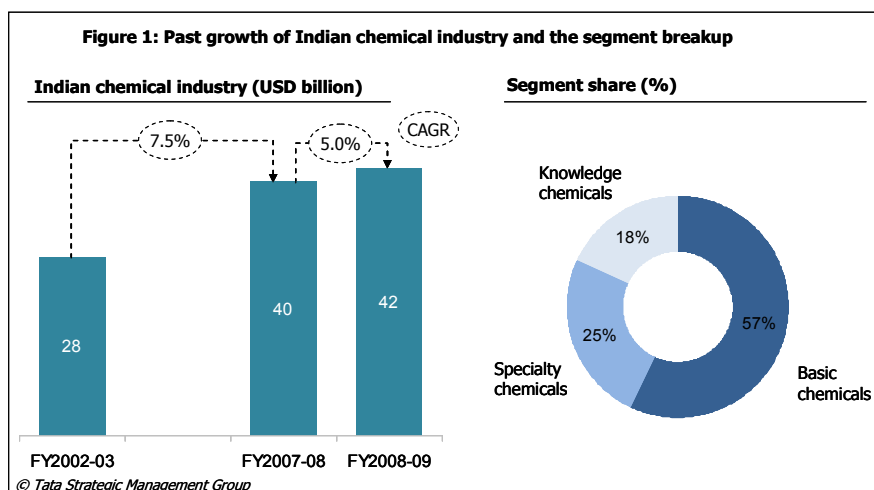


Indian chemical industry: Road ahead

The growth story for the Indian chemical industry remains intact. However post downturn, domestic chemical companies across different segments are likely to face stiff competition either from imports or global giants manufacturing locally to serve the Indian market. There is no common solution to counter such competitive pressures as each segment has different critical success factors. Indian chemical companies would do well to tailor their strategy depending upon the segment in which they operate, say **Raju Bhinge**, Chief Executive and **Ankur Singhai** of Tata Strategic Management Group

The worst is behind us

India's chemical industry has come a long way, growing from USD 28 billion in FY2003 to USD 42 billion in FY2009. While it grew at about 7.5% per annum from FY2003 to FY2008, the recent economic downturn slowed down the growth momentum considerably. As can be seen in Figure 1, only 5.0% growth was recorded during the FY2008-09 period, that too on account of the stimulus package announced by the government of India. However, going by the IIP data for the period Apr'09 – Jan'10, the Indian chemical industry has bounced back strongly, growing at about 11.5% during FY2009-10.



The chemical industry primarily comprises of three segments namely basic chemicals, specialty chemicals and knowledge chemicals. Basic chemicals with ~57% share is the largest segment followed by specialty chemicals at 25% and knowledge chemicals at 18%. This

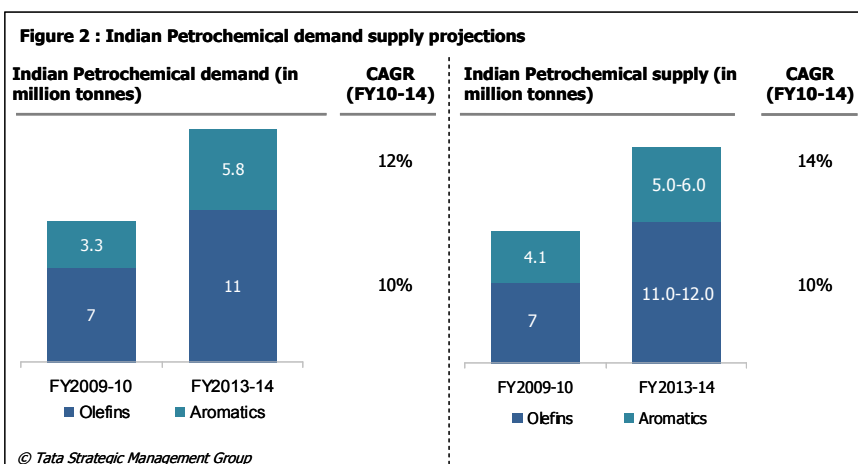
has largely remain unchanged over the past few years.

