bet against SABIC:** The petrochemicals sector represents 5% of Saudi nominal GDP but 34% of the value of the stock market; SABIC alone represents 22% of the TASI index. Saudi Kayan, SABIC and other petrochemicals stocks have dominated recent market trading. Any investor focused on Saudi Arabia or the GCC who holds no Saudi petrochemicals stocks – and notably no SABIC – in his portfolio is therefore implicitly taking a significant bet against the index.

**Valuation and conclusion:** Our chief valuation method for the petrochemicals stocks is long-run discounted economic profit (DEP) forecasting. Our long-run DEP fair value is SAR102.7. We set this as our target price, implying 17% appreciation potential. SABIC is one of the most modestly valued Saudi petrochemicals stocks under our coverage, trading on an EV/EBITDA multiple of 7.6x and a PE of 12.4x for 2010.



### Corporate summary

Established in 1976, SABIC is the largest listed company in the GCC. It is 70% owned by the Saudi government, giving it solid financial and regulatory backing. SABIC has grown from producing 6mtpa of petrochemicals in the 1980s to over 60mtpa currently, and it accounts for over 80% of Saudi Arabia's output. SABIC has seen solid revenue growth over the last 5 years while the EBITDA margin has averaged 35% over the same period, significantly higher than the global average of 15%.

### Share information

Market cap (SAR/US\$)	264.0bn / 70.40bn		
52-week range	66.75 - 106.8		
Daily avg volume (US\$)	153.9mn		
Shares outstanding	3,000mn		
Free float (est)	22.6%		
Performance:	1M	3M	12M
Absolute	4.8%	-16.8%	22.6%
Relative to index	0.4%	-8%	14.3%
Major Shareholder:			
Public Investments Funds (PIF)	70%		
GOSI	5%		

Source: Bloomberg, Al Rajhi Capital

### Valuation

Period End	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	103,062	136,438	156,280	172,340
EBITDA (SARmn)	29,577	52,256	59,855	66,006
Net Profit (SARmn)	16,375	32,147	38,645	43,644
EPS (SAR)	3.02	7.08	8.94	9.81
DPS (SAR)	1.25	2.83	4.47	5.69
EPS Growth	-58.8%	134.0%	26.2%	9.8%
EV/EBITDA (x)	13.8	7.6	6.5	5.8
P/E (x)	29.1	12.4	9.8	9.0
P/B (x)	2.4	2.2	2.0	1.8
Dividend Yield	1.4%	3.2%	5.1%	6.5%

Source: Company data, Al Rajhi Capital

SABIC has six major segments spanning the petrochemicals market and related fields

## Diverse portfolio of products is a key attraction

SABIC is divided into six strategic business units (SBUs). The Basic Chemicals SBU produces ethylene, propylene, styrene, benzene and other aromatics. The Intermediates SBU sits further along the petrochemicals value chain and produces monoethylene glycol (MEG) and diethylene glycol (DEG), among other chemicals. The Polymers SBU represents integration still further down the value chain and produces polyester, polyethylene and polystyrene. SABIC is a global leader in many of these areas, being the world's second largest producer of ethylene glycol and methanol, its third largest producer of polyethylene and fourth largest of polypropylene. These three SBUs, grouped broadly as Petrochemicals, contributed 83% of turnover in 2009. Another SBU associated with petrochemicals is Fertilisers, which produces fertilisers based on ammonia, urea and phosphate; this segment contributes about 5% of sales. SABIC's Metals SBU supplies steel, aluminium and manganese. The Metals SBU is the largest manufacturer of steel in the GCC region. Finally, the Specialty Chemicals SBU is the newest division within SABIC and reflects the company's intention of entering the high value-added chemicals market segment, currently dominated by European players. This unit accounts for 14% of sales. SABIC has recently acquired additional assets in this segment with the acquisitions of the plastics division of GE of the US and the UK's Huntsman Chemicals, both in 2007. The output of this division serves end-uses in the manufacture of consumer goods such as cars and electronics. In this area too, the bulk of new demand comes from Asia.

SABIC is the best way to invest in the Saudi petrochemicals market as a whole, because it is not a niche player

In our opinion, Sabic's diverse portfolio of petrochemicals makes it attractive to an investor looking to invest in the regional petrochemicals market from a macroeconomic perspective. While competitors like Sipchem and Petro Rabigh are arguably niche players owing to their concentration on petrochemicals such as methanol, SABIC offers across-the-board exposure to the petrochemicals sector. The company has among the lowest feedstock cost structures in Saudi Arabia. With controlling stakes in two of the largest ongoing projects in the kingdom (Saudi Kayan and Yansab), SABIC is well-placed to capture market share from established US and EU competitors while also tapping increasingly important Asian markets. On this front, SABIC's joint venture with Sinopec at Tianjin is a significant step towards cementing its foothold in the country. While SABIC is already a global force in basic chemicals, the planned expansion into speciality chemicals should improve realised prices in the future. SABIC's metals segment, though smaller than its flagship petrochemicals unit, is a successful and profitable business. However we do not see the metals segment growing significantly beyond its current status as regional Middle Eastern player.

Delays in investment projects will affect the subsidiaries far more than the parent

We should add that SABIC's huge scale should ensure that the impact of existing or potential future delays in its investment projects is minimised. In our opinion, delays such as those currently affecting Saudi Kayan are likely to have a far greater impact on SABIC's listed subsidiaries than on the parent company. In support of our view, we could point out, for example, that our estimate of Saudi Kayan's revenues in 2012 – which we expect to be that company's first full year of operation – is only 7% of our estimate of revenues for the SABIC group in that year.

SABIC suffered in 2009, but we expect recovery up to our assumed economic peak year of 2014, and then a slowdown to an economic trough in 2019

## SABIC: long-run assumptions

As for all the other companies in this report, we make explicit revenue and profit forecasts for SABIC until 2021. After the recession year of 2009, in which sales fell by 31% and return on invested capital (ROIC) fell to just 7.4% by our estimate, we expect SABIC to achieve a strong recovery in 2010. For this year we forecast revenue growth of 32%, EBITDA growth of 76% and a recovery in ROIC to 12.9%. We assume steady growth up to our assumed economic peak year of 2014, followed by a gradual slowdown to an economic trough in 2019. We expect



We expect investment activity to slow down sharply from now on

We assume a period of competitive advantage of 40 years for SABIC

peak ROIC of 16.6% in 2014, trough ROIC of 7.1% in 2019, and gradual recovery thereafter. We assume that SABIC's production volumes remain steady throughout the coming decade except in 2019, for which we assume a decline of 5%. Given SABIC's strong feedstock cost advantage, we have built our model assuming an EBITDA margin of around 38% for the next few years. (While above the level of global peers, note that SABIC's EBITDA margin is only about two-thirds of the margin of Sipchem, which is focused on one family of products based on methanol.) However, we expect that the margin will drop to 31.5% in our assumed economic trough year of 2019 before recovering.

SABIC is engaged in massive capacity expansion at Jubail and Yanbu. Once these projects are completed, we do not expect SABIC to engage in major capacity expansion for some years. Hence we assume a sharp decline in the capex/sales ratio from 23% in 2009 to 17% in 2010, followed by a decline by to 14% in 2011. We expect this level to be maintained for the rest of the decade.

In common again with the other companies in this report, one of our key methods of valuation for SABIC is long-run discounted economic profit (DEP) forecasting. We assume a steady fading of economic returns from 2021 until 2049, by which time we assume that ROIC falls to equal weighted average cost of capital (WACC). Given SABIC's dominant position in the Middle Eastern petrochemicals market and its increasing global presence, we assume a longer period of competitive advantage, i.e. period over which ROIC exceeds WACC, for SABIC than for its peers: 40 years for SABIC versus 30 for the rest. We calculate a WACC of 8.9% for SABIC. Our estimate of fair value for SABIC on a DEP basis is SAR102.7 per share.



After a 31% drop in 2009, we expect global recovery and capacity expansion to drive strong sales growth over the next three years

We expect the EBITDA margin to rebound nearly ten percentage points in 2010 to near the level of 2007 (38.6%)

ROIC should jump from 7.4% in 2009 to 12.9% in 2010, and rise further over 2011-12

Moderately valued on a PE basis, although dividend yield of 3.3% could be higher

Income Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Revenue</b>	<b>150,810</b>	<b>103,062</b>	<b>136,438</b>	<b>156,280</b>	<b>172,340</b>
Cost of Goods Sold	(94,994)	(63,669)	(75,314)	(86,266)	(95,132)
<b>Gross Profit</b>	<b>55,815</b>	<b>39,392</b>	<b>61,124</b>	<b>70,013</b>	<b>77,208</b>
Government Charges					
S.G. & A. Costs	(19,224)	(20,588)	(26,341)	(29,175)	(31,795)
<b>Operating EBIT</b>	<b>36,591</b>	<b>18,804</b>	<b>34,783</b>	<b>40,838</b>	<b>45,413</b>
Cash Operating Costs	(104,166)	(73,485)	(84,182)	(96,424)	(106,334)
EBITDA	46,643	29,577	52,256	59,855	66,006
Depreciation and Amortisation	(10,052)	(10,773)	(17,473)	(19,017)	(20,593)
<b>Operating Profit</b>	<b>36,591</b>	<b>18,804</b>	<b>34,783</b>	<b>40,838</b>	<b>45,413</b>
Net financing income/(costs)	744	(1,529)	(1,296)	(583)	49
Forex and Related Gains					
Provisions	-	-	-	-	-
Other Income					
Other Expenses	-	-	-	-	-
<b>Net Profit Before Taxes</b>	<b>37,335</b>	<b>17,275</b>	<b>33,487</b>	<b>40,255</b>	<b>45,463</b>
Taxes	(1,400)	(900)	(1,339)	(1,610)	(1,819)
Minority Interests	(13,905)	(7,302)	(10,911)	(11,839)	(14,224)
<b>Net profit available to shareholders</b>	<b>22,030</b>	<b>9,074</b>	<b>21,236</b>	<b>26,805</b>	<b>29,421</b>
Dividends	(10,250)	(3,750)	(8,495)	(13,403)	(17,064)
Transfer to Capital Reserve					
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Adjusted Shares Out (mn)	3,000	3,000	3,000	3,000	3,000
CFPS (SAR)	15.33	9.05	16.54	19.22	21.41
EPS (SAR)	7.34	3.02	7.08	8.94	9.81
DPS (SAR)	3.42	1.25	2.83	4.47	5.69
<b>Growth</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Revenue Growth	19.5%	-31.7%	32.4%	14.5%	10.3%
Gross Profit Growth	0.5%	-29.4%	55.2%	14.5%	10.3%
EBITDA Growth	-4.1%	-36.6%	76.7%	14.5%	10.3%
Operating Profit Growth	-10.9%	-48.6%	85.0%	17.4%	11.2%
Net Profit Growth	-18.5%	-58.8%	134.0%	26.2%	9.8%
EPS Growth	-25.3%	-58.8%	134.0%	26.2%	9.8%
<b>Margins</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Gross profit margin	37.0%	38.2%	44.8%	44.8%	44.8%
EBITDA margin	30.9%	28.7%	38.3%	38.3%	38.3%
Operating Margin	24.3%	18.2%	25.5%	26.1%	26.4%
Pretax profit margin	24.8%	16.8%	24.5%	25.8%	26.4%
Net profit margin	14.6%	8.8%	15.6%	17.2%	17.1%
<b>Other Ratios</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
ROCE	15.4%	7.3%	12.9%	14.7%	15.9%
ROIC	16.4%	7.4%	12.9%	14.7%	16.0%
ROE	22.7%	8.6%	18.5%	21.0%	20.9%
Effective Tax Rate	3.7%	5.2%	4.0%	4.0%	4.0%
Capex/Sales	17.6%	23.3%	17.0%	14.0%	14.0%
Dividend Payout Ratio	46.5%	41.3%	40.0%	50.0%	58.0%
<b>Valuation Measures</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
P/E (x)	12.0	29.1	12.4	9.8	9.0
P/CF (x)	5.7	9.7	5.3	4.6	4.1
P/B (x)	2.6	2.4	2.2	2.0	1.8
EV/Sales (x)	2.7	4.0	2.9	2.5	2.2
EV/EBITDA (x)	8.6	13.8	7.6	6.5	5.8
EV/EBIT (x)	11.0	21.7	11.4	9.5	8.4
EV/IC (x)	1.7	1.6	1.5	1.4	1.4
Dividend Yield	3.9%	1.4%	3.2%	5.1%	6.5%

