

## Foreword

#### Dear reader,

It gives us immense pleasure to present the second issue of Chemicals Quarterly, a joint initiative of CII and Ernst & Young. Our continued endeavor is to provide our decision-makers in the Indian chemical industry with a consolidated source of news, views and insights covering the global and domestic chemical markets.

While the global chemical industry shows tentative signs of recovery, demand is still sluggish. Europe continues to under-perform as downstream companies reduce restocking. The US chemical industry appears to be staging a faster recovery on the back of the recovery of the housing industry as well as a rebound in various petrochemical prices. However, during the next few quarters, the growth engine is likely to continue to be China, whose investment cycle has shown an increasing trend in the last three quarters. The recovery of the global chemical industry has been amply demonstrated in the last couple of months with giants such as Clariant and Rhodia making profits in 3Q10 on the back of a revival in demand and their cost-cutting initiatives.

In this issue, we focus on the specialty chemicals industry. It also includes an Ernst & Young overview of the key strategic considerations relating to the sector and the viewpoints of two industry leaders. In the last decade, this sector has continued to be a growth driver for the global chemical industry and a flag bearer for innovation within the sector. The year 2009 witnessed two mega deals, Dow Chemical with Rohm & Haas & BASF and Ciba. These deals amply indicate that the industry's top executives believe in the specialty chemicals industry's growth story. However, financial results in 2009 also proved (and rather painfully) that specialty chemicals are not a panacea in an economic downturn.

The last decade has also witnessed the radical transformation of the Indian specialty chemical industry, with several MNC growth plans and acquisitions reiterating the India advantage. There is adequate reason to believe that India's success story in fine chemicals will also be replicated in its specialty chemicals industry. In this issue, we have Dr. Annoottam Ghosh, Managing Director, Croda India sharing his views on the industry. Further, we have the viewpoint of Mr. Naishadh Desai, Managing Director, Britacel Silicones on the emerging frontiers in textile specialties, which is a crucial segment of the Indian specialty chemical industry. Both of them are veterans in the specialty chemicals industry and we will benefit substantially from their knowledge and experience.

As we sign off the year 2009, India's largest private sector company, RIL, continues to pursue its acquisition of Lyondell Basell Industries in what may be the biggest deal in Indian corporate history. While 2009 has been eventful for the sector, 2010 promises to be a transformational year. As you will see, we have made certain changes in this newsletter, for instance, strengthening the views section, based on the feedback received from our members on the first edition. We earnestly solicit your feedback to make these quarterly interactions even more useful, insightful and informative.

M Muralidharan Nair Chemical Sector Leader Ernst & Young, India

R Mukundan Chairman CII National Committee on Chemicals & Managing Director Tata Chemicals

#### Contents ► Valuation – Indian Chemicals Industry Specialty chemical industry – Industry news strategic considerations pg 12 pg 04 pg 17 Interview with Mr. Annoottam Company news Ghosh, Managing Director, Ernst & Young's point of view pg 07 Croda India pg 20 Regulations pg 13 pg 10 Commodity price snapshots Emerging frontiers in textile specialties pg 23 Mergers & Acquisitions pg 15 pg 11 References pg 25

# Industry news

#### India

#### **Petrochemicals**

- According to Business Monitor International (BMI), consumption of petrochemicals in India is expected to continue its growth throughout FY200910, with demand strengthening toward the latter part of the year amid restocking in the packaging sector.
- In its year-end review, the Ministry of Chemicals and Fertilisers has approved proposals from Andhra Pradesh, West Bengal and Gujarat to set up Petroleum Chemicals and Petrochemical Investment Regions (PCPIRs) in these states. The PCPIR in Andhra Pradesh will be located at Visakhapatnam as well as in the east Godavari districts, and will cover an area of 603 sq. kms. The PCPIR in Gujarat will be spread over the Vagra and Bharuch blocks and cover an area of 453 sq. kms, while the proposed PCPIR in West Bengal will be located at Haldia in the Purba Madinipur district, covering an area of 250.19 sq. kms.
- These PCPIRs are expected to create infrastructure worth INR397,440 million and cover roads, railways, air links, ports, telecom, power, water treatment, sewerage, effluent treatment, green buffers, etc.

#### **Agrochemicals**

- Despite a weak export market and inadequate monsoons, most agrochemical companies in the country have posted improved results in 2Q10, mainly due to:
  - Farmers enjoy increased liquidity, with several schemes such as NREGA, farm loan waivers and increased MSP for various crops launched by the government.
  - The area under key crops such as wheat and rice during the 2009-10 rabi season has increased as compared to 2008-09. According to recent data released by the Ministry of Agriculture, the wheat crop sown was on 2607.1 million hectares of land in end-December 2009, as compared to 2556.3 million hectares in end-December 2008. The other key crop, rice, has seen the acreage sown increase to 0.455 million hectares, as compared to 0.361 hectares in 2008.
- It is expected that rabi 2009-10 season might see an additional 10 million tonnes of production of food grains and oil seeds. This will further boost the sentiments of agrochemicals sector.



#### **Specialty chemicals**

- At a meeting convened by the Hon'ble High Court of Judicature at Mumbai on 16 and 17 December 2009, shareholders of BASF India Ltd (BIL) and Ciba India Limited (CIL) approved the Scheme of Amalgamation for the three Ciba Group Companies in India with BASF India Ltd. BASF had announced its plans to merge the three Indian Ciba companies, Ciba India Ltd., Ciba Research (India) Pvt. Ltd. and Diamond Dye-Chem Ltd., with BASF India Ltd (BIL) at its Board meeting on 12 September 2009. The merger will create a large specialty chemical conglomeration, whose segments, including paper, chemicals, coating effects and care chemicals, will complement each other.
- In a bid to explore opportunities to develop markets in the Indian sub-continent, the Asia Pacific and globally, ethylene oxide derivatives manufacturer Laffans Petrochemicals Ltd. has signed a formal agreement with Huntsman Corporation Singapore Pte. Ltd. for commercial manufacturing.

  Manufacturing will be carried out in India under the ambit of Huntsman's technology transfer. Huntsman will enter the Indian surfactant industry with locally made production, which is scheduled to commence shortly. Initial production will be supervised by the Huntsman team. According to the agreement, both the parties will explore opportunities to develop markets in the Indian sub-continent, the Asia Pacific and globally by drawing on the synergy of the commercial and manufacturing alliance, including sharing of technical knowhow, expertise and resources for specialty chemicals.