Each segment is different, with its own unique set of challenges and opportunities. Therefore each of these segments needs to be looked at in greater detail to understand what the future has in store for Indian chemical companies.

Basic chemicals

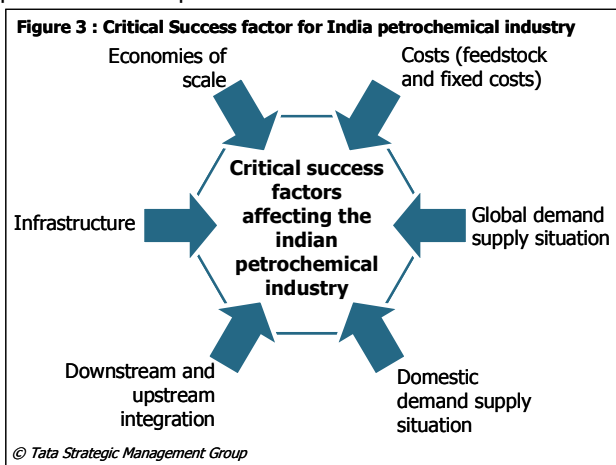
Petrochemicals (Olefins and aromatics) form the backbone of basic chemical industry with more than 60% share by revenue. As illustrated in Figure 2, olefins demand in India is expected to grow at 10 % per annum while aromatics demand is expected to grow at 12% per annum over the next four-five years. High GDP growth (7%-8% per annum) and increase in real per capita income (6%-7% per annum) will drive the demand in key end use industries like automobiles, consumer durables, textile, packaging and real estate, thereby stimulating the demand for petrochemicals.

As global majors across diverse industries like auto and consumer durable set up manufacturing facilities in India, downstream polymer processing industry is also evolving into a more organized market. On one hand multinationals like Austrian Alpla (Packaging industry) and Italian Meccaferr (Non woven geo-textile) are making a mark in the domestic market while on the other hand domestic companies like Jain Irrigation and Essel Propack are trying to create a global footprint. This will further drive the demand for petrochemicals in India.



High growth prospects have led to many companies announcing plans to set up domestic capacity close to market. Reliance Industries recently announced plans to set up a 1.3 million to 1.6 million tonnes per annum cracker at Jamnagar by 2014. Similarly Indian Oil and ONGC are setting up petrochemical facilities which are expected to come online in 2010 and 2013 respectively. Further, availability of captive feedstock like Naphtha & refinery off-gases and

infrastructure support through development of Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR) are incentivising companies to invest in petrochemical capacities.



However Indian companies should take note of the wave of petrochemicals capacity (over 13 million tonnes) coming up in West Asia in the next four-five years. Most of this capacity is based on low cost gas feedstock which can render naphtha based complexes uncompetitive. Already plagued by overcapacity, many European capacities like the one at Wilton, Teesside chemical cluster are being closed down. Besides, owing to proximity to India, West Asia companies will target the

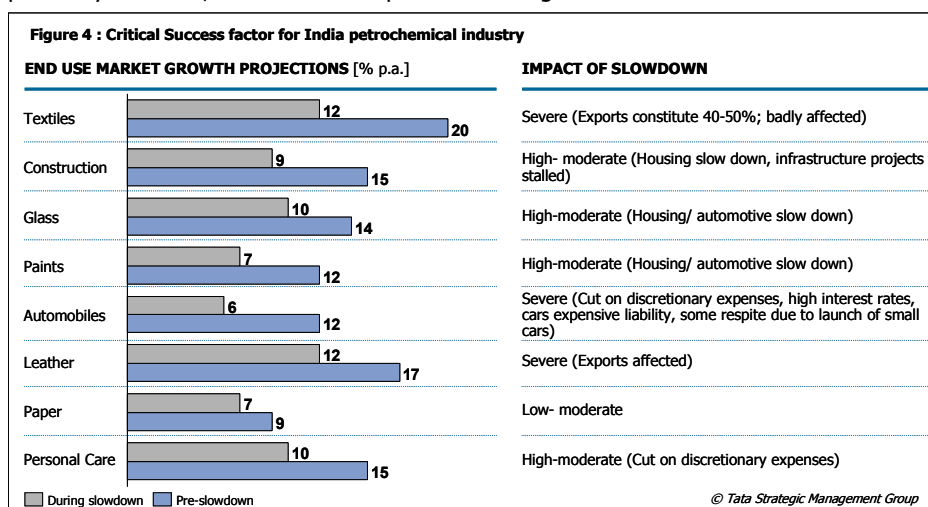
Indian market. This is a major risk for Indian chemical companies looking to invest/ expand their petrochemical business.