Source: Company data, Al Rajhi Capital



SABIC's capacity expansion is expanding the balance sheet

We expect SABIC to swing into a net cash position by 2012

We expect cash flow from operations to rise 83% this year

Balance Sheet (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
Cash and Cash Equivalents	51,028	56,377	61,393	62,649	64,699
Current Receivables	16,104	20,534	20,165	23,141	25,550
Inventories	24,360	23,770	27,288	31,256	34,468
Other current assets	3,677	5,482	5,482	5,482	5,482
<b>Total Current Assets</b>	<b>95,455</b>	<b>106,464</b>	<b>114,628</b>	<b>122,829</b>	<b>130,501</b>
Fixed Assets	141,440	157,539	163,261	166,123	169,658
Investments	8,696	8,299	10,369	10,369	10,369
Goodwill	22,979	21,901	21,901	21,901	21,901
Other Intangible Assets	-	-	-	-	-
Total Other Assets	3,190	2,658	2,658	2,658	2,658
<b>Total Non-current Assets</b>	<b>176,305</b>	<b>190,398</b>	<b>198,189</b>	<b>201,052</b>	<b>204,587</b>
<b>Total Assets</b>	<b>271,760</b>	<b>296,861</b>	<b>312,818</b>	<b>323,881</b>	<b>335,087</b>
Short Term Debt	4,289	6,477	6,477	6,477	6,477
Trade Payables					
Dividends Payable					
Other Current Liabilities					
<b>Total Current Liabilities</b>	<b>26,580</b>	<b>33,849</b>	<b>35,104</b>	<b>39,343</b>	<b>42,764</b>
Long-Term Debt	88,367	100,538	83,625	65,207	46,412
Other LT Payables	2,831	2,800	10,762	10,762	10,762
Provisions	7,340	7,044	7,044	7,044	7,044
<b>Total Non-current Liabilities</b>	<b>98,538</b>	<b>110,382</b>	<b>101,431</b>	<b>83,013</b>	<b>64,218</b>
Minority interests	43,709	44,375	55,286	67,126	81,349
Paid-up share capital	30,000	30,000	30,000	30,000	30,000
Total Reserves	72,932	78,255	90,997	104,399	116,756
<b>Total Shareholders' Equity</b>	<b>102,932</b>	<b>108,255</b>	<b>120,997</b>	<b>134,399</b>	<b>146,756</b>
<b>Total Equity</b>	<b>146,642</b>	<b>152,630</b>	<b>176,283</b>	<b>201,525</b>	<b>228,105</b>
<b>Total Liabilities &amp; Shareholders' Equity</b>	<b>271,760</b>	<b>296,861</b>	<b>312,818</b>	<b>323,881</b>	<b>335,087</b>

Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
Net Debt (SARmn)	41,629	50,637	28,708	9,034	(11,811)
Net Debt/EBITDA (x)	0.89	1.71	0.55	0.15	(0.18)
Net Debt to Equity	28.4%	33.2%	16.3%	4.5%	-5.2%
EBITDA Interest Cover (x)	(62.7)	19.3	40.3	102.6	(1,336.9)
BVPS (SAR)	34.31	36.08	40.33	44.80	48.92

Cashflow Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Net Income before Tax &amp; Minority Interest</b>	<b>37,335</b>	<b>17,275</b>	<b>33,487</b>	<b>40,255</b>	<b>45,463</b>
Depreciation & Amortisation	10,052	10,773	17,473	19,017	20,593
Decrease in Working Capital	1,090	(135)	(1,894)	(2,706)	(2,201)
Other Operating Cashflow	(2,248)	(1,901)	(1,339)	(1,610)	(1,819)
<b>Cashflow from Operations</b>	<b>46,229</b>	<b>26,012</b>	<b>47,726</b>	<b>54,956</b>	<b>62,036</b>
Capital Expenditure	(26,596)	(23,988)	(23,194)	(21,879)	(24,128)
New Investments	(1,550)	724	(2,070)	-	-
Others	(1,661)	(1,371)	-	-	-
<b>Cashflow from investing activities</b>	<b>(29,807)</b>	<b>(24,636)</b>	<b>(25,265)</b>	<b>(21,879)</b>	<b>(24,128)</b>
<b>Net Operating Cashflow</b>	<b>16,423</b>	<b>1,377</b>	<b>22,462</b>	<b>33,077</b>	<b>37,909</b>
Dividends paid to ordinary shareholders	(10,282)	(3,750)	(8,495)	(13,403)	(17,064)
Proceeds from issue of shares	-	-	-	-	-
Effects of Exchange Rates on Cash					
Other Financing Cashflow	(13,702)	(6,931)	-	-	-
<b>Cashflow from financing activities</b>	<b>(11,272)</b>	<b>3,973</b>	<b>(17,446)</b>	<b>(31,821)</b>	<b>(35,859)</b>
Total cash generated	5,150	5,350	5,016	1,256	2,050
Cash at beginning of period	45,877	51,028	56,377	61,393	62,649
<b>Implied cash at end of year</b>	<b>51,027</b>	<b>56,377</b>	<b>61,393</b>	<b>62,649</b>	<b>64,699</b>

Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
Capex/Sales	17.6%	23.3%	17.0%	14.0%	14.0%

Source: Company data, Al Rajhi Capital



<b>US\$2.000bn</b> Market cap	<b>68.3%</b> Free float	<b>US\$6.70mn</b> Avg. daily volume
Target price	<b>29.70</b>	32.5% over current
Consensus price	<b>27.50</b>	22.8% over current
Current price	<b>22.40</b>	as at 3/8/2010

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**Underweight**   **Neutral**   **Overweight**

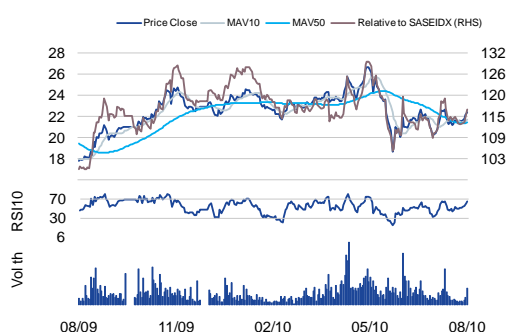
**Key themes**

We expect the Saudi petrochemicals sector to outperform global peers in the next few years given its feedstock cost advantages and strong demand growth from emerging economies. Sipchem's production is currently focused on methanol and methanol derivatives with a heavy concentration towards Chinese demand.

**Implications**

Sipchem is performing well operationally and has recently commissioned its Phase 2 expansion which will help the company move up the value chain. The company's Phase 3 facility will come on board in a few years and diversify its revenues further. We are Overweight on the company.

**Performance**

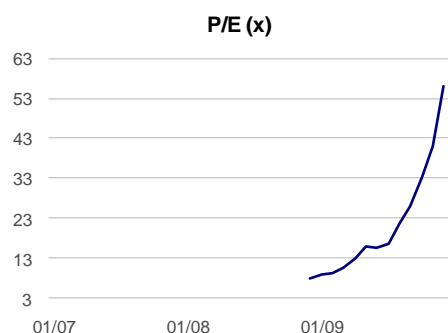


**Earnings**

Period End (SAR)	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	830	2,113	2,597	2,857
Revenue Growth	-51.4%	154.4%	22.9%	10.0%
EBITDA (SARmn)	336	1,204	1,714	1,886
EBITDA Growth	-69.4%	258.8%	42.4%	10.0%
EPS	0.43	1.22	2.17	2.23
EPS Growth	-79.1%	185.2%	77.0%	2.9%

Source: Company data, Al Rajhi Capital

**Valuation**



Source: Company data, Al Rajhi Capital

# Sipchem

## Opportunity for diversification

*Sipchem's sales and profits collapsed during the global downturn but look set to recover strongly as its Phase 2 plant diversifies revenue streams while its Phase 3 plant will move it further up the petrochemicals value chain. Given its position as one of the world's lowest-cost methanol suppliers with high gearing to Asian demand, we forecast sales growth of 154% and a trebling of EBITDA this year. The 2010 PE is 18.3x but this falls to 10.3x for 2011. With 33% upside to our target price of SAR29.7, we launch coverage with an Overweight rating.*

**Market scenario and current business structure:** The Saudi petrochemicals sector benefits from low feedstock costs, favourable government policies and rising demand from Asia. Sipchem is predominantly a methanol producer and enjoys high margins as its costs are very low (see below). Moreover, competition in this market segment is limited as rivals like Petro Rabigh are not present. Sipchem's Phase 1 business produces methanol and butanediol through two subsidiaries, International Methanol Company and International Diol Company.

**Low-cost producer:** Sipchem is amongst the lowest-cost supplier of methanol in the world. This assumes greater importance given the fact that over 50% of global methanol output comes from plants benefiting from low feedstock costs. With Sipchem's low-cost production structure, we think even a fairly steep drop in demand should allow the company to earn comparatively high returns.

**Highly geared to Asia:** Sipchem exports over 50% of its output to Asia, notably China, which has long been a net importer of methanol. We view this very positively as we expect Asia to be to the driving force behind petrochemicals demand over the next decade. In combination, demand from Asia and the launch of the Phase 2 and Phase 3 production facilities drive our forecast of 30% compound annual sales growth between now and 2015.

**Phase 2 production diversifies revenues:** Sipchem's Phase 2 production facilities came on stream in Q1 2010. This will diversify Sipchem's revenue streams by adding carbon monoxide, vinyl acetate monomer and acetic acid. In addition, the Phase 2 plant has an operating structure which permits one-half of production of acetic acid to be used as a feedstock for the production of VAM, thus ensuring in-house supply of feedstock at cost price.

**Phase 3 will push Sipchem up the value chain:** Sipchem's Phase 3 plant, due to be built and launched by 2014, will supply ethylene and propylene, moving Sipchem further up the value chain of petrochemicals production. Sipchem has signed an agreement whereby it will supply carbon monoxide to SABIC in return for ethylene and propylene. This is a mutually beneficial agreement which we expect to continue till Sipchem starts producing ethylene and propylene itself.

**Valuation and conclusion:** We value the petrochemicals stocks using long-run DEP forecasting. Sipchem does not look obviously cheap on a 2010 EV/EBITDA multiple of 10.9x and a PE of 18.3x. However, based on our assumption of further strong growth next year, these ratios fall to 8.0x and 10.3x respectively for 2011. Sipchem trades on an enterprise value/invested capital (EV/IC) multiple of 1.1x – a modest valuation for a company that we expect to create significant economic value between now and our assumed next downturn in 2019. With 33% upside to our DEP-based target price of SAR29.7, we rate Sipchem as Overweight and see it as a higher-growth alternative to SABIC.