#### Key statistics released by Government of India

- Export of drugs and pharmaceuticals from India rose by 25% to INR384,330 million in 2008-09 from INR307, 600 million in 2007-08. Exports increased by 23% in FY08 from INR249.420 million in 2006-07.
- ➤ Some chemical companies demanded concessions during the period of recession. These included a reduction in central excise duty from 14% to 8%, roll-back of import duty of 5% on naphtha, levy of crisis duty of 10% on all imported chemicals, intermediates, dyes, pigments and pesticides, as well as expeditious implementation of anti-dumping/safeguard measures, fiscal relief to SMEs and provision of low-cost credit to them. The government has responded by reducing excise duty from 14% to 10% and thereafter from 10% to 8%.
- The government has also imposed anti-dumping/safeguard duties on soda ash (of 20%), caustic soda (safeguard duty of 15%) and carbon black (country-specific anti-dumping duty of USD78-195 per tonne).
- The government has restored DEPB rates to the March 2008 level and levied 150% weighted deduction for expenditure on R&D for recognized R&D units.
- The period of export credit has also been increased from 180 to 270 days.

**Note:** The following facts were highlighted by the Minister of State for Chemicals and Fertilizers, Mr. Srikant Kumar Jena, in a reply to questions raised during a Lok Sabha session on 17 December 2009.

#### Global

- According to Moody's, the chemical industry is expected to witness slow volume growth and excess capacity, coupled with the threat of raw material price increases. Although demand has revived in the last two quarters, it is expected to remain subdued in the near future as downstream companies reduce their restocking initiatives. Similarly, analysts are of the opinion that although the industry has begun looking up, recovery is still sluggish in Europe. For example, 3Q09 production is up by 5.5% (sequentially) in France, but industry players still feel that this growth will not return to 2008 levels before 2011-2012. However, the American Chemistry Council (ACC) has a different view and expects a V-shaped recovery, driven by the revival of the housing industry. It expects the global chemicals industry to grow by 4.6% in 2010 as compared to the expected 4.6% decline in 2009.
- According to the China Petroleum and Chemical Industry
  Association, China's chemical industry is showing signs
  of revival with its output in 2009 expected to increase as
  compared to 2008. The industry generated an output of
  356.9 billion yuan in October 2009, up 21% y-o-y, mainly
  driven by the growth in the auto and real estate industries.
  Chemicals prices also bottomed out in October 2009 and
  have shown an uptrend, supported by revived demand in the
  country's downstream industries.

#### **Petrochemicals**

- Commodity resin prices in North America showed an upswing in November 2009 on the back of rising feedstock costs and tighter production constraints. Polymer prices rose in line with increased raw material prices.
- Ethylene prices have also gained significant ground in the US recently, on the back of restricted supplies (a spate of cracker outages) in December 2009 and the firm buying interest shown by downstream PE exporters in markets including China and the Middle East.
- Petrochemical prices in Asia have rebounded in December 2009, as indicated by the increased price of ethylene to USD1,100, as compared to USD1,000 in November 2009.
- China has imposed an anti-dumping duty on PVC imported from the US, Korea, Japan, Russia and Taiwan for a period of five years. This is an attempt to curb unabated PVC imports into the country.

#### **Agrochemicals**

According to press reports in December 2009, the European Union (EU) seems to be using a dual strategy to enforce a ban on a low-cost pesticide known as endosulfan, which is used by a large section of India's farming community. Apart from directly lobbying for this ban on endosulfan through conventions on chemicals, such as the ones held at Stockholm and Rotterdam, of which India is a member, the EU is also propagating its policies through environmental NGOs. The campaign to ban endosulfan (which is substantially cheaper as compared to other pesticides) began in 2007 after the EU, the world's largest user, producer and exporter of pesticides, stopped its production of endosulfan in 2006.

According to a recent study by market research firm Frost & Sullivan, the biopesticides market is expected to gain ground in the US and Western Europe. The industry is expected to touch USD1 billion by 2015, boosted by the increased thrust on chemical- free crops and enhanced organic farming acreage. Government support and the increasing demand for chemical-free crops from leading supermarkets is also driving the trend.

#### Inorganic chemicals

- China's soda ash and PVC industry is expected to recover in the next couple of years on the back of an improvement in the real estate industry. The industry continues to grapple with overcapacity. According to the China Chlor-Alkali Industry Association, nine new projects were under construction as of August 2009, with a total planned capacity of 1.7 million tonnes per annum.
- According to the Chlorine Institute, US chlor–alkali operating rates were 80% in October 2009, the same as in September 2009. These rates indicate a decline from an operating rate of 85% in August 2009.

#### **Specialty chemicals**

- According to S&P, chemical companies are expected to post higher sales in 2010 on the back of a forecasted growth of 1.9% in real US GDP in 2010, as well as favorable exchange rates. Since specialty chemical companies are less exposed to cyclicality in the economy, they are expected to report more stable margins as compared to commodity chemicals players.
- According to European specialty companies Clariant and Rhodia, the industry is showing signs of revival, supported by improving demand. These companies feel that although demand has bottomed out, signs of a sustainable recovery are still not evident. Both Clariant and Rhodia turned in profits in 3Q10 on the back of a revival in demand and costcutting initiatives.
- The global flavors and fragrances industry is witnessing improving sales due to a recovery in demand in Asia and Latin America as well as with de-stocking losing steam. Earnings in 3Q09 earnings indicated a mixed bag, but most companies showed sequential improvements.

## Company news

#### India

#### **BASF India**

BASF is in the process of disposing of its agrochemicals site at Dadra in Mumbai to Sonachi Industries for INR51 million. This sale is a part of the company's overall strategy to improve its product portfolio of agricultural products by eliminating lowmargin generic products from it, outsourcing, carrying out organizational restructuring and moving its resources from cotton to segments such as soyabeans, fruits and vegetables.

#### Bayer India

Bayer has entered an agreement with GVK Biosciences to conduct research in the area of early discovery chemistry. The company's objective is to speed up the search for and development of active ingredients for innovative crop protection products by utilizing GVK's capabilities in early discovery chemistry. This may well be the beginning of a series of CRAMs deals in the agrochemicals industry.

#### **Gujarat Alkalies and Chemicals**

 Gujarat Alkalies is planning to invest INR980 million to increase the capacity of its hydrogen peroxide plant in the Bharuch district of Gujarat. The company's expected capacity after expansion is expected to exceed 39,000 tonnes per annum.

#### **Gujarat Fluorochemicals**

Gujarat Fluorochemicals (GFL) plans to invest INR5 billion on the expansion of its Dahej chemical complex to improve its production capacity and meet the escalating demand in the market. This investment is expected to raise the company's polytetrafluoroethylene (PTFE) capacity to 12,500 tonnes per annum (tpa), chloromethane capacity to 120,000 tpa and caustic soda capacity to 170,000 tpa. This investment is aimed to enable the company to become one of the biggest PTFE, chloromethanes and HCFC22 (refrigerant) producers in the country.