As shown in Figure 3, six factors would define the success of Indian petrochemical industry in future. Indian companies will have to review their capabilities along each of these dimensions. They should leverage high growth domestic market and focus on securing access to low cost captive feedstock and world scale capacities to have a meaningful play in the petrochemical market.

Other sub-segments like inorganic chemicals and fertilizers also operate on similar principles. Since the basic chemical segment is mainly commoditized, any company would have to strategize around either being well entrenched in the market (domestic or global) or have a global scale or have access to low cost feedstock or a combination of these to sustain competitive advantage

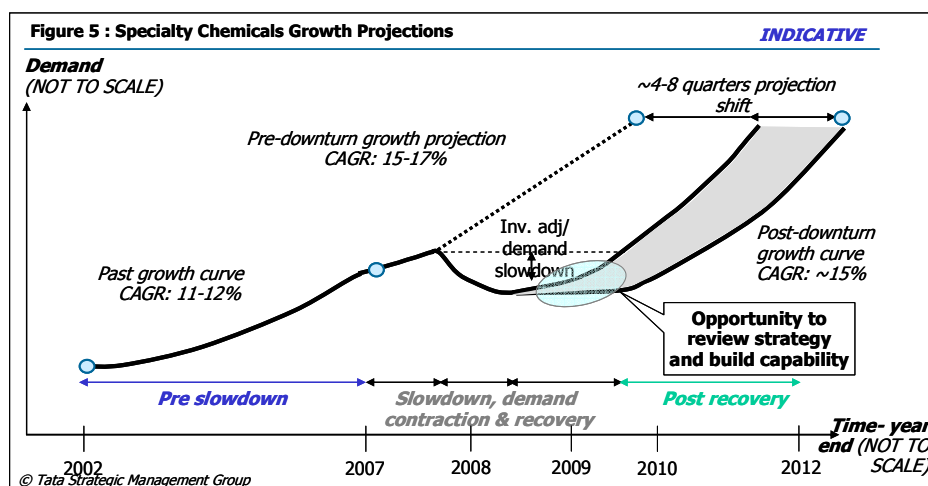
Specialty chemicals

The demand for specialty chemicals industry is driven by a wide range of end use industries. Thus as depicted in Figure 4, global economic slowdown has impacted adversely the growth of the key consumer industries and consequently the specialty chemicals industry in India. Not all segments were equally affected. Chemicals being supplied to consumer industries with relatively higher



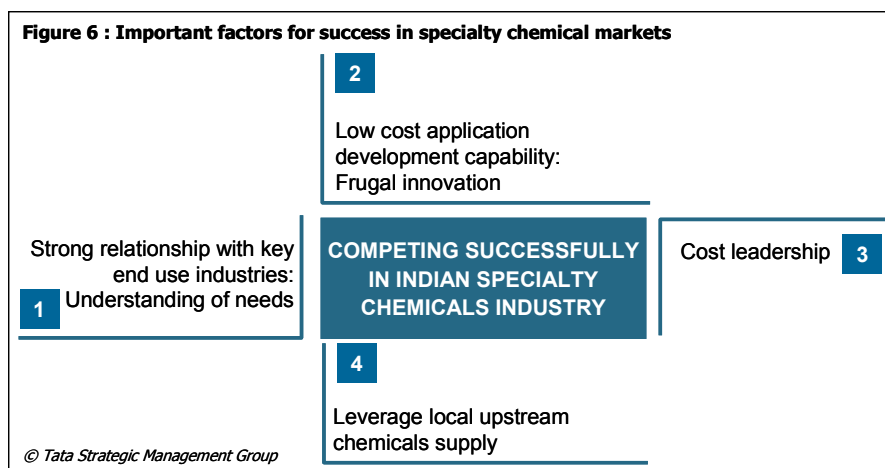
export dependence e.g. textiles witnessed a much steeper decline in growth as compared to chemicals for industries like paper where domestic demand has a predominant share in the overall demand.