### Corporate summary

Sipchem is something of a rarity in the Saudi petrochemicals sector. While the other big players like SABIC and PetroRabigh are owned directly or indirectly by the government, Sipchem is a company promoted by a private sector enterprise, the Zamil Industrial Group (the government owns only 8% through the Public Investment Fund).

### Share information

Market cap (SAR/US\$) 7.50bn / 2.000bn  
52-week range 17.85 - 26.60  
Daily avg volume (US\$) 6.70mn  
Shares outstanding 333.3mn  
Free float (est) 68.3%

Performance:	1M	3M	12M
Absolute	11.2%	-15.8%	24.8%
Relative to index	6.8%	-7%	16.5%

Major Shareholder:

Al-Zamil Group Holding Co.	10.1%
National Industries Group Holding.	8.3%

Source: Bloomberg, Al Rajhi Capital

### Valuation

Period End	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	830	2,113	2,597	2,857
EBITDA (SARmn)	336	1,204	1,714	1,886
Net Profit (SARmn)	170	787	1,191	1,269
EPS (SAR)	0.43	1.22	2.17	2.23
DPS (SAR)	-	-	-	-
EPS Growth	-79.1%	185.2%	77.0%	2.9%
EV/EBITDA (x)	35.1	10.9	8.0	7.5
P/E (x)	52.2	18.3	10.3	10.1
P/B (x)	1.5	1.4	1.2	1.1
Dividend Yield	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital

## Moving beyond pure methanol

Sipchem's original and core product is methanol, one of the most basic petrochemicals products. Sipchem is one of the lowest-cost producers of methanol globally; it is also a low-cost leader in butanediol. The company supplies both Asia and Europe, but Asia accounts for about 50% of sales, with China the key market. We expect additions to methanol capacity in China to lag demand for the next few several years, underpinning demand for Sipchem's core product. We do not believe that anti-dumping duties in Asia pose a significant threat to Sipchem's business in its largest market, given both the strength of Chinese demand and the increasing trade relations between China and Saudi Arabia.

Sipchem's Phase 2 production facility came on stream in Q1 2010. As with Yansab, a commercial startup is a significant positive for the company in the current situation of delays in new petrochemicals capacity. The facility will produce higher value-added products (VAM, carbon monoxide and acetic acid), and its structure will permit part of the feedstock to be generated internally, thus reducing dependence on external suppliers besides saving on costs. Sipchem has also commenced preparations for its Phase 3 plant which will see the company producing basic chemicals in part through a mutually beneficial agreement with SABIC. This agreement plays to the advantages of both companies, with each concentrating on its niche.

## Sipchem: long-run assumptions

Currently, Sipchem's business portfolio is very dominated by methanol. Looking forward, however, the company will move into derivatives of methanol which will generate new revenue streams. Sipchem's increasing diversification should sharply reduce its sensitivity to the economic cycle, which cut the company savagely in 2009 when sales dropped by 51% and EBITDA by 69%. Looking forward, we thus assume healthy price growth for the company over the next decade barring 2019, which we assume will mark the trough of the next economic downturn. Given Sipchem's niche, we see capacity utilisation holding steady at 95%, except for 2019, where we assume a drop to 85%. We assume a boost to overall production as the Phase 3 facility comes on board in 2014. As Sipchem is one of the lowest cost producers, we assume an EBITDA margin of over 60% over the next ten years except in the assumed economic downturn of 2018-19. As the company will soon begin construction of its Phase 3 plant, we assume heavy capex in the period leading up to 2014. Beyond that period, we expect capex to moderate and assume that the company will increase its dividend payout.

Sipchem's high capex means that asset turnover is low: we estimate only 0.2-0.3x over the next ten years. This helps explain why return on invested capital (ROIC) is far lower than the high EBITDA margins would suggest; we estimate ROIC in a range of 8-11% over the coming decade. However, in all years except over the next downturn we expect Sipchem to achieve ROIC above cost of capital, so the company should generate respectable economic returns over time.

Sipchem's increasing diversification should reduce its sensitivity to the economic cycle

ROIC is far lower than high the EBITDA margin would suggest, reflecting low asset turnover



With Phase 2 on stream,  
Sipchem will enjoy very strong  
revenue growth

Sipchem has one of the lowest  
cost structures in the world,  
supporting margins

While much capex has been  
finished, we expect capex to  
remain heavy over 2010-2012

Income Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Revenue</b>	<b>1,709</b>	<b>830</b>	<b>2,113</b>	<b>2,597</b>	<b>2,857</b>
Cost of Goods Sold	(541)	(427)	(824)	(779)	(857)
<b>Gross Profit</b>	<b>1,167</b>	<b>403</b>	<b>1,289</b>	<b>1,818</b>	<b>2,000</b>
Government Charges					
S.G. & A. Costs	(223)	(235)	(465)	(560)	(645)
<b>Operating EBIT</b>	<b>944</b>	<b>168</b>	<b>823</b>	<b>1,258</b>	<b>1,355</b>
Cash Operating Costs	(612)	(495)	(908)	(883)	(971)
EBITDA	1,096	336	1,204	1,714	1,886
Depreciation and Amortisation	(152)	(167)	(381)	(456)	(531)
<b>Operating Profit</b>	<b>944</b>	<b>168</b>	<b>823</b>	<b>1,258</b>	<b>1,355</b>
Net financing income/(costs)	(93)	42	(3)	(18)	(33)
Forex and Related Gains					
Provisions	-	-	-	-	-
Other Income					
Other Expenses					
<b>Net Profit Before Taxes</b>	<b>851</b>	<b>210</b>	<b>820</b>	<b>1,241</b>	<b>1,322</b>
Taxes	(30)	(40)	(33)	(50)	(53)
Minority Interests	(284)	(29)	(379)	(469)	(526)
<b>Net profit available to shareholders</b>	<b>537</b>	<b>141</b>	<b>408</b>	<b>722</b>	<b>743</b>
Dividends	-	-	-	-	-
Transfer to Capital Reserve					
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Adjusted Shares Out (mn)	323.5	333.3	333.3	333.3	333.3
CFPS (SAR)	3.72	1.03	3.50	4.94	5.40
EPS (SAR)	2.051	0.429	1.223	2.165	2.229
DPS (SAR)	0	0	0	0	0
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Growth</b>					
Revenue Growth	11.8%	-51.4%	154.4%	22.9%	10.0%
Gross Profit Growth	5.6%	-65.5%	219.7%	41.1%	10.0%
EBITDA Growth	4.6%	-69.4%	258.8%	42.4%	10.0%
Operating Profit Growth	5.4%	-82.2%	389.2%	52.8%	7.7%
Net Profit Growth	-9.6%	-73.8%	189.4%	77.0%	2.9%
EPS Growth	0.0%	-79.1%	185.2%	77.0%	2.9%
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Margins</b>					
Gross profit margin	68.3%	48.5%	61.0%	70.0%	70.0%
EBITDA margin	64.2%	40.4%	57.0%	66.0%	66.0%
Operating Margin	55.3%	20.3%	39.0%	48.5%	47.4%
Pretax profit margin	49.8%	25.3%	38.8%	47.8%	46.3%
Net profit margin	31.4%	17.0%	19.3%	27.8%	26.0%
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Other Ratios</b>					
ROCE	9.6%	1.5%	7.4%	10.4%	10.1%
ROIC	14.0%	1.4%	7.3%	11.0%	10.8%
ROE	13.5%	2.8%	8.0%	12.7%	11.6%
Effective Tax Rate	3.6%	19.2%	4.0%	4.0%	4.0%
Capex/Sales	159.4%	188.4%	88.8%	72.2%	65.6%
Dividend Payout Ratio	0.0%	0.0%	0.0%	0.0%	0.0%
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Valuation Measures</b>					
P/E (x)	10.9	52.2	18.3	10.3	10.1
P/CF (x)	6.0	21.8	6.4	4.5	4.1
P/B (x)	1.5	1.5	1.4	1.2	1.1
EV/Sales (x)	4.6	14.2	6.2	5.3	4.9
EV/EBITDA (x)	7.2	35.1	10.9	8.0	7.5
EV/EBIT (x)	8.3	69.9	15.9	10.9	10.4
EV/IC (x)	1.0	1.1	1.2	1.1	1.1
Dividend Yield	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital



Fixed asset base will increase with Phase 2 and Phase 3...

...which will mean higher debt but a steady decline in net debt/EBITDA as new production increases

<b>Balance Sheet (SARmn)</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Cash and Cash Equivalents	2,581	1,831	521	177	71
Current Receivables	154	308	634	779	857
Inventories	107	79	32	39	43
Other current assets	0	0	-	-	-
<b>Total Current Assets</b>	<b>2,842</b>	<b>2,218</b>	<b>1,186</b>	<b>995</b>	<b>970</b>
Fixed Assets	7,792	9,569	11,064	12,483	13,827
Investments	-	-	-	-	-
Goodwill	200	31	31	31	31
Other Intangible Assets	-	-	-	-	-
Total Other Assets	-	-	-	-	-
<b>Total Non-current Assets</b>	<b>7,992</b>	<b>9,601</b>	<b>11,095</b>	<b>12,514</b>	<b>13,858</b>
<b>Total Assets</b>	<b>10,833</b>	<b>11,818</b>	<b>12,281</b>	<b>13,510</b>	<b>14,829</b>
Short Term Debt	176	283	283	283	283
Trade Payables	-	-	-	-	-
Dividends Payable	-	-	-	-	-
Other Current Liabilities	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>979</b>	<b>903</b>	<b>1,128</b>	<b>1,322</b>	<b>1,426</b>
Long-Term Debt	3,581	4,642	4,093	3,937	3,883
Other LT Payables	382	401	401	401	401
Provisions	34	40	40	40	40
<b>Total Non-current Liabilities</b>	<b>3,996</b>	<b>5,083</b>	<b>4,534</b>	<b>4,378</b>	<b>4,324</b>
Minority interests	894	910	1,289	1,759	2,284
Paid-up share capital	3,333	3,333	3,333	3,333	3,333
Total Reserves	1,631	1,589	1,997	2,718	3,461
<b>Total Shareholders' Equity</b>	<b>4,965</b>	<b>4,922</b>	<b>5,330</b>	<b>6,052</b>	<b>6,795</b>
<b>Total Equity</b>	<b>5,858</b>	<b>5,832</b>	<b>6,619</b>	<b>7,810</b>	<b>9,079</b>
<b>Total Liabilities &amp; Shareholders' Equity</b>	<b>10,833</b>	<b>11,818</b>	<b>12,281</b>	<b>13,510</b>	<b>14,829</b>

<b>Ratios</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Net Debt (SARmn)	1,175	3,094	3,855	4,042	4,096
Net Debt/EBITDA (x)	1.07	9.22	3.20	2.36	2.17
Net Debt to Equity	20.1%	53.0%	58.2%	51.8%	45.1%
EBITDA Interest Cover (x)	11.7	(8.0)	347.0	96.7	56.6
BVPS (SAR)	15.35	14.77	15.99	18.16	20.38