#### Lanxess India

In a presentation made recently at an industry forum, Dr. Strassburger, Managing Director and Country Representative of Lanxess India, focused on the major drivers for investments and growth in the chemical industry in India, as well as on trends and developments in the global chemical industry. He said, "Lanxess is very bullish on Indian markets. With India being an emerging economy with high growth rates, we are not only investing EUR50 million on our Gujarat site and creating employment for 230 workers, but we have also successfully completed our first acquisition in India and now have a new production site in Nagda. With strong domestic demand, such as from the automotive, paint, construction and pharma industries, Lanxess is excited about the future



of the chemical industry in India. Global chemical companies present in India benefit from many opportunities as a result of favorable factors such as skilled workers, low manufacturing costs and strong domestic demand."

#### Rallis

 Rallis is in the process of setting up a new facility at Dahej in Gujarat to expand its production capacity to 5,000 MT/KL per year with a INR5,000 million revenue potential over a threeyear period. Commercial production is expected to begin by June 2010.

#### **Reliance Industries**

In a related development in what may potentially be India Inc's largest deal till date, LyondellBasell's decision to pay off its debts and raise USD2.5 billion through a rights issue has raised some questions about the former's proposed deal with Reliance industries. Reliance Industries is planning to partner with unsecured creditors and bond holders of LyondellBasell to keep the deal alive. LyondellBasell, the third-largest global chemicals company, globally has large petrochemicals capacities, a sound technology portfolio and JVs in the East, while, RIL's petrochemicals business is mainly India-centric.

#### **Tata Chemicals**

- Tata Chemicals plans to raise INR6-8 billion via the sale of its group companies. The company needs funds for its INR25 billion investment in the Barbala project in India. It plans to double its urea capacity at Barbala to 2.5 million tonnes. The company is using this facility to develop customized fertilizers.
- Tata Chemicals has closed down the Netherlands manufacturing site of Brunner Mond, its European subsidiary.
   Reportedly, it took this step in light of mounting losses at the site due to rising energy and raw material costs.

#### Zuari

Zuari Industries is in the process of setting up a gas-based factory at Belgaum in Karnataka, which will have the capacity to produce 1 million tonnes of urea per annum. The company plans to raise USD800-900 million for this facility. Belgaum, with its gas pipeline, has a strategic advantage due to its proximity the Maharashtra-Goa border. In early November 2009, Zuari Industries signed an agreement with state-run GAIL India for procurement of natural gas for its fertilizer plant in Goa. The anticipated date of supply is 1 January 2013.

#### Global

#### **Akzo Nobel**

Recent press reports indicate that Akzo Nobel is currently evaluating new growth and investment opportunities in emerging markets over traditional markets such as the US and Europe. According to the company, growth in developed markets has stagnated and these markets are in their consolidation phase. India and China rank the highest among emerging markets for Akzo Nobel. Further, the company is planning to enhance its position in Malaysia, which is one of its most important markets.

#### **BASF**

 BASF plans to set up a 60,000-tonne plant in Brazil to produce sodium methylate, which will enable it to cater to the growing demand for biodiesel in the country.

- Due to overcapacity in the paper-coating binder industry in Europe and its declining profitability, BASF is planning to discontinue its production of XSB paper-coating binders at its sites in Spain, Finland and France by mid-2010. This is likely to result in a 40% reduction in the company's XSB capacity.
- BASF has recently outlined its "Strategy 2020" for the Asia Pacific region. Through 2020, the company aims to grow by an average 2 percentage points faster than the Asia Pacific chemical market each year and double regional sales by 2020. To support its strategy, it plans to invest USD1.4 billion for capacity expansion in China. BASF will also actively seek opportunities to support rapidly developing customer markets in relatively untapped locations, including Vietnam and inland China.

#### DIC

According to recent press reports, DIC plans to double its operating profit by 2012 by undertaking cost-cutting initiatives. The company intends to boost its presence in emerging markets including Asia, Eastern Europe and South America. It also plans to strengthen several of its segments including synthetic resins, colorants and liquid crystal display materials.

#### **Dow Chemical**

Dow Chemical is in the process of investing close to USD1 billion in its polyurethane business. Some of its projects include polyol production expansion at Texas and the Netherlands, methylene diphenyl diisocyanate capacity expansion at Texas and Portugal and a new hydrogen peroxide to propylene oxide plant at Belgium.

- As part of its focus on the lifesciences and boost its biopharmaceutical therapeutics and vaccines business, Dow Chemical has formed an independent entity, Pfenex Inc. The company will hold a significant minority stake in Pfenex, along with Signet Healthcare Partners, a veteran venture capital investor in the healthcare sector.
- Dow is planning to launch its new construction chemicals business by capitalizing on the expertise of Rohm & Hass and Dow Wolff Cellulosics. While Rohm & Hass will offer expertise in the construction chemicals business, Dow Wolff will provide technical expertise and formulation development experience to customers.

#### DSM

- DSM expects its sales in China to grow and reach USD1.5 billion in 2010. The company recorded sales of USD813 million during the first three guarters of 2009.
- The company plans to enter a joint venture with North China Pharmaceutical Group, due to which it has put its nutrition and anti-infective businesses on hold. It is now looking at exploring other partnerships to grow its pharmaceuticals business in the region.

#### Lanxess

- Lanxess' construction and chemical businesses in China continue to grow on the back of strong real estate and infrastructure development. The company has recently inaugurated a new inorganic pigments facility with an annual capacity of 10,000 tonnes in the country.
- Additionally, Lanxess is set to capitalize on the growing chemicals industry in Brazil, which is expected to grow at 10% in 2010. Its key initiatives to strengthen its presence in Brazil

include the acquisition of synthetic rubber producer Petroflex and an investment of around Euro7 million in a co-generation energy plant in São Paulo state.

#### Mitsui Chemicals

- Mitsui has signed an agreement with Sinopec Corp to set up PTT phenol (400,000 tonnes capacity) and EPT projects (75,000 tonnes capacity) in China. The total cost of the projects amount to 4.6 billion yuan. The PTT phenol project is expected to become operational during the next three years and the EPT project by 4Q13.
- The company aims to expand its operations in China, for which it plans to raise close to USD717 million through a public share offering and a third-party allotment. The funds will be used for R&D and building and expanding its product portfolio.
- Faced with stiff competition from basic petrochemical products from the Middle East, Mitsui intends to increase its production of high value performance chemicals. The company is setting up a facility at its plant in western Japan, which will produce ultra-high molecular weight polyethylene, used to make lithium-ion batteries.

#### **SABIC**

SABIC is planning to set up new petrochemical plants to raise its production to 10 million tonnes by 2020. The company's petrochemical unit, Saudi Kayan Petrochemical Co., is expected to begin full-fledged production by 2011. However, of the unit's 16 plants, only a few will start production in 2010 and others will follow suit in 2011. SABIC also plans to increase its presence in China and is waiting for government approval for a USD3 billion joint venture plant with Sinopec.