However the fundamental shape of the Indian specialty chemicals growth curve has not altered significantly. It is expected to return to pre-slowdown growth rates of ~15 % p.a. in one-two years as shown in Figure 5 below.



Post slowdown some of the key end user industries such as auto, construction and consumer electronics are estimated to grow at an even faster pace. Besides, a number of new applications in each of these sectors will also contribute to growth. e.g. Auto industry is expected to grow at 9% per annum during the next five years from 11.25 million units in FY2008-09 to 17.12 million units in FY2013-14. Moreover emerging trends like demand for cost effective fuel efficient cars is driving the usage of performance plastics in cars which in turn would

require specialty chemicals like anti-oxidants to provide thermal stability.



modest CAGR of 7.5% during the next four-five years. Both the sub-segments in knowledge chemicals industry have witnessed similar life-cycle trends. It started with a focus on low cost export of generics and gradually moved on to developing contract manufacturing opportunities. Currently the contract manufacturing market presents a USD 2 billion opportunity for the Indian pharma industry and is likely to grow at 25%-30% per annum over the next two-three years. Similar opportunities exist in agro-chemical space. Rallis has invested Rs. 150 crores in a plant at Dahej in Gujarat for contract manufacturing of agro-chemicals for its global partners.

While the growth story for specialty chemicals has returned post downturn, the competitive landscape has changed, which domestic companies should take cognizance of. Specialty chemical industry has seen consolidation with global majors like BASF and Dow entering the specialty chemical space by acquiring Ciba and Rohm and Haas respectively. Thus BASF which till now was supplying performance plastics to auto industry would also start supplying specialty chemicals. As a result the domestic specialty chemicals companies will face a much bigger and stronger competitor in the market.

Companies need to address four key dimensions to compete successfully in India's specialty chemicals industry. They are as shown in Figure 6.

Emerging trends in consuming industries call for development of unique local products/ solutions based on an understanding of Indian customer. This factor is critical for companies supplying to the whole spectrum of end user industries. Automotive industry requires chemicals to support emergence of India as a low cost small car hub and green-tech features. Creating products to support growing demand for ultra low-cost housing projects and green buildings is critical for the growth of construction chemical companies. Likewise demand for environment friendly crop-protection solutions/GM crops and processed food creates new opportunities for agro-based chemical companies. Growth of renewable energy sector is increasingly creating new customer segments for chemical players.

Knowledge chemicals

Knowledge chemicals mainly consist of pharmaceuticals and agro-chemicals. These segments were relatively unaffected by economic downturn. Domestic pharma market was estimated to be USD 7.5 billion in FY2009 and have a CAGR of 14.0% during the period FY 2008-09 to FY2013-14. Besides domestic sales, export of generic drugs and active pharmaceutical ingredients by Indian companies adds another USD 11 to12 billion to the pharma market. Similarly the domestic agrochemical market was estimated to be USD 900 million in FY2008-09 with another USD 300-400 million exports. The domestic agrochemical market is expected to have a

Even as India boasts of the highest number of US FDA plants, ANDA (Abbreviated New Drug Application) and DMF (Drug Master File) filings outside of US, it is facing stiff regulatory pressures in those developed markets. In contract manufacturing market too, China is following closely on the heels of India. The agrochemical market in India already has global majors like Monsanto, BASF and Dow competing with local companies like United Phosphorus and Excel Crop Care

Thus Indian knowledge chemical companies may need to focus on the following three parameters to become globally competitive:

1. Understand the exact need of the consumers
2. Increase R&D efforts to develop new molecules
3. Develop high quality low cost manufacturing facilities from lab scale to ton scale

Conclusion

Three common themes are emerging across the segments:

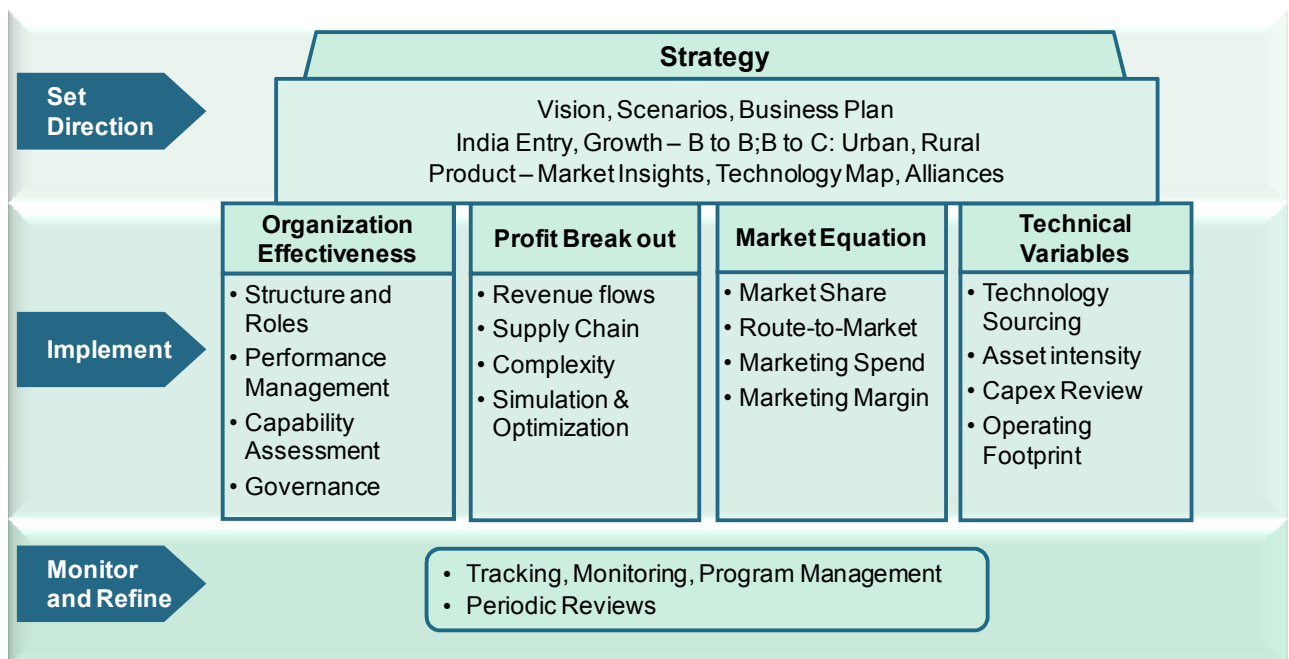
1. Domestic market continues to offer high growth opportunities
 2. Competitive pressure is increasing both from imports and from global majors setting up manufacturing facilities in India
 3. There has to be an ongoing focus on lowering costs
- Thus in order to successfully tap the high growth domestic market while keeping the competition at bay, Indian chemical companies will have to tailor their strategies along the critical dimensions depending upon the segments in which they operate.

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About Tata Strategic:

Tata Strategic Management Group is the largest Indian Owned Management Consulting Firm. Set up in 1991, Tata Strategic has completed over 500 engagements with more than 100 Clients across countries and industry sectors, addressing the business concerns of the top management. Today more than half the revenue of Tata Strategic Management Group comes from working with companies outside the Tata Group. We enhance client value by providing creative strategy advice, developing innovative solutions and partnering effective implementation.

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About the Author:

Raju Bhinge is the Chief Executive of Tata Strategic Management Group. He has wide experience dealing with corporate level strategic issues and has consulted with numerous organizations on key strategic issues like growth, divestments and review of business portfolio. He has a keen interest in Economy & Policy issues and has also been involved in negotiating joint ventures and setting them up. He continues to serve on the board of several companies across sectors as diverse as technology, auto components and retail.

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