<b>Cashflow Statement (SARmn)</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Net Income before Tax &amp; Minority Interest</b>	<b>851</b>	<b>210</b>	<b>820</b>	<b>1,241</b>	<b>1,322</b>
Depreciation & Amortisation	152	167	381	456	531
Decrease in Working Capital	119	(283)	(54)	41	22
Other Operating Cashflow	91	(269)	(33)	(50)	(53)
<b>Cashflow from Operations</b>	<b>1,214</b>	<b>(175)</b>	<b>1,114</b>	<b>1,688</b>	<b>1,821</b>
Capital Expenditure	(2,723)	(1,565)	(1,875)	(1,875)	(1,875)
New Investments	1	238	-	-	-
Others	(85)	-	-	-	-
<b>Cashflow from investing activities</b>	<b>(2,807)</b>	<b>(1,327)</b>	<b>(1,875)</b>	<b>(1,875)</b>	<b>(1,875)</b>
<b>Net Operating Cashflow</b>	<b>(1,594)</b>	<b>(1,502)</b>	<b>(761)</b>	<b>(187)</b>	<b>(54)</b>
Dividends paid to ordinary shareholders	(333)	(333)	-	-	-
Proceeds from issue of shares	1,967	-	-	-	-
Effects of Exchange Rates on Cash	-	-	-	-	-
Other Financing Cashflow	(1,036)	(216)	-	-	-
<b>Cashflow from financing activities</b>	<b>2,612</b>	<b>752</b>	<b>(549)</b>	<b>(156)</b>	<b>(53)</b>
Total cash generated	1,019	(750)	(1,311)	(343)	(107)
Cash at beginning of period	1,562	2,581	1,831	521	177
<b>Implied cash at end of year</b>	<b>2,581</b>	<b>1,831</b>	<b>521</b>	<b>177</b>	<b>71</b>

<b>Ratios</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Capex/Sales	159.4%	188.4%	88.8%	72.2%	65.6%

Source: Company data, Al Rajhi Capital



<b>US\$7.00bn</b> Market cap	<b>45%</b> Free float	<b>US\$96.40mn</b> Avg. daily volume
Target price	<b>14.40</b>	-17.2% over current
Consensus price	<b>16.15</b>	-7.2% over current
Current price	<b>17.40</b>	as at 3/8/2010

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<b>Underweight</b>	<b>Neutral</b>	<b>Overweight</b>
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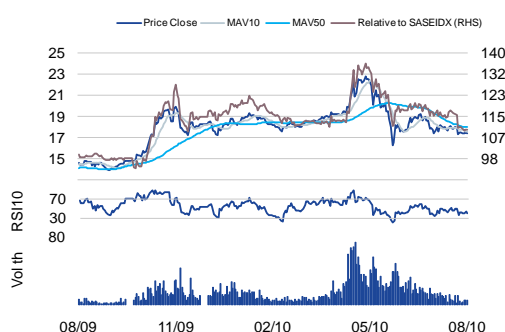
**Key themes**

We expect the Saudi petrochemicals sector to outperform global peers in the next few years given its feedstock cost advantages and strong demand growth from emerging economies. While local competitors profit from this situation, Saudi Kayan is unable to do so because multiple delays have affected start-up of its massive production capacity.

**Implications**

With a string of delays pushing commercial start-up from the initially planned Q4 2009 to (according to our estimate) Q2 2012 Saudi Kayan presents no obvious catalysts for price appreciation. With little visibility about when it will start recording revenues, we rate Saudi Kayan as Underweight.

**Performance**



**Earnings**

Period End (SAR)	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	-	-	-	11,756
Revenue Growth				
EBITDA (SARmn)	(17)	(17)	(17)	4,526
EBITDA Growth	-90.2%	0.0%	0.0%	
EPS	(0.01)	(0.01)	(0.01)	1.69
EPS Growth	-103.4%	-0.4%	0.0%	

Source: Company data, Al Rajhi Capital

**Valuation**

Note. We have not provided a historical valuation chart here, because we do not expect Saudi Kayan to report revenues or profits until 2012.

## Saudi Kayan Constrained by start-up delays

*Saudi Kayan is essentially a “project company” which has been formed to supply its parent SABIC. When completed, Saudi Kayan’s plant at Jubail will be one of the largest petrochemicals plants in the world. However, the key risk for any project company is delays – and multiple delays have pushed production launch for Saudi Kayan to Q2 2012 by our estimate. It is hard to recommend investment in a company which will record no revenues or profits for nearly two years. We launch coverage of Saudi Kayan with Underweight.*

**Market scenario and current business structure:** The Saudi petrochemicals sector is focused on exports. The sector benefits from low feedstock costs, favourable government policies and rising demand from Asia, especially China. Saudi Kayan is building a plant at Jubail in the Eastern Province for the purpose of supplying its 35% owner SABIC, which will market and distribute the plant’s production. When completed, this plant will be one of the world’s largest petrochemicals facilities, with installed capacity of 6.0mtpa. This capacity will be split into basic chemicals (85% of output including ethylene and propylene) and speciality chemicals (15% including aminoethanols and dimethylformamide).

**Low-cost producer:** Like other Saudi petrochemicals suppliers, Saudi Kayan has access to cheap ethane and obtains discounts on heavier feedstock. The company’s planned production of speciality chemicals will necessitate a higher proportion of heavy and more expensive feedstocks. Nevertheless, once mature, Saudi Kayan should achieve much higher margins than its global competitors.

**Delays lower visibility and lead to lost opportunities:** Start-up delays on new production facilities have been experienced across the GCC region. However, Saudi Kayan has suffered from multiple delays which have pushed back start-up from the initially planned Q4 2009 to (by our estimate) Q1 2012. These delays reduce the visibility of long-run revenue and cash flow streams. Equally so, the delays create a substantial opportunity cost. While we expect Asia to generate strong petrochemicals demand for many years, Saudi Kayan is losing the opportunity to benefit from Asian demand right now. The company should be able to tap Asian markets successfully in the future, but for the moment it is missing out on the stage of rapid demand growth in China and elsewhere.

**Valuation and conclusion:** Our primary valuation method for the Saudi petrochemicals stocks is long-run discounted economic profit (DEP) forecasting. Our estimate of DEP fair value is SAR14.4 per share. It should be noted that a one quarter change in start-up date has a material impact on this figure: if we assumed a start date of Q2 2012, our fair value per share would fall by 1.2%, while assuming a further delay to Q3 2012 would reduce fair value by 2.4%. In terms of multiples, with no revenues or profits for almost the next two years, Saudi Kayan can only be valued in relation to assets. The enterprise value/ invested capital (EV/IC) ratio of 1.3x and the price/book value ratio of 1.7x suggest that the stock market believes Saudi Kayan will generate economic profits (i.e. returns above cost of capital) in the future. We agree –but not on a scale sufficient to justify its current share price. We see 17% downside to fair value and rate Saudi Kayan Underweight



### Corporate summary

Saudi Kayan, coming on board at Jubail will be one of the largest petrochemical plants in the world. SABIC has a 35% stake in the company with the rest being split between the Al Kayan Company (20%) and the general public (45%) after an IPO for the company in 2008. Saudi Kayan, has however, faced delays with its startup. From an initial expected startup date in FY09 which further got pushed to Q2FY10, the project now faces a potential delay till Q2 FY12, thus delaying the revenue stream associated with the company.

### Share information

Market cap (SAR/US\$)	26.10bn / 7.00bn		
52-week range	13.95 - 22.75		
Daily avg volume (US\$)	96.40mn		
Shares outstanding	1,500mn		
Free float (est)	45%		
Performance:	1M	3M	12M
Absolute	-2%	-22.8%	19.6%
Relative to index	-6.4%	-14%	11.3%
Major Shareholder:			
SABIC	35%		
Al Kayan	20%		

Source: Bloomberg, Al Rajhi Capital

### Valuation

Period End	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	-	-	-	11,756
EBITDA (SARmn)	(17)	(17)	(17)	4,526
Net Profit (SARmn)	(17)	(17)	(17)	2,528
EPS (SAR)	(0.01)	(0.01)	(0.01)	1.69
DPS (SAR)	-	-	-	-
EPS Growth	-103.4%	-0.4%	0.0%	na
EV/EBITDA (x)	NA	NA	NA	8.2
P/E (x)	NA	NA	NA	10.3
P/B (x)	1.7	1.7	1.7	1.5
Dividend Yield	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital

String of delays means revenue stream has been pushed further away

## A tale of delays

We are pessimistic about Saudi Kayan due to the delays associated with commissioning of its new production facilities. From an expected initial start-up date in Q4 2009 which was delayed until Q2 2010, we think the project now faces a potential delay till Q2 2012, thus delaying the revenue stream associated with the company. The project was delayed after the company cancelled its engineering, procurement and construction (EPC) contracts for the new facilities. These contracts were agreed upon just before the onset of the global economic recession and hence reflected pricing levels which fell sharply during the downturn. We had expected that the company might be able to renegotiate the terms of the contracts to achieve better terms. In the event, however, Saudi Kayan surprised us by announcing on 25th July that the total project cost had gone up by 24% and that in consequence it would require SAR9bn (US\$2.4bn) of additional financing; the company stated that it was working with banks to achieve this.

The problems associated with the prolonged delays outweigh the advantage of low feedstock costs and the potential increment to fair value resulting from the company's push into speciality chemicals. These delays make revenue projections very uncertain. We note that a one quarter delay in start-up reduces our estimate of fair value per share by 1.2%.

Besides postponing the point at which Saudi Kayan starts to generate revenues and profits, the delays prevent Kayan from participating in the current rebound in world petrochemicals demand. Led by China and Asia, we believe that the greater part of new demand growth will be seen over next few years. We think that Kayan's delay till 2012 will mean that the company misses out on this stage of rapidly increasing petrochemicals consumption growth.

## Saudi Kayan: long-run assumptions

Looking forward, as noted we assume that Saudi Kayan starts production in Q2 2012. We make explicit forecasts for the company's production volumes and realised prices between then and 2021; these assumptions drive our revenue forecasts. We assume a global economic peak in 2014 followed by a gradual decline till 2019 when we assume an economic trough. In 2019, we have assumed that capacity utilisation declines by 10% and realised prices fall by 5% year-on-year.

Saudi Kayan will generate economic profit – but not enough to justify the current share price

Under the DEP method, we use fading assumptions from 2021 till 2039 based on an assumed 30 year period of competitive advantage. 2039 is the year in which ROIC (return on invested capital) falls to WACC (weighted average cost of capital). Between now and 2021, we expect Saudi Kayan to achieve an economic profit, i.e. a ROIC above WACC, in all years except our assumed trough year of 2019. For 2021, we predict ROIC of 10.3%, which then fades gradually to WACC of 8.3% by 2039. The fact that the stock market values Saudi Kayan at a premium to the value of its assets (hence the EV/IC ratio of 1.3x and the price/book value ratio of 1.7x) suggests that the market expects Saudi Kayan to achieve economic profits over time. While we agree with this, we do not expect Saudi Kayan to generate a sufficient level of economic profit to justify the current share price. Our long-run DEP estimate of fair value is SAR14.4 per share, compared to the market price of SAR17.9.