#### Sumitomo Chemical

- Sumitomo Chemical has entered a joint venture with the Dalian Jingang Group in China. The JV aims to manufacture and sell feed additive methionine and high-performance greenhouse films.
- Further, the company has formally inaugurated its USD9.8 billion joint venture (Saudi Aramco) refinery and petrochemical facility at Rabigh. The joint venture is looking to produce and develop synthetic fibers and other products during the second phase of the development of the complex.
- Sumitomo Chemical is planning to initiate the production of emission-control systems for diesel automobiles in Europe and other overseas markets. The company has developed devices that use aluminium titanate filters to collect and remove soot from exhaust gas.

#### **Syngenta**

 Syngenta has invested in Metabolon, a US-based biotechnology company focused on the use of metabolomics in research and diagnostics. This will enable Syngenta to boost its in-house R&D efforts, while exploring partnerships as a means to its grow business.

# Regulations

#### India

- The government has imposed a 20% safeguard duty on import of soda ash from China, since increased import from China has created stiff competition among domestic players, resulting in price and margin erosion.
- The government has also initiated an anti-dumping investigation on the import of sodium tripoly phosphate from China. This is in response to a petition filed by Tata Chemicals against dumping of the chemical used in household cleaning products.
- The Ministry of Chemicals and Fertilizers has invited the Indonesian government to invest in Petroleum, Chemicals & Petrochemical Investment Regions (PCPIRs) in the country. The objective of PCPIRs is to promote investment and growth in the industry.



# Mergers & Acquisitions

#### Indian deals

Announced date	Acquirer	Target	Seller	Deal value (USD m)	Status	Rationale
December 2009	Kiri Dyes and Chemicals	Dystar Textilfarben	Dystar Textilfarben	N/A	In process	Dystar will provide Kiri Dyes an assured supply of raw materials, its superior production capabilities and help the latter boost its presence in US and European markets.
						Dystar has recently filed for bankruptcy.
November 2009	media to be sourced at		This is a sale of assets under a liquidation scheme. LyondellBasell filed for bankruptcy in April 2009. The transaction will make Reliance one of the leading polymer producers worldwide.			
				USD12 billion		It will also enhance the company's presence in the US fuel market and expand its overseas production capacity outside India, thereby reducing the risk of over dependency on India.
December 2009	MHM Holding GmbH	Micro Inks	Public shareholders	Delisting	In process	The objective of delisting is to obtain full ownership of the company and merge the operations of the Indian entity with the parent.
December 2009	ELANTAS GmbH	Elantas Beck India Ltd	Public shareholder	Delisting	In process	The objective of delisting is to obtain full ownership of the company. This will provide the promoter with increased operational flexibility to support the company's business and meet the needs of its customers, as well as provide an exit opportunity to its public shareholders, since equity shares are infrequently traded.
Global deal	S					
November 2009	Qatar Petroleum International	Petrochemical Corporation of Singapore	Shell Eastern Petroleum	1,000	Joint Venture in process	This will strengthen Quatar's position in the chemical feedstock industry in the Asia-Pacific region.
November 2009	Terra Industries	Agrium Inc	Agrium Inc	250	In process	Agrium will provide Terra an assured supply of cheap natural gas resources, its superior production capabilities (ammonia-based products) and boost its presence in North America.

# Valuation – Indian chemicals industry

Particulars (INR million)	Sales	PAT	EV/Sales	EV/EBITDA	P/E
Reliance	1,388,280	145,350	2.8x	14.6x	23.0x
Tata Chemicals	97,907	5,287	1.3x	8.0x	14.0x
United Phosphorus	51,286	4,940	1.7x	8.7x	14.8x
Bayer CropScience	15,629	1,181	1.4x	9.8x	18.2x
Finolex	13,893	334	1.0x	9.4x	20.2x
Guj Alkalies	13,206	1,209	0.9x	4.0x	7.4x
Deepak Fertilizer	12,801	1,370	1.0x	4.5x	6.3x
Aarti Industries	11,677	543	0.7x	4.1x	6.3x
BASF India	11,516	810	1.0x	7.9x	14.4x
Savita	10,942	314	0.5x	7.9x	17.5x
Atul Ltd	10,587	528	0.1x	0.4x	4.6x
ICI India	8,998	3,078	2.6x	5.8x	7.7x

Particulars (INR million)	Sales	PAT	EV/Sales	EV/EBITDA	P/E
Clariant India	8,762	914	1.3x	6.9x	12.9x
Rallis	8,613	806	1.4x	8.9x	13.8x
India Glycols	8,504	(917)	1.7x	NA	NA
Chemplast Sanmar	5,876	(636)	3.4x	NA	NA
Deepak Nitrite	5,281	149	0.4x	3.8x	8.1x
Ciba India	4,631	(145)	1.0x	NA	NA
Himadri Chemicals	3,801	537	4.1x	13.5x	22.7x
Punjab Chemicals	3,578	(177)	1.7x	25.2x	NA
Balaji Amines	2,312	161	0.8x	4.5x	5.3x
Alkyl Amines	1,907	9	0.9x	8.1x	NA
Median			1.2x	7.9x	13.8x

<sup>\*</sup>Based on market capitalization as on 22 December 2009 (when Sensex was 16,692.0) and September 2009 Trailing 12 months (TTM) results

<sup>\*\*</sup> The sample list above represents the Indian chemical industry and is not comprehensive.

<sup>\*\*\*</sup>Enterprise Value (EV) equals market Capitalization plus net debt.

## Interview with

### Mr. Annoottam Ghosh, Managing Director, Croda India

#### Croda bullish on India growth story



 Could you please explain Croda's existing businesses, worldwide and in India, to our readers/members?

Croda is an UK-based multinational company, which was established in 1925, and has a long and distinguished history in the industry. Its acquisition of ICI's Uniqema business in 2006 transformed it into a company with sales of 1 billion, with a presence in 35

countries and employing around 3500 people.

Croda is a true specialty chemicals company, which has been built on innovation and customer focus with diverse products for the various industry sectors. Worldwide, it is the market leader in specialty ingredients for personal care and high-end nutritional lipids for healthcare. The company also makes products for the adjuvants (crop care) market. In addition, it serves the polymer additives (anti- slip), lubricant additives and low VOC additives for coatings markets as well.

The company serves wide-ranging and diverse industry sectors and has a major presence in chemicals and finishes for textiles and synthetic fibres in India. In addition, Croda India manufactures a large range of surfactants for the crop care, personal care, healthcare, polymers/coatings and plastics markets.

Croda plans to invest a significant amount of capital at its Thane site and grow its business exponentially and double it in three to five years.

2. What has been Croda's experience in the Indian market till date? How does it plan to invest in 2010 and 2011?

Croda started it operations by distributing its products in 1995 and set up its India sales office in 2002. It acquired Uniqema India business in January 2007. Since the acquisition, the company has grown rapidly in India with its large product range and distribution reach.

The company has made significant investments in its manufacturing capacity across all end-user sectors during the last three years, and plans to add further capacities in 2010. After its acquisition of ICI's Uniqema business, Croda is delighted with the progress its Indian operations have made and has recently set up state-of-the-art laboratories, which serve a wide variety of end-user sectors. This facility was inaugurated in December 2009.