We expect Saudi Kayan to generate revenues only in 2012

Saudi Kayan will generate positive returns only in 2012

With no revenues or profits till 2012, Saudi Kayan is better valued on EV/IC or price/book value

Income Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Revenue</b>	-	-	-	-	<b>11,756</b>
Cost of Goods Sold	-	-	-	-	(6,466)
<b>Gross Profit</b>	-	-	-	-	<b>5,290</b>
Government Charges					
S.G. & A. Costs	(172)	(17)	(17)	(17)	(2,432)
<b>Operating EBIT</b>	<b>(172)</b>	<b>(17)</b>	<b>(17)</b>	<b>(17)</b>	<b>2,859</b>
Cash Operating Costs	(172)	(17)	(17)	(17)	(7,230)
EBITDA	(172)	(17)	(17)	(17)	4,526
Depreciation and Amortisation	-	-	-	-	(1,667)
<b>Operating Profit</b>	<b>(172)</b>	<b>(17)</b>	<b>(17)</b>	<b>(17)</b>	<b>2,859</b>
Net financing income/(costs)	679	-	-	-	(226)
Forex and Related Gains					
Provisions	-	-	-	-	-
Other Income					
Other Expenses					
<b>Net Profit Before Taxes</b>	<b>507</b>	<b>(17)</b>	<b>(17)</b>	<b>(17)</b>	<b>2,633</b>
Taxes	(13)	(0)	-	-	(105)
Minority Interests					
<b>Net profit available to shareholders</b>	<b>494</b>	<b>(17)</b>	<b>(17)</b>	<b>(17)</b>	<b>2,528</b>
Dividends	-	-	-	-	-
Transfer to Capital Reserve					
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Adjusted Shares Out (mn)	1,500	1,500	1,500	1,500	1,500
CFPS (SAR)	0.329	(0.011)	(0.011)	(0.011)	2.797
EPS (SAR)	0.329	(0.011)	(0.011)	(0.011)	1.685
DPS (SAR)	0	0	0	0	0
<b>Growth</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Revenue Growth					
Gross Profit Growth					
EBITDA Growth	4.8%	-90.2%	0.0%	0.0%	
Operating Profit Growth	4.8%	-90.2%	0.0%	0.0%	
Net Profit Growth	53.2%	-103.4%	-0.4%	0.0%	
EPS Growth	0.0%	-103.4%	-0.4%	0.0%	
<b>Margins</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Gross profit margin					45.0%
EBITDA margin					38.5%
Operating Margin					24.3%
Pretax profit margin					22.4%
Net profit margin					21.5%
<b>Other Ratios</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
ROCE	-0.8%	0.0%	0.0%	0.0%	8.0%
ROIC	-1.1%	-0.1%	0.0%	0.0%	8.1%
ROE	3.2%	-0.1%	-0.1%	-0.1%	15.1%
Effective Tax Rate	2.6%	-0.4%	0.0%	0.0%	4.0%
Capex/Sales					15.0%
Dividend Payout Ratio	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Valuation Measures</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
P/E (x)	52.8	NA	NA	NA	10.3
P/CF (x)	52.8	NA	NA	NA	6.2
P/B (x)	1.7	1.7	1.7	1.7	1.5
EV/Sales (x)	NA	NA	NA	NA	3.1
EV/EBITDA (x)	NA	NA	NA	NA	8.2
EV/EBIT (x)	NA	NA	NA	NA	12.9
EV/IC (x)	1.3	1.2	1.3	1.3	1.0
Dividend Yield	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital



Company will steadily increase its asset base

Balance Sheet (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
Cash and Cash Equivalents	3,522	2,472	1,613	1,664	6,968
Current Receivables	88	168	168	-	3,527
Inventories	-	-	-	-	176
Other current assets	(0)	0	0	-	0
<b>Total Current Assets</b>	<b>3,610</b>	<b>2,639</b>	<b>1,781</b>	<b>1,664</b>	<b>10,671</b>
Fixed Assets	18,764	33,147	33,247	33,347	33,443
Investments	-	-	-	-	-
Goodwill	-	-	-	-	-
Other Intangible Assets	27	21	21	21	21
Total Other Assets	-	-	-	-	-
<b>Total Non-current Assets</b>	<b>18,792</b>	<b>33,168</b>	<b>33,268</b>	<b>33,368</b>	<b>33,464</b>
<b>Total Assets</b>	<b>22,402</b>	<b>35,808</b>	<b>35,049</b>	<b>35,032</b>	<b>44,135</b>
Short Term Debt	-	-	-	-	-
Trade Payables	-	-	-	-	-
Dividends Payable	-	-	-	-	-
Other Current Liabilities	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>1,041</b>	<b>1,155</b>	<b>1,155</b>	<b>1,155</b>	<b>8,229</b>
Long-Term Debt	5,815	19,113	18,372	18,372	17,873
Other LT Payables	52	62	62	62	62
Provisions	-	-	-	-	-
<b>Total Non-current Liabilities</b>	<b>5,867</b>	<b>19,175</b>	<b>18,434</b>	<b>18,434</b>	<b>17,934</b>
Minority interests	-	-	-	-	-
Paid-up share capital	15,000	15,000	15,000	15,000	15,000
Total Reserves	494	477	460	443	2,971
<b>Total Shareholders' Equity</b>	<b>15,494</b>	<b>15,477</b>	<b>15,460</b>	<b>15,443</b>	<b>17,971</b>
<b>Total Equity</b>	<b>15,494</b>	<b>15,477</b>	<b>15,460</b>	<b>15,443</b>	<b>17,971</b>
<b>Total Liabilities &amp; Shareholders' Equity</b>	<b>22,402</b>	<b>35,808</b>	<b>35,049</b>	<b>35,032</b>	<b>44,135</b>

Debt repayment will commence as Kayan begins production

Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
Net Debt (SARmn)	2,293	16,642	16,759	16,708	10,905
Net Debt/EBITDA (x)	(13.33)	(987.93)	(994.87)	(991.85)	2.41
Net Debt to Equity	14.8%	107.5%	108.4%	108.2%	60.7%
EBITDA Interest Cover (x)	0.3	-	-	-	20.1
BVPS (SAR)	10.33	10.32	10.31	10.30	11.98

Saudi Kayan will generate positive cash flows only by 2012

Cashflow Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Net Income before Tax &amp; Minority Interest</b>	<b>507</b>	<b>(17)</b>	<b>(17)</b>	<b>(17)</b>	<b>2,633</b>
Depreciation & Amortisation	-	-	-	-	1,667
Decrease in Working Capital	(21)	(938)	-	168	3,371
Other Operating Cashflow	32	10	-	-	(105)
<b>Cashflow from Operations</b>	<b>518</b>	<b>(946)</b>	<b>(17)</b>	<b>151</b>	<b>7,566</b>
Capital Expenditure	(13,218)	(13,410)	(100)	(100)	(1,763)
New Investments	-	-	-	-	-
Others	(27)	6	-	-	-
<b>Cashflow from investing activities</b>	<b>(13,245)</b>	<b>(13,404)</b>	<b>(100)</b>	<b>(100)</b>	<b>(1,763)</b>
<b>Net Operating Cashflow</b>	<b>(12,727)</b>	<b>(14,349)</b>	<b>(117)</b>	<b>51</b>	<b>5,803</b>
Dividends paid to ordinary shareholders	-	-	-	-	-
Proceeds from issue of shares	-	-	-	-	-
Effects of Exchange Rates on Cash	-	-	-	-	-
Other Financing Cashflow	(330)	-	-	-	-
<b>Cashflow from financing activities</b>	<b>5,484</b>	<b>13,299</b>	<b>(742)</b>	<b>-</b>	<b>(499)</b>
Total cash generated	(7,243)	(1,051)	(858)	51	5,303
Cash at beginning of period	10,765	3,522	2,472	1,613	1,664
<b>Implied cash at end of year</b>	<b>3,522</b>	<b>2,472</b>	<b>1,613</b>	<b>1,664</b>	<b>6,968</b>
<b>Ratios</b>	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Capex/Sales	-	-	-	-	15.0%

Source: Company data, Al Rajhi Capital



<b>US\$5.80bn</b> Market cap	<b>39.7%</b> Free float	<b>US\$43.20mn</b> Avg. daily volume
Target price	n/a	n/a
Consensus price	<b>44.00</b>	14.0% over current
Current price	<b>38.60</b>	as at 3/8/2010

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## Yansab

### In operation but debt rather high

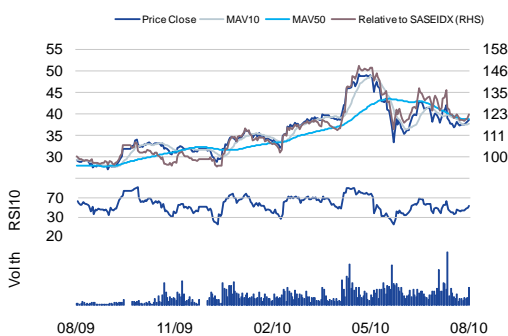
#### Key themes

We expect Saudi petrochemicals suppliers to outperform global rivals with margins driven by cheap feedstock costs and strong demand coming from Asia. We believe a shift towards heavier, more expensive feedstock in plants from now on will not constrain profits growth as improving prices and higher volumes should offset the higher costs.

#### Implications

Yansab is trading on a 2011 EV/EBITDA multiple of 9.6x. This is well above the corresponding level for SABIC (6.5x), which is effectively the industry aggregate, despite Yansab's higher level of risk. While Yansab's commercial start-up is a significant catalyst for the stock, its relatively high debt level constrains the company financially. We think that Yansab will not be able to pay a dividend until 2015.

#### Performance



#### Earnings

Period End (SAR)	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	-	6,600	8,151	8,477
Revenue Growth			23.5%	4.0%
EBITDA (SARmn)	(29)	2,541	3,342	3,476
EBITDA Growth	14.2%		31.5%	4.0%
EPS	(0.05)	2.75	4.18	4.43
EPS Growth	14.2%		52.3%	6.0%

Source: Company data, Al Rajhi Capital

#### Valuation

Note. We have not provided an historical valuation chart here, because until this year Yansab had neither revenues nor profits.

*Like Saudi Kayan, Yansab is essentially a "project" company which has been formed in order to build and manage a huge plant for SABIC. As such, it will always face a greater degree of risk than its more diversified parent. Unlike Saudi Kayan, however, Yansab actually has launched operation and so will record sales and profits this year. Yansab benefits from low feedstock prices and so should achieve margins above the global average over the medium term. However, relatively high debt may constrain the company in the near term. We do not have a target price or investment rating for Yansab.*

**Market scenario and current business structure:** The Saudi petrochemicals sector is focused on exports. The sector benefits from low feedstock costs, favourable government policies and rising demand from Asia, especially China. Yansab is 51% owned by SABIC, and is responsible for one of the SABIC group's major investment projects, located at Yanbu on the west coast of Saudi Arabia. This plant will concentrate on the production of basic petrochemicals such as ethylene and propylene, and has installed capacity of 4.0mtpa. Yansab started commercial production in Q1 2010, a significant milestone against the backdrop of delays on major petrochemicals projects in the GCC region.

**Low-cost producer:** Like the rest of the industry, Yansab benefits from cheap feedstock prices. Ethane accounts for the bulk of the Yanbu facility's feedstock, while propane and other heavier and more expensive feedstocks constitute the remainder. Scarcity of ethane has forced most new Saudi petrochemicals plants to operate using mixed feedstock. However, the overall discount on feedstock prices should ensure that Yansab achieves net margins above the global average.

**A project company:** Like Saudi Kayan, Yansab is essentially a "project company". To our mind, the two companies have been formed primarily in order to build and manage huge plants intended to supply their parent SABIC, which will market and distribute the plants' output. As companies whose business plan is focused around a single project, Yansab and Saudi Kayan are vulnerable to delays in those projects, or to specific risks affecting them. This means that investors in Yansab and Saudi Kayan will always face a greater degree of risk than investors in SABIC, which is much more diversified. Unlike Saudi Kayan, however, Yansab actually has launched operation and so will record revenues and profits this year. This fact should help to support Yansab's share price.