3. In your view, how competent is the Indian specialty chemicals industry?

The Indian specialty chemicals industry is very competent, but highly competitive, fragmented and relatively small scale. An area of improvement, which is essential, is the need to enhance SHE standards in the industry.

The bulk of the industry still operates in conventional areas and has yet to upgrade itself to manufacture truly specialty ingredients. This should take place as markets develop and manufacturers implement new technologies.

Further, most end-user sectors continue to focus on optical price rather than effectiveness or cost in the use of products.

Overall, I would like to see industry moving toward building competence and capabilities, and aspiring to excel across areas such as SHE management, innovation, technology adaptation, and technical and customer service.

4. A major end-user sector for your products is the consumer/ FMCG industry. How bullish are you on the long-term sustenance of this growth?

As disposable income rises and semi-urban and rural markets continue to develop, the consumer and FMCG industries will surely grow ahead of GDP growth.

5. What are your views on climate change and the responsibility of the chemicals industry?

All industries have an enormous responsibility to act and reduce their carbon footprint. The chemicals industry, in particular, has a key role to play and needs to increasingly move toward using renewable resources and less energy-intensive processes.

6. You are a veteran of the Indian chemicals industry. How has the industry changed in the last few years?

As I mentioned, the industry is highly fragmented, but we are seeing signs of consolidation with M&A activity very much on the increase. More MNCs are setting up shop in India. Polluting industries are coming under greater pressure to conform to prescribed norms.

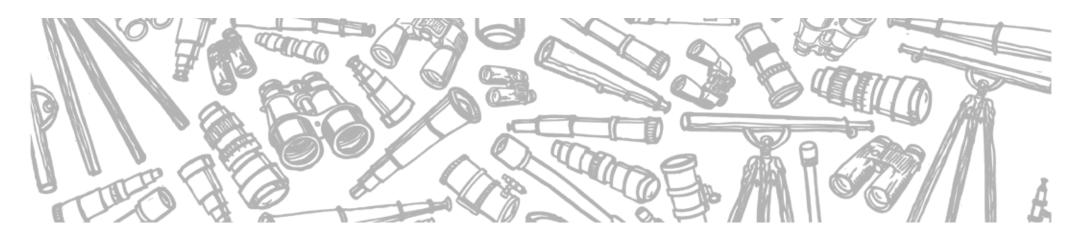
7. What are your recommendations to our policy makers to enhance the growth rate of the industry in India?

We need to build better infrastructure and provide adequate power/water to support industry growth. Uninterrupted power supply is a vital need for the chemical industry.

We should ensure stricter enforcement of safety, health and environment norms and close down units that fail to conform.

Overall, I would like to see industry moving toward building competence and capabilities and aspiring to excel across all areas including SHE management, innovation, technology adaptation, and technical and customer service.

There needs to be greater protection for intellectual property (IP) with laws that are enforced and deter IP violation. This will encourage MNCs to bring in new technologies into the country.



# Emerging frontiers in textile specialties

By Naishadh Desai, CMD, Britacel Silicones



Textile Chemicals, which forms an essential component of the textile industry, was neglected as an important value addition tool for many years, but has created waves in the industry all over the world in recent times. The textile industry has witnessed a dynamic change in its innovation capabilities, and as a result, a fast-paced increase in demand has been seen in the past decade.

The key trends in the textile chemical field have been:

- Newer functional effects
- Eco-friendly products
- Ever-increasing durability levels
- Cost reduction

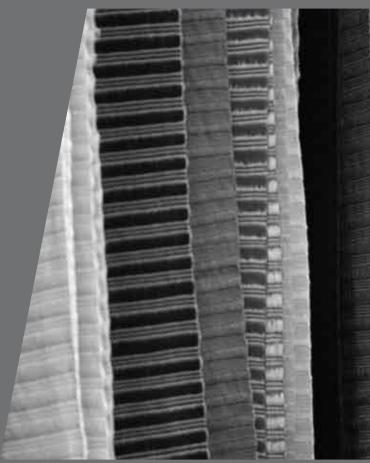
Newer functional effects: The global demand is for better and innovative functional effects. The proliferation of television and print media has made even common people aware of novel effects and they are ready to pay a little extra for these. So we have an ever-increasing demand for wrinkle resistant/free performance, stain release or repel effects, moisture wicking or anti-microbial effects, which all have aesthetic functionalities. Apart from these, there are other effects which are necessitated

by changing lifestyles leading to stress, which makes people ask for fabrics treated with stress busters such as negative ion therapy or change of habitat, which necessitates the use of effects such as mosquito repellent or sun protection effects, etc., on fabrics. The key to survive in today's textile chemical market is to be constantly aware of the needs of the common people with regard to their requirements and constantly develop new products to meet these.

**Eco-friendly products:** The other major factor is awareness of the ecological hazards of chemical usage. People all over world, and especially in western countries, are highly alert to the effects of environmental degradation. This has forced global textile brands to push for products with cleaner technology. Newer standards are being continuously implemented to make the chemicals used in textile processing as environmentally safe as possible. The key to success is to consistently come out with cleaner and greener technologies.

**Ever-increasing durability levels:** The competition among the various global brands forces them to offer increasingly higher effect levels to their end customers. This, coupled with the awareness among the common people about the importance of preserving the world's resources and reducing pollution levels, has resulted in continuous demands for higher durability of effects, to ensure that garments retain their original properties even after repeated washing.

**Cost reduction:** The global financial slowdown has put significant pressure on product costs, which has resulted in every global brand demanding price cuts from textile mills. This directly



affects textile chemical suppliers, which need to be innovative in reducing their costs to meet the ever-increasing demand of textile mills to reduce product prices. There are a number of ways in which companies can look at cutting their costs, e.g., by selling concentrates and multipurpose auxiliaries, and offering bulk packing to reduce the costs of drums and drum disposal.

#### Challenges for the textile auxiliary industry

The main challenges for the textile auxiliary suppliers have been:

- Too many players in the market
- Very short product life cycle
- Increasingly difficult ecological norms

Too many players in the market: There is a continuous increase in the number of suppliers in the market, which results in heavy pressure on costs and margins since everybody is looking to grab a share of the limited textile market.

Very short product life cycle: Innovative products are getting copied in no time in these times of cut-throat competition. This means that the possibility of getting the first mover advantage and cashing in on the efforts and resources used in product development is limited, which makes innovation a difficult

proposition. Therefore, coming out with a really innovative product is becoming increasingly difficult. Today, most innovations are only incremental in nature.

Increasingly difficult ecological norms: With the advent of global warming and the El Nino effect, the textile chemical industry is also seeing severe pressure being exerted on the ecology with ever- stringent ecological norms coming into play constantly. Although increasing ecological awareness is a good sign, it needs money to bring out products that meet these new standards. Coupled with increasing cost pressure, this has given rise to players facing significant difficulties in the textile chemical industry.