**Debt is a cause for concern:** Yansab's operations were originally financed with a 70%/30% mix of debt and equity. At the end of Q2 2010, net debt was around SAR14.0bn, equivalent to 2.1x our estimate of 2010 revenues and to 5.5x our estimate of 2010 EBITDA. In our view, the high debt level will constrain the company financially, and so we do not expect a dividend payment until 2015. While we expect the net debt/EBITDA ratio to have fallen to a reasonable level of 2.4x by 2012, despite its high profit margins and strong operating cash flows we do not expect the company to move to a net cash position until 2018.

**Valuation and conclusion:** Yansab trades on a 2011 EV/EBITDA multiple of 9.6x. This is well above the corresponding levels for SABIC (6.5x) despite the fact that Yansab carries a higher level of risk. We do not have a target price or investment rating for Yansab because it is non-Sharia compliant by our definition (see the front of our main report for further information).



### Corporate summary

Yansab is handling one of the two major capex projects currently being undertaken by the SABIC group at Yanbu on the west coast. SABIC holds 51% of its Yansab subsidiary and the rest is owned by public shareholders. Yansab is listed on the TASI following an IPO in 2005 and focus on production of basic chemicals such as ethylene and propylene, helping SABIC meet demand coming from Asia and other growth markets. The facility at Yansab commenced commercial production in Q1 2010.

### Share information

Market cap (SAR/US\$) 21.70bn / 5.80bn  
52-week range 27.20 - 49.20  
Daily avg volume (US\$) 43.20mn  
Shares outstanding 562.5mn  
Free float (est) 39.7%

Performance:	1M	3M	12M
Absolute	-3%	-20.9%	31.3%
Relative to index	-7.4%	-12.1%	23%

Major Shareholder:  
SABIC/SABIC 3551%  
GOSI/Company Employees 204%

Source: Bloomberg, Al Rajhi Capital

### Valuation

Period End	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	-	6,600	8,151	8,477
EBITDA (SARmn)	(29)	2,541	3,342	3,476
Net Profit (SARmn)	(29)	1,545	2,353	2,494
EPS (SAR)	(0.05)	2.75	4.18	4.43
DPS (SAR)	-	-	-	-
EPS Growth	14.2%	na	52.3%	6.0%
EV/EBITDA (x)	NA	13.4	9.6	8.6
P/E (x)	NA	14.1	9.2	8.7
P/B (x)	3.8	3.0	2.3	1.8
Dividend Yield	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital

Commercial launch ought to be a positive catalyst for Yansab's share price...

...but high debt constrains the company financially

We expect Yansab to achieve an EBITDA margin of around 41% over the next decade except in 2018-19

We expect Yansab to pay its first dividend for 2015

## Commercial start-up overshadowed by debt levels

At first glance, one would expect Yansab's launch of commercial operations to act as a significant positive catalyst for its share price since the company's revenue stream from its petrochemicals output can now be estimated more accurately. Unlike its peers Saudi Kayan and Alujain Corp (not covered by Al Rajhi Capital) which have faced multiple delays in commercial start-up, Yansab is already in a position to capitalise on growing Asian demand and a possible revival in global demand. While the Yansab plant has yet to function at full capacity utilisation rates, we believe Yansab's production has come on stream at an opportune time considering the current situation of surging demand in China and other emerging markets in Asia. Moreover, Yansab should benefit from its relationship with SABIC's in marketing and distributing its output.

However, Yansab's debt level is a cause for concern. The company's capital structure at its initiation was 70%/30% equity. At the end of Q2 2010, net debt was SAR14.0bn, equivalent to 2.1x our estimate of 2010 revenues and to 5.5x our estimate of 2010 EBITDA. In our view, the high debt level will constrain the company financially, and so we do not expect a dividend payment until 2015. On the positive side, due to its high gearing Yansab should achieve very rapid earnings growth if recovery in global demand for petrochemicals drives strong growth in volumes for the Saudi petrochemicals sector.

## Yansab: long-run assumptions

We make explicit forecasts for Yansab for eleven years, i.e. till 2021. Now that commercial launch has begun, we have assumed 95% capacity utilisation and steady production volumes over the coming decade except in our assumed recession year of 2019. Regarding selling prices, we forecast steady growth to our assumed economic peak year of 2014, followed by a gradual slowdown and a decline in 2019. We expect the company to report EBITDA of SAR2.54bn and an EBITDA margin of 38.5% in 2010. Thereafter we believe that the EBITDA margin will rise to around 41%, taking account of the company's sizable advantage in terms of feedstock costs. We expect that Yansab will be able to maintain that margin level except during our assumed downturn of 2018-19.

Although Yansab has already incurred very high capex in the construction of the Yanbu plant, bearing in mind both strong demand from Asia and the cost overruns on investment projects seen in the sector, as in the case of Saudi Kayan have assumed a capex/sales ratio of 15% for several years into the future. Yansab has relatively high gearing: we estimate the net debt/EBITDA ratio at 4.8x for the end of 2010. While we expect the net debt/EBITDA ratio to have fallen to a reasonable level of 2.4x by 2012, despite its high profit margins and strong operating cash flows we do not expect the company to move to a net cash position until 2018. Bearing in mind its relative financial constraints, we have assumed that Yansab will pay its first dividend for the year 2015.



Yansab should record its first revenues this year

Income Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Revenue</b>	-	-	6,600	8,151	8,477
Cost of Goods Sold	-	-	(3,630)	(4,279)	(4,450)
<b>Gross Profit</b>	-	-	2,970	3,872	4,027
Government Charges					
S.G. & A. Costs	(26)	(29)	(1,172)	(1,312)	(1,383)
<b>Operating EBIT</b>	<b>(26)</b>	<b>(29)</b>	<b>1,798</b>	<b>2,559</b>	<b>2,644</b>
Cash Operating Costs	(26)	(29)	(4,059)	(4,809)	(5,001)
EBITDA	(26)	(29)	2,541	3,342	3,476
Depreciation and Amortisation	-	-	(743)	(783)	(832)
<b>Operating Profit</b>	<b>(26)</b>	<b>(29)</b>	<b>1,798</b>	<b>2,559</b>	<b>2,644</b>
Net financing income/(costs)	-	-	(189)	(108)	(46)
Forex and Related Gains	-	-	-	-	-
Provisions	-	-	-	-	-
Other Income	-	-	-	-	-
Other Expenses					
<b>Net Profit Before Taxes</b>	<b>(26)</b>	<b>(29)</b>	<b>1,609</b>	<b>2,451</b>	<b>2,598</b>
Taxes	-	-	(64)	(98)	(104)
Minority Interests	-	-	-	-	-
<b>Net profit available to shareholders</b>	<b>(26)</b>	<b>(29)</b>	<b>1,545</b>	<b>2,353</b>	<b>2,494</b>
Dividends	-	-	-	-	-
Transfer to Capital Reserve	-	-	-	-	-

	12/08A	12/09A	12/10E	12/11E	12/12E
Adjusted Shares Out (mn)	562.5	562.5	562.5	562.5	562.5
CFPS (SAR)	(0.05)	(0.05)	4.07	5.57	5.91
EPS (SAR)	(0.045)	(0.052)	2.746	4.183	4.433
DPS (SAR)	0	0	0	0	0

Steady selling prices should drive growth

Growth	12/08A	12/09A	12/10E	12/11E	12/12E
Revenue Growth				23.5%	4.0%
Gross Profit Growth				30.4%	4.0%
EBITDA Growth	-69.2%	14.2%		31.5%	4.0%
Operating Profit Growth	-69.2%	14.2%		42.3%	3.3%
Net Profit Growth	-123.3%	14.2%		52.3%	6.0%
EPS Growth	-123.3%	14.2%		52.3%	6.0%

Margins	12/08A	12/09A	12/10E	12/11E	12/12E
Gross profit margin			45.0%	47.5%	47.5%
EBITDA margin			38.5%	41.0%	41.0%
Operating Margin			27.2%	31.4%	31.2%
Pretax profit margin			24.4%	30.1%	30.6%
Net profit margin			23.4%	28.9%	29.4%

We expect Yansab to achieve ROIC of 11% by 2011

Other Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
ROCE	-0.2%	-0.2%	8.7%	11.5%	11.3%
ROIC	-0.2%	-0.2%	8.5%	11.4%	11.0%
ROE	-0.4%	-0.5%	24.0%	28.0%	23.1%
Effective Tax Rate	0.0%	0.0%	4.0%	4.0%	4.0%
Capex/Sales			15.0%	15.0%	15.0%
Dividend Payout Ratio	0.0%	0.0%	0.0%	0.0%	0.0%

Valuation Measures	12/08A	12/09A	12/10E	12/11E	12/12E
P/E (x)	NA	NA	14.1	9.2	8.7
P/CF (x)	NA	NA	9.5	6.9	6.5
P/B (x)	3.8	3.8	3.0	2.3	1.8
EV/Sales (x)	NA	NA	5.1	3.9	3.5
EV/EBITDA (x)	NA	NA	13.4	9.6	8.6
EV/EBIT (x)	NA	NA	18.9	12.5	11.4
EV/IC (x)	1.9	1.8	1.6	1.4	1.2
Dividend Yield	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital



Yansab will remain a highly geared company

Balance Sheet (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
Cash and Cash Equivalents	1,033	606	2,147	3,123	3,911
Current Receivables	123	858	2,656	3,277	3,407
Inventories	8	738	990	1,223	1,272
Other current assets	75	24	24	24	24
<b>Total Current Assets</b>	<b>1,217</b>	<b>2,208</b>	<b>5,800</b>	<b>7,630</b>	<b>8,597</b>
Fixed Assets	17,105	18,576	18,823	19,263	19,703
Investments	-	-	-	-	-
Goodwill					
Other Intangible Assets	34	30	30	30	30
Total Other Assets	321	310	310	310	310
<b>Total Non-current Assets</b>	<b>17,460</b>	<b>18,916</b>	<b>19,163</b>	<b>19,603</b>	<b>20,043</b>
<b>Total Assets</b>	<b>18,677</b>	<b>21,124</b>	<b>24,963</b>	<b>27,233</b>	<b>28,640</b>
Short Term Debt	669	916	916	916	916
Trade Payables					
Dividends Payable	-	-	-	-	-
Other Current Liabilities					
<b>Total Current Liabilities</b>	<b>1,771</b>	<b>1,679</b>	<b>4,216</b>	<b>4,991</b>	<b>5,154</b>
Long-Term Debt	11,128	13,696	13,453	12,595	11,345
Other LT Payables	-	-	-	-	-
Provisions	81	81	81	81	81
<b>Total Non-current Liabilities</b>	<b>11,209</b>	<b>13,777</b>	<b>13,535</b>	<b>12,676</b>	<b>11,427</b>
Minority interests	-	-	-	-	-
Paid-up share capital	5,625	5,625	5,625	5,625	5,625
Total Reserves	72	43	1,587	3,940	6,434
<b>Total Shareholders' Equity</b>	<b>5,697</b>	<b>5,668</b>	<b>7,212</b>	<b>9,565</b>	<b>12,059</b>
<b>Total Equity</b>	<b>5,697</b>	<b>5,668</b>	<b>7,212</b>	<b>9,565</b>	<b>12,059</b>
<b>Total Liabilities &amp; Shareholders' Equity</b>	<b>18,677</b>	<b>21,124</b>	<b>24,963</b>	<b>27,233</b>	<b>28,640</b>

Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
Net Debt (SARmn)	10,764	14,006	12,223	10,387	8,350
Net Debt/EBITDA (x)	(420.67)	(479.44)	4.81	3.11	2.40
Net Debt to Equity	188.9%	247.1%	169.5%	108.6%	69.2%
EBITDA Interest Cover (x)			13.5	30.9	74.8
BVPS (SAR)	10.13	10.08	12.82	17.01	21.44

Strong cash flows help offset the effect of debt

Cashflow Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Net Income before Tax &amp; Minority Interest</b>	<b>(26)</b>	<b>(29)</b>	<b>1,609</b>	<b>2,451</b>	<b>2,598</b>
Depreciation & Amortisation	-	-	743	783	832
Decrease in Working Capital	(173)	(1,758)	485	(78)	(16)
Other Operating Cashflow	21	0	(64)	(98)	(104)
<b>Cashflow from Operations</b>	<b>(178)</b>	<b>(1,787)</b>	<b>2,773</b>	<b>3,058</b>	<b>3,309</b>
Capital Expenditure	(4,106)	(1,471)	(990)	(1,223)	(1,272)
New Investments	-	-	-	-	-
Others	(20)	15	-	-	-
<b>Cashflow from investing activities</b>	<b>(4,126)</b>	<b>(1,455)</b>	<b>(990)</b>	<b>(1,223)</b>	<b>(1,272)</b>
<b>Net Operating Cashflow</b>	<b>(4,304)</b>	<b>(3,242)</b>	<b>1,783</b>	<b>1,835</b>	<b>2,037</b>
Dividends paid to ordinary shareholders	-	-	-	-	-
Proceeds from issue of shares	-	-	-	-	-
Effects of Exchange Rates on Cash	-	-	-	-	-
Other Financing Cashflow	11	2,155	-	-	-
<b>Cashflow from financing activities</b>	<b>3,642</b>	<b>2,814</b>	<b>(242)</b>	<b>(859)</b>	<b>(1,249)</b>
Total cash generated	(661)	(427)	1,541	977	788
Cash at beginning of period	1,694	1,033	606	2,147	3,123
<b>Implied cash at end of year</b>	<b>1,033</b>	<b>606</b>	<b>2,147</b>	<b>3,123</b>	<b>3,911</b>

Yansab will incur marginal capex going ahead

Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
Capex/Sales			15.0%	15.0%	15.0%

Source: Company data, Al Rajhi Capital

# Rabigh Refining & Petrochemicals Co

Petrochemicals – Industrial

PETROR AB: Saudi Arabia

4 August 2010

الراجحي المالية  
Al Rajhi Capital



**US\$6.00bn** Market cap  
**17.4%** Free float  
**US\$24.20mn** Avg. daily volume

Target price n/a  
Consensus price **40.00** 56.3% over current  
Current price **25.60** as at 3/8/2010

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Not Rated

## Petro Rabigh

### Several strengths, one weakness

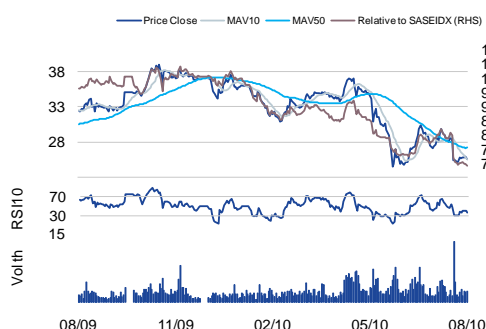
#### Key themes

We expect the Saudi petrochemicals sector to outperform global peers in the next few years given its feedstock cost advantages and strong demand growth from emerging economies. PetroRabigh is backed by strong parent companies and its Phase 2 expansion will add to its top-line growth.

#### Implications

We expect Petro Rabigh to be profitable in 2010 largely due to the rising share of petrochemicals in turnover. The company's integrated operating model almost guarantees low-cost supply of feedstock. While strategically we are positive, Petro Rabigh has high gearing which is unlikely to fall in the near term.

#### Performance



#### Earnings

Period End (SAR)	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	29,423	46,704	47,089	47,493
Revenue Growth	349.7%	58.7%	0.8%	0.9%
EBITDA (SARmn)	(1,209)	3,215	3,984	4,203
EBITDA Growth	-7.1%		23.9%	5.5%
EPS	(1.64)	0.89	1.74	1.70
EPS Growth	14.1%		95.9%	-2.6%

Source: Company data, Al Rajhi Capital

#### Valuation

Note. We have not provided an historical valuation chart here, because until this year petro Rabigh was not profitable.

*Petro Rabigh is a unique combination of an oil refining operation with a new petrochemicals business. Strategically, we are positive about the company as we think it will benefit from its strong parents, its integrated structure and its high exposure to Asia (84% of petrochemicals output). However, gearing is very high and we do not expect it to fall significantly for some time. We do not have an investment rating or target price for Petro Rabigh.*

**Market scenario and current business structure:** The Saudi petrochemicals sector benefits from low feedstock costs, favourable government policies and rising demand from Asia, especially China. Petro Rabigh is a joint venture between two strong parents, Saudi Aramco (the giant state-owned oil and gas group) and Sumitomo Chemical of Japan. Unlike the other Saudi petrochemicals suppliers, Petro Rabigh combines an oil refining operation with high capacity of 440,000 barrels per day with petrochemicals facilities with capacity of 2.4mtpa. Petro Rabigh supplies naphtha, benzene, and other chemicals including polyethylene, polypropylene, and ethylene glycol.

**Secure supply of feedstock:** PetroRabigh has a unique agreement with Saudi Aramco whereby the latter will provide it with a secure supply of ethane for a period of 30 years till 2038. Even though the pricing of the contract is due to be revised in 2015, the security of ethane supply assumes considerable importance in the present situation of declining availability of ethane in the Kingdom.

**Strong parentage gives multiple advantages:** Apart from the benefit derived from stable supply of ethane by Saudi Aramco, there are other ways in which Petro Rabigh profits from its strong parentage. These include distribution and marketing: Saudi Aramco handles marketing of Petro Rabigh's refining output within the Middle East, while Sumitomo Chemical handles marketing of all output outside the GCC – notably in Asia, which is Petro Rabigh's chief market.

**Concentration on Asia:** About 96% of Petro Rabigh's petrochemicals output is exported outside Saudi Arabia, with Asia accounting for 84% of the total. In contrast, only 35% of refined oil output is exported, with the rest consumed domestically. Given rapidly rising Asian demand, we see Petro Rabigh's high exposure as a major strength. Considering that the refining operations of the company operate at very low single-digit margins, we believe continuing expansion in petrochemicals could add substantial value to the company.

**Phase 2 expansion to drive earnings:** PetroRabigh has started construction of its Phase 2 expansion, which we think will come on stream by 2014. The project will add substantial ethane capacity (30mn scf per day) while also increasing the company's output in high-growth chemicals like LDPE and acrylic acid. We believe that the investment cost of the Phase 2 project has fallen by about 50% since inception in 2008, with positive implications for fair value.

**Balance sheet constrained:** Despite Petro Rabigh's strategic advantages, we are concerned about the company's high gearing. We estimate the net debt/EBITDA ratio at over 8x for 2010 and do not expect gearing to fall meaningfully for the next several years due to ongoing high investment requirements. On this basis we do not predict a dividend payment till 2016. We do not have a target price or investment rating for Petro Rabigh because it is non-Sharia compliant by our definition (see the front of our main report for further information).



### Corporate summary

PetroRabigh is the world's largest integrated refining and petrochemical complex. Incorporated in 2005, the company is owned jointly by Saudi Aramco and Japan's Sumitomo Chemical (37.5% each), with the rest being divested through an IPO in 2008. This is the first affiliate of the giant Saudi Aramco to be publicly listed on the TASI. The facility is an extension of Saudi Aramco's oil refining operations in Rabigh and represents the single largest investment by the company in the Kingdom, costing a total of US\$10bn.

### Share information

Market cap (SAR/US\$)	22.40bn / 6.00bn		
52-week range	24.50 - 38.90		
Daily avg volume (US\$)	24.20mn		
Shares outstanding	876.0mn		
Free float (est)	17.4%		

Performance:	1M	3M	12M
Absolute	-5.9%	-26.7%	-21.7%
Relative to index	-10.3%	-17.9%	-30%

Major Shareholder:	
Saudi Arabian Oil Co. (ARAMCO)	37.5%
Sumitomo Chemical	37.5%

Source: Bloomberg, Al Rajhi Capital

### Valuation

Period End	12/09A	12/10E	12/11E	12/12E
Revenue (SARmn)	29,423	46,704	47,089	47,493
EBITDA (SARmn)	(1,209)	3,215	3,984	4,203
Net Profit (SARmn)	(1,433)	778	1,525	1,485
EPS (SAR)	(1.64)	0.89	1.74	1.70
DPS (SAR)	-	-	-	-
EPS Growth	14.1%	na	95.9%	-2.6%
EV/EBITDA (x)	NA	15.9	13.3	13.0
P/E (x)	NA	28.8	14.7	15.1
P/B (x)	2.9	2.6	2.2	1.9
Dividend Yield	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital

Expanding into petrochemicals should boost margins

## Petrochemicals the value driver

Petro Rabigh is the only petrochemicals company that we cover which has direct exposure to oil refining operations. While feedstock prices are fixed, an integrated petrochemicals cracker in a large oil refining operation means that PetroRabigh both saves on transport costs and achieves high economies of scale. The company is backed by Saudi Aramco, which assures supply of ethane feedstock. Petro Rabigh's refining operations have been functioning at very low margins (reflecting the worldwide decline in gross refining margins), and so the expansion into petrochemicals stands to create substantial additional value for the company. With a strong concentration of exports towards Asia, we believe Petro Rabigh will benefit from the surge of new demand coming from China in particular.

In our view, the marketing and distribution agreements with Saudi Aramco and Sumitomo Chemical are beneficial to PetroRabigh as both its parent companies are well-established names in the oil and gas industry. These agreements should help the company achieve better price realisations and sales volume growth. Petro Rabigh's Phase 2 production facility, expected to come on stream in 2014, should help the company diversify away further from the oil refining business through the production of higher value-added products including LDPE and acrylic acid.

Investment cost for Phase 2 has come down

Moreover, the investment cost associated with this project has reportedly come down from US\$14bn (projected at initiation) to US\$7bn. This is mainly due to lower costs overall in the current environment compared to 2008 when the project was conceived. At that time, the global economy and the GCC real estate sector were at their peak. The recession dampened new construction activity, as a result of which contractors and materials are available at substantially lower costs currently.

## Petro Rabigh: long-run assumptions

We make explicit forecasts for Petro Rabigh for eleven years, i.e. till 2021. Following full operational start-up, we expect the company's petrochemicals production volumes to remain steady till 2015 when we have modelled a 30% increase in production on account of the launch of its Phase II project. In 2019, we expect an economic trough and have hence reduced our assumed capacity utilisation from 95% to 85%. Regarding realised petrochemicals prices, we assume a steady growth rate till 2014 after which we expect a gradual decline till 2018 and a decline of 5% in 2019. In the refining segment we have assumed a crude oil price of US\$75 in all future years except our assumed recession year of 2019, for which we have assumed that crude oil collapses to US\$50 per barrel. Furthermore, we have assumed a gross refining margin of US\$1.50 per barrel in 2010 and an increase of 5% annually till 2018. For 2019, we have assumed a steep decline of 75% the in gross refining margins to US\$0.55 per barrel and then a bounce back to \$1.00 per barrel in 2020.