The global demand for textile chemicals is estimated to increase by 2.8% per year to USD19 billion in 2012. While textile chemical manufacturers and suppliers predict a rise in colorants and auxiliaries in this segment worldwide, the leader in the consumption of textile chemicals is slated to be India and China. The Chinese textile chemicals market promises long-term development trends that are likely to have an impact on China's macroeconomic trends, investment environment, the structure and capacities of the country's textile chemicals industry, as well as on its production and demand, end-user market consumption trends, distribution channels and industry participants.



# Specialty chemical industry – strategic considerations

#### Introduction

Specialty Chemicals are performance chemicals, manufactured for a specialized purpose or to achieve certain end results. They are applied to improve the performance of the end use of a product or the manufacturing process and are thus "customized." They require application know-how and technical service support to achieve the desired level of performance or use. The specialty chemicals sector currently contributes 25% of the overall USD 57 billion Indian chemical industry.

While the Indian specialty chemical industry has been in existence for a couple of decades, the credit for developing a true specialty chemical culture in the Indian industry should go to some of the chemical MNCs present in India. The efforts of companies such as BASF, Bayer, ICI, Ciba, Givaudan, IFF, 3M and Honeywell have been truly outstanding. The last decade has also seen the emergence of some dominant Indian players including Pidilite, Galaxy Surfactants, Dorf Ketal, Himadri and Fine Organics. However, a large section of the sector continues to suffer due to challenges relating to scale and finds itself consistently grappling with typical SSI-led issues including low R&D spend.

Some of the end-user sectors historically addressed by the players include leather, textiles, paper and plastic. The key reasons for this included (a) large volumes of usage and (b) the specific competencies of MNCs present in India. However, the last decade has witnessed an enhanced focus on end-user sectors such as construction, oil and gas, food, personal care and automotives.

#### Recent global trends

#### Challenge of margins

The recent downturn has brought in its wake the pitiless realization that specialties are not a panacea in an economic downturn. The financial results of companies such as Ciba, Altana, Albermale and Cytec in the latter half of 2008 have proved that the sector is extremely vulnerable.

Rising energy and feedstock prices are driving margins substantially downwards. No longer is the industry operating at a profitability that is even close to that seen in the glory days of the mid-90s. In fact, several players currently operate at EBITDA margins below 10%. According to industry sources, the sector may witness a 3-4% decline in sales from its existing USD 470 billion level.

**Figure 1:** Weighted average EBITDA and net margins of leading global specialty chemicals companies



<sup>\*</sup> The chart depicts the global specialty chemicals industry and includes the top 15 global specialty companies, with combined sales of around USD60 b, and is not comprehensive.



#### Purchase decisions of most customers becoming increasingly global

Today, companies have far greater access to information and relatively inexpensive raw materials (chemicals) from low-cost countries such as India and China. Thus, global customers are now able to take finely tuned and judicious purchasing decisions. Its chemicals segment constituted one of China's fastest growing export sectors, mainly exporting to the US. In 2008, the country's exports to the US (from some of its chemicals subs-sectors) included fertilizers and agrochemicals (USD850.3 million), inorganic chemicals (USD1.6 billion) and organic chemicals (USD3.5 billion).

#### Resilience showed by certain specialties, even in downturn

Research indicates that specialty chemicals end-use markets such as agriculture, water treatment, nutrition, household and personal care showed significant resilience to the current economic crisis. Plastic additives, electronic chemicals, textile chemicals and construction demonstrated the sharpest decline. Historical analysis also indicates that companies such as Syngenta, Yara, Croda and Bayer are engaged in defensive rather than offensive business, and therefore, show less volatility in their earnings.

#### Cost reduction paramount with maximum emphasis on manpower reduction

Chemical companies are grappling with employee cost pressures in different ways including workforce reduction, temporary pay-cuts, etc. Innovative initiatives, for instance, sending senior personnel on mid-term expatriate assignments to BRIC countries, have also been tried. Globally, employee costs comprise the major share of expenditure in specialty chemicals companies and contribute significantly to their cost structure. In the case of specialty and life sciences companies, such costs are typically higher than 20% of their sales. (For 2008, the employee costs of Bayer, Givaudan and Danisco amounted to 22.8%, 24.7% and 25.8%, respectively.)

However, as a rule, players have refrained from cutting their spend on R&D and training.

#### Focus on BRIC and other emerging markets for growth

In earlier days, European companies invested in Asian production with the intention of lowering their manufacturing costs. They export such products back to developed markets. The key driving force now is to focus on the growing local demands of emerging markets in India, China and Latin America. For example, Lanxess has adopted the strategy of focusing on growth in BRIC countries (including acquisitions wherever required).

Some of these decisions are being driven by the capacities of the end-user sectors that are growing in these regions. It is forecasted that China and the Middle East will contribute around 78% of the new capacity in hydrocarbons by 2013. Similarly, incremental additions in the automobile, tyre and telecommunications sectors in emerging markets far outweigh the dynamics in developed markets.

### Critical success factors for Indian specialty chemical industry

The Indian specialty chemicals industry is at the threshold of exponential growth. Several factors aid and facilitate this process:

- Capacities in various end -user sectors (automotive, metals and textiles) being relocated to India and nearby geographies such as the Middle East
- Increasing purchasing power and transformation of the consumer landscape
- India becoming a manufacturing hub for certain chemical sub-sectors (petrochemicals, agrochemicals and APIs), which consume specialties

Let's evaluate the critical success factors of which the industry needs to take cognizance, going forward.

#### Focusing on Indian solutions

Indian companies will be required to chart their own path as various end-user issues and challenges are likely to be Indiaspecific. Scarcity of water and cost of labor (textile chemicals), the development of small cars such as the Nano (specialty polymers and coatings), a tropical climate, use of inferior construction material and low-cost housing (construction chemicals) are some of the typical "Indian" challenges companies will face, to which they will need to find solutions.

#### Higher investment in R&D

Today every major chemical company in the world professes and believes that its future success depends on its ability to innovate. R&D costs for various global Specialty majors are in the range of 6-8% of sales.

Hence, Indian companies will also need to intensity their R&D efforts and capital outlay to effectively support their efforts in the field of innovation to establish themselves firmly in global markets.

#### SHE compliance

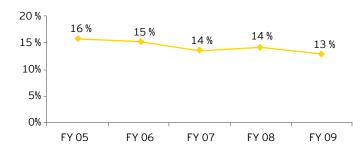
While this has been an ignored area till today, compliance to SHE is gaining in importance as customers increasingly demand global standards from vendors.