We expect EBITDA to swing handsomely positive in 2010 on account of the contribution from petrochemicals division, and expect the company to achieve an EBITDA margin of around 8% this year. Note: Petro Rabigh's oil refining operations carry much lower margins than petrochemicals. We expect a capex/sales ratio of 10-12% over 2011-2015 as Phase 2 capex continues. Following this, we have assumed a decline to 5%. As a consequence of high investment, we expect the net debt/EBITDA ratio to stay at 7-8x for the next five years before dropping from 2015 onwards. We do not expect a dividend payment before 2016.



Petro Rabigh has been in loss due to low or negative gross refining margins

Petro Rabigh should generate a positive net margin in 2010

ROE should be in the black for the first time in 2010

Income Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Revenue</b>	<b>6,543</b>	<b>29,423</b>	<b>46,704</b>	<b>47,089</b>	<b>47,493</b>
Cost of Goods Sold	(7,165)	(29,878)	(42,461)	(42,634)	(42,815)
<b>Gross Profit</b>	<b>(622)</b>	<b>(455)</b>	<b>4,243</b>	<b>4,455</b>	<b>4,678</b>
Government Charges					
S.G. & A. Costs	(680)	(754)	(2,615)	(2,152)	(2,366)
<b>Operating EBIT</b>	<b>(1,302)</b>	<b>(1,209)</b>	<b>1,628</b>	<b>2,303</b>	<b>2,312</b>
Cash Operating Costs	(7,845)	(30,632)	(43,489)	(43,105)	(43,290)
EBITDA	(1,302)	(1,209)	3,215	3,984	4,203
Depreciation and Amortisation	-	-	(1,588)	(1,681)	(1,891)
<b>Operating Profit</b>	<b>(1,302)</b>	<b>(1,209)</b>	<b>1,628</b>	<b>2,303</b>	<b>2,312</b>
Net financing income/(costs)	45	(224)	(817)	(715)	(765)
Forex and Related Gains					
Provisions	-	-	-	-	-
Other Income					
Other Expenses					
<b>Net Profit Before Taxes</b>	<b>(1,256)</b>	<b>(1,433)</b>	<b>811</b>	<b>1,588</b>	<b>1,547</b>
Taxes	-	-	(32)	(64)	(62)
Minority Interests					
<b>Net profit available to shareholders</b>	<b>(1,256)</b>	<b>(1,433)</b>	<b>778</b>	<b>1,525</b>	<b>1,485</b>
Dividends	-	-	-	-	-
Transfer to Capital Reserve					
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
Adjusted Shares Out (mn)	876.0	876.0	876.0	876.0	876.0
CFPS (SAR)	(1.434)	(1.636)	2.701	3.659	3.854
EPS (SAR)	(1.434)	(1.636)	0.888	1.740	1.696
DPS (SAR)	0	0	0	0	0
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Growth</b>					
Revenue Growth		349.7%	58.7%	0.8%	0.9%
Gross Profit Growth		-26.8%		5.0%	5.0%
EBITDA Growth	207.8%	-7.1%		23.9%	5.5%
Operating Profit Growth	207.8%	-7.1%		41.5%	0.4%
Net Profit Growth	183.9%	14.1%		95.9%	-2.6%
EPS Growth	0.0%	14.1%		95.9%	-2.6%
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Margins</b>					
Gross profit margin	-9.5%	-1.5%	9.1%	9.5%	9.8%
EBITDA margin	-19.9%	-4.1%	6.9%	8.5%	8.8%
Operating Margin	-19.9%	-4.1%	3.5%	4.9%	4.9%
Pretax profit margin	-19.2%	-4.9%	1.7%	3.4%	3.3%
Net profit margin	-19.2%	-4.9%	1.7%	3.2%	3.1%
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Other Ratios</b>					
ROCE	-3.2%	-3.0%	4.0%	5.6%	5.3%
ROIC	-5.1%	-3.0%	3.7%	5.3%	5.3%
ROE	-16.5%	-16.8%	9.5%	16.3%	13.7%
Effective Tax Rate	0.0%	0.0%	4.0%	4.0%	4.0%
Capex/Sales	141.2%	4.2%	5.0%	11.1%	11.1%
Dividend Payout Ratio	0.0%	0.0%	0.0%	0.0%	0.0%
	<b>12/08A</b>	<b>12/09A</b>	<b>12/10E</b>	<b>12/11E</b>	<b>12/12E</b>
<b>Valuation Measures</b>					
P/E (x)	NA	NA	28.8	14.7	15.1
P/CF (x)	NA	NA	9.5	7.0	6.6
P/B (x)	2.4	2.9	2.6	2.2	1.9
EV/Sales (x)	8.0	1.9	1.1	1.1	1.2
EV/EBITDA (x)	NA	NA	15.9	13.3	13.0
EV/EBIT (x)	NA	NA	31.3	23.0	23.7
EV/IC (x)	1.3	1.3	1.2	1.3	1.2
Dividend Yield	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Company data, Al Rajhi Capital



The balance sheet is expanding steadily

Balance Sheet (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
Cash and Cash Equivalents	1,534	1,306	4,739	1,383	878
Current Receivables	2,348	4,682	4,670	4,709	4,749
Inventories	974	2,670	2,335	2,354	2,375
Other current assets	199	289	289	289	289
<b>Total Current Assets</b>	<b>5,056</b>	<b>8,948</b>	<b>12,034</b>	<b>8,735</b>	<b>8,291</b>
Fixed Assets	39,517	39,689	40,437	44,006	47,365
Investments	3,338	3,212	3,212	3,212	3,212
Goodwill	-	298	298	298	298
Other Intangible Assets	-	-	-	-	-
Total Other Assets	-	-	-	-	-
<b>Total Non-current Assets</b>	<b>42,855</b>	<b>43,199</b>	<b>43,946</b>	<b>47,515</b>	<b>50,874</b>
<b>Total Assets</b>	<b>47,911</b>	<b>52,146</b>	<b>55,980</b>	<b>56,251</b>	<b>59,166</b>
Short Term Debt	131	1,035	1,035	1,035	1,035
Trade Payables					
Dividends Payable					
Other Current Liabilities					
<b>Total Current Liabilities</b>	<b>7,199</b>	<b>11,338</b>	<b>15,046</b>	<b>15,162</b>	<b>15,283</b>
Long-Term Debt	31,439	32,961	32,307	30,938	32,246
Other LT Payables	-	-	-	-	-
Provisions	9	17	17	17	17
<b>Total Non-current Liabilities</b>	<b>31,448</b>	<b>32,978</b>	<b>32,325</b>	<b>30,955</b>	<b>32,264</b>
Minority interests					
Paid-up share capital	8,760	8,760	8,760	8,760	8,760
Total Reserves	504	(929)	(151)	1,374	2,859
<b>Total Shareholders' Equity</b>	<b>9,264</b>	<b>7,831</b>	<b>8,609</b>	<b>10,134</b>	<b>11,619</b>
<b>Total Equity</b>	<b>9,264</b>	<b>7,831</b>	<b>8,609</b>	<b>10,134</b>	<b>11,619</b>
<b>Total Liabilities &amp; Shareholders' Equity</b>	<b>47,911</b>	<b>52,146</b>	<b>55,980</b>	<b>56,251</b>	<b>59,166</b>

We expect net debt/EBITDA to stay high for several years

Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
Net Debt (SARmn)	30,035	32,689	28,603	30,590	32,403
Net Debt/EBITDA (x)	(23.08)	(27.04)	8.90	7.68	7.71
Net Debt to Equity	324.2%	417.4%	332.2%	301.9%	278.9%
EBITDA Interest Cover (x)	28.7	(5.4)	3.9	5.6	5.5
BVPS (SAR)	10.58	8.94	9.83	11.57	13.26

Cashflow Statement (SARmn)	12/08A	12/09A	12/10E	12/11E	12/12E
<b>Net Income before Tax &amp; Minority Interest</b>	<b>(1,256)</b>	<b>(1,433)</b>	<b>811</b>	<b>1,588</b>	<b>1,547</b>
Depreciation & Amortisation	-	-	1,588	1,681	1,891
Decrease in Working Capital	2,494	(1,105)	4,055	58	61
Other Operating Cashflow	282	1,073	(32)	(64)	(62)
<b>Cashflow from Operations</b>	<b>1,520</b>	<b>(1,465)</b>	<b>6,421</b>	<b>3,263</b>	<b>3,437</b>
Capital Expenditure	(9,240)	(1,226)	(2,335)	(5,250)	(5,250)
New Investments	(887)	125	-	-	-
Others					
<b>Cashflow from investing activities</b>	<b>(10,127)</b>	<b>(1,101)</b>	<b>(2,335)</b>	<b>(5,250)</b>	<b>(5,250)</b>
<b>Net Operating Cashflow</b>	<b>(8,607)</b>	<b>(2,565)</b>	<b>4,086</b>	<b>(1,987)</b>	<b>(1,813)</b>
Dividends paid to ordinary shareholders	-	-	-	-	-
Proceeds from issue of shares	4,568	-	-	-	-
Effects of Exchange Rates on Cash					
Other Financing Cashflow	2,932	2,337	-	-	-
<b>Cashflow from financing activities</b>	<b>9,956</b>	<b>2,337</b>	<b>(653)</b>	<b>(1,370)</b>	<b>1,309</b>
Total cash generated	1,348	(228)	3,433	(3,356)	(505)
Cash at beginning of period	186	1,534	1,306	4,739	1,383
<b>Implied cash at end of year</b>	<b>1,534</b>	<b>1,306</b>	<b>4,739</b>	<b>1,383</b>	<b>878</b>

Ratios	12/08A	12/09A	12/10E	12/11E	12/12E
Capex/Sales	141.2%	4.2%	5.0%	11.1%	11.1%

Source: Company data, Al Rajhi Capital



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Al Rajhi Capital uses a three-tier rating system based on absolute upside or downside potential for all stocks under its coverage except financial stocks and those few other companies not compliant with Islamic Shariah law:

**"Overweight"**: Our target price is more than 15% above the current share price, and we expect the share price to reach the target on a 6-9 month time horizon.

**"Neutral"**: We expect the share price to settle at a level between 5% below the current share price and 15% above the current share price on a 6-9 month time horizon.

**"Underweight"**: Our target price is more than 5% below the current share price, and we expect the share price to reach the target on a 6-9 month time horizon.

#### 2. Definitions

**"Time horizon"**: Our analysts make recommendations on a 6-9 month time horizon. In other words, they expect a given stock to reach their target price within that time.

**"Fair value"**: We estimate fair value per share for every stock we cover. This is normally based on widely accepted methods appropriate to the stock or sector under consideration, e.g. DCF (discounted cash flow) or SoTP (sum of the parts) analysis.

**"Target price"**: This may be identical to estimated fair value per share, but is not necessarily the same. There may be very good reasons why a share price is unlikely to reach fair value within our time horizon. In such a case we set a target price which differs from estimated fair value per share, and explain our reasons for doing so.

Please note that the achievement of any price target may be impeded by general market and economic trends and other external factors, or if a company's profits or operating performance exceed or fall short of our expectations.

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