#### Cost competitiveness

Pricing is a challenge in Indian markets since most buyers are more focused on cost rather than the effectiveness or applications. Although the industry's EBITDA margins are higher than that of basic chemicals, generally, margins have been gradual declining due to (also refer to Figure 2)the following:

- Rising raw material costs
- Pricing pressures due to gradual commoditization of end-user markets including paper, textiles and leather

Figure 2: Weighted average EBITDA margins of leading Indian specialty chemicals companies



#### Awareness levels

The awareness level of certain specialties is still low. Recent surveys showed that around 85% of construction industry personnel were ignorant about the fundamental concepts of construction chemicals. Hence, most players need to invest in parallel in customer education and awareness.

#### **Outsourcing**

For industry players to remain price competitive, Indian companies need to develop outsourcing capabilities so that the multi-step process-partial parts of processes can be outsourced. However, confidentiality issues, such as in the flavors and fragrances industry, can be a bottleneck.

#### Global competitiveness of end-user sectors

Whereas end-user sectors are export-driven, it is imperative that they are globally competitive. India's superlative performance in exports in certain sectors, including pharmaceuticals, agrochemicals and textiles, has proved its manufacturing competency.

#### **CRAMs** potential

Today the Contract Research & Manufacturing Services (CRAMs) opportunity in pharmaceuticals is estimated at around USD1.5 billion and is growing exponentially. The key factors that have helped India achieve this feat include its large talent pool with outstanding chemistry skill sets and its ability to build regulated market standard assets at low costs. This competence can also be utilized in specialty chemicals. We are already seeing the initial signs of success of CRAMs in the Indian agrochemicals sector.

#### Aggression and financial strength for inorganic growth

Non-core specialty chemical assets are likely to be divested due to the ongoing restructuring of the European chemical industry. It is therefore important that Indian players utilize such opportunities on the basis of their balance sheet strength and the easy availability of funds.

#### Conclusion

With the Indian economy projected to grow at a sustained rate of 8%+ in the next decade, the Indian specialty chemical sector is expected to grow at 15% CAGR during the same period. Going forward, the country's excellent chemistry skill sets, abundant domestic demand and the increasing interest in outsourcing shown by MNCs will be critical drivers for the sector. Compliance to SHE and customer education are however likely to be the key challenges facing Indian companies as the industry braces itself for a decade of exponential growth.

## Ernst & Young's point of view

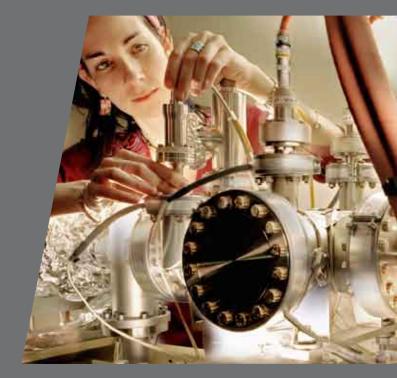
### The Copenhagen Accord: outcomes and implications for Indian industry

The Copenhagen Accord is a political declaration that provides a framework for future climate change negotiations, but does not legally extend the Kyoto Protocol.

There is little doubt that the Copenhagen Conference has left its mark in history – never before has climate change featured so significantly on the international agenda. This historic congregation brought together 115 heads of state and government, and was widely reported as one of the largest high-level gatherings outside of New York. The key outcome of the Conference was the "Copenhagen Accord," which was released on 19 December 2009, is a three-page political declaration that has been formulated with the objective of developing a broad framework for future UN climate change negotiations and to codify national policies on "mitigation" and "adaptation." The Accord marks the culmination of two years of intensive negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) and the Bali Roadmap of December 2007.

Millions of people around the world had hoped that "Hopenhagen" would be a turning point in the battle against climate change and would extend the Kyoto Protocol, which will terminate on 31 December 2012. The key aspect of the Kyoto Protocol include the binding targets it sets for 37 industrialized countries and the European community to reduce greenhouse gas (GHG) emissions by at least 5%, as compared to 1990 levels, calculated as an average over the five-year period 2008-2012. Since the first commitment period will end in 2012, there was widespread hope (and belief) that the Copenhagen Conference would culminate with a successor treaty, which would extend the Kyoto Protocol. Feelings about the outcome are, at best, mixed, since such hopes were not fulfilled –the Accord is not legally binding and has only been "noted."

While the Copenhagen Accord is a step in the right direction, the document is high level and there are still many areas on which considerable effort needs to be expended to make it really effective.



#### Positives Limitations

#### 1. Emission reduction targets

- Increase in global temperatures need to be limited to 20 C.
- Developed countries (Annex 1 parties to the Kyoto Protocol) must submit unilateral emission reduction targets for 2020 by 31 January 2010.
- Developing countries (non-Annex 1 parties to the Kyoto Protocol) must submit their mitigation plans for reduction in emissions by 31 January 2010.
- No explicit 2050 global target has been set for emission reduction.
- ► There are no legally binding 2050 or 2020 targets for emission reduction for developed countries.
- There is no time frame for peaking year for emissions.
- ► There are no guidelines on the format or proposed metrics of the emission-reduction plans of developing countries.
- There are no penalties for failure to submit emission-reduction targets or plans by 31st January 2010 or a failure to meet those targets.

#### 2. Financing

- Developed countries are to provide additional funding of up to USD30b over the period 2010-2012 (USD10bn per year) for climate change mitigation and action by developing countries.
- Developed countries are to further increase this funding to USD100b (annually) by 2020.
- Funding is to come from a variety of sources including public, private, multilateral and bilateral funds.

- ► There is limited clarity on the following:
  - How the burden will be allocated between the developing countries
  - How funds will be accessed by developing countries
- Funds have not been divided and allocated for mitigation and adaptive action.

#### 3. Governance

- (MRV) of mitigation actions:
  - Mitigation actions taken by developed countries are to undergo international MRV.
  - Mitigation action taken by developing countries, which will be the recipients of international funding, will also undergo international MRV.
  - Other mitigation action will be subject to national reporting every two years along with international consultation and analysis.
- A technology mechanism will accelerate technology development and transfer in support of action on adaptation and mitigation for developing countries.
- There will be a mechanism for Reduced **Emissions from Deforestation and** Degradation (REDD) to save tropical rain forests.

- Monitoring, Reporting and Verification
   There will be no monitoring, reporting and verification of action, which is not internationally funded, which implies that many actions of the richer developing countries, which may not receive international funding, will not be subject to external scrutiny.
  - There will be no further expansion of international carbon markets -- to enable more programmatic CDM -- and approval of emission reduction projects will be faster.
  - There is very little clarity about the nature of the technology mechanism, REDD, which will require further definition to be operative.
  - There is no timetable for a legally binding treaty, to follow the Copenhagen Accord, indicating that enhanced certainty is not guaranteed.

Source: Verdantix research, The Carbon Trust - Perspective on Copenhagen, International Institute of Sustainable Development, IOE information paper, press articles

The Accord's lack of detail will require further negotiations to become effective and a treaty may fructify in Mexico. However, it has played an important role in consolidating the pre-Copenhagen emission reduction pledges made by individual countries and provided some momentum on efforts to tackle climate change. What Copenhagen has done is to endorse the view that while developed countries are responsible for achieving absolute emission reduction, the major developing countries have the responsibility of measuring and mitigating the rise in their emissions.

The Copenhagen Accord does not play a negative role in slackening India's pace of industrialization. However, ubiquitously, it will not allow unbridled development either. The Indian chemicals industry will need to focus beyond cost-competitiveness, develop a judicious mix of cost and technology solutions and leverage technology-transfer opportunities toward clean and sustainable development.

- The key outcome for India due to the Accord is the absence of legally binding emission targets, which may have played a detrimental role in the country's industrialization initiatives. It is important to note that while India has 16% of the world's population, it contributes only 4.6% of global emission. Among the 70 countries studied by the World Bank, India ranks the 63rd for per capita emissions and 48th for CO2 emissions per unit of GDP. At the same time, it has committed itself to reduce its emissions by 25% over 2005 levels by 2020. These targets, as well as their performance, will be subject to international consultation and analysis, and India will have to report its mitigation efforts every two years to the UNFCCC.
- India's primary focus will remain "adaptation", with specific niches for "mitigation"
- Only those mitigations plans will be subject to international MRV (monitoring, reporting and verification) that are supported by international finance and technology transfer.
- ► India has already formulated its comprehensive National Action Plan on Climate Change.

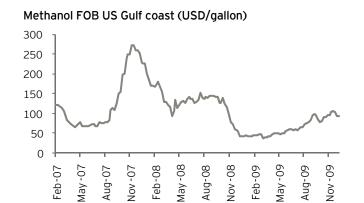
Country	Per capita CO2 emissions (tons)	% share of global CO2 emissions
World	4.5	
OECD	11.5	
Developing	2.4	
USA	20.6	20.9
UK	9.8	2.0
Germany	9.8	2.8
Japan	9.9	4.3
China	3.8	17.3
Brazil	1.8	1.1
South Africa	9.8	1.5
India	1.2	4.6

Source: HDR, 2007

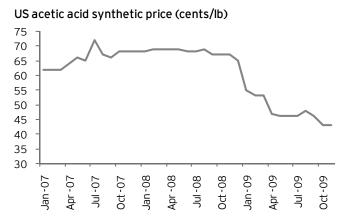
 Given the fact that the Indian Government has proposed a 20-25% voluntary emission intensity reduction target between 2005 and 2020, its industries will be subject to individual carbon emission caps or sectoral energy benchmarks. Thus, individual companies will have to make significant efforts to increase the efficiency of their processes, explore alternative raw material usage and strategize their investment in cleantech. Emphasis on non-traditional sources of energy will only increase. For example, there is the possibility of a moratorium on coal-fired power plants, which could severely impact countries such as India. More than half of the 800,000 megawatts of power India plans to produce by 2030 are to come from coal-fired plants, because coal is abundant in India and other energy sources are relatively scarce. Access to new technology transfers under the Copenhagen Accord can only accelerate this process.

- As the world unequivocally moves toward a low carbon future, which is the inevitable outcome of any such agreement, there will be ample business opportunities for the Indian chemical industry in domestic and global markets.
  - The country's clean development mechanism will only mature further, allowing developed countries to invest in projects in India and get credit for carbon dioxide emission, which is likely to result in significant business opportunities for Indian chemicals companies. With the US on the verge of announcing its climate change regulations, this is expected to create a carbon market three times the size of that in the EU. This is expected to bring new vibrancy to the global carbon market by shooting up carbon credit demand exponentially. Hence, there is to be an enhanced thrust on carbon emission assessment disclosure and mitigation efforts on one hand and carbon trading on the other.
  - Initiatives such as "clean coal" technology in power stations, improved vehicle emission targets, better building standards, insulation, advanced lighting solutions, lightweight materials and solar panels are likely to provide innovation opportunities for the specialty chemical industry. For example, India has created a Solar Energy Vision with the objective of generating 20,000 MW of solar power by 2020, creating significant opportunities for solar cell companies. The Indian Green Building Council has set itself the goal of building 1 billion square ft of green building space by 2012, creating innovation opportunities for the chemicals industry to service the construction business.
  - Biotechnology will also play an important role in achieving carbon efficiency. On the basis of estimates, biotechnology can save up to 2.5 billion tons of carbondi-oxide per annum (equivalent to nearly 10% of current carbon emissions).

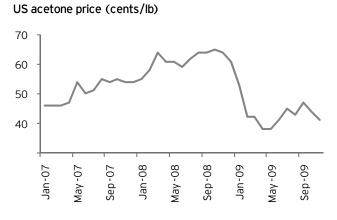
## Commodity price snapshots





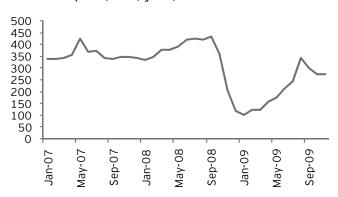


Source: Bloomberg



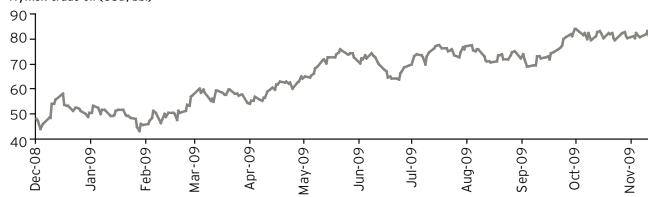
Source: Bloomberg

#### US benzene price (cents/gallon)



Source: Bloomberg

#### Nymex crude oil (USD/bbl)



Source: Bloomberg

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#### About CII

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the growth of industry in India, partnering industry and government alike through advisory and consultative processes.

CII is a non-government, not-for-profit, industry led and industry managed organisation, playing a proactive role in India's development process. Founded over 114 years ago, it is India's premier business association, with a direct membership of over 7,800 organisations from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 90,000 companies from around 385 national and regional sectoral associations.

CII catalyses change by working closely with government on policy issues, enhancing efficiency, competitiveness and expanding business opportunities for industry through a range of specialised services and global linkages. It also provides a platform for sectoral consensus building and networking. Major emphasis is laid on projecting a positive image of business, assisting industry to identify and execute corporate citizenship programmes. Partnerships with over 120 NGOs across the country carry forward our initiatives in integrated and inclusive development, which include health, education, livelihood, diversity management, skill development and water, to name a few.

Complementing this vision, CII's theme for 2009-10 is 'India@75: Economy, Infrastructure and Governance.' Within the overarching agenda to facilitate India's transformation into an economically vital, technologically innovative, socially and ethically vibrant global leader by year 2022, CII's focus this year is on revival of the Economy, fast tracking Infrastructure and improved Governance.

With 64 office in India, 9 overseas in Australia, Austria, China, France, Germany, Japan, Singapore, UK and USA, and institutional partnerships with 221 counterpart organisations in 90 countries, CII serves as a reference point for Indian industry and the international business community.

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