

'Chemical industry may reach USD 304 bn by FY 25'



The country's chemical industry is expected to grow at around 9% per annum to reach USD 304 billion by FY25, from USD 163 billion in FY18, a report said. The growth is likely to be driven by rising demand in end-use segments for specialty chemicals and petrochemical intermediates, said the India Chem Strategy report by Tata Strategic group, brought in association with leading industry body FICCI.

The country's chemical industry is one of the fastest growing in the world, currently ranked the third largest in Asia and sixth globally with respect to output after the US, China, Germany, Japan and Korea.

The study said the domestic chemical sector (other than fertiliser) attracted FDI investment of USD 1.3 billion in FY18, which is about 3% of the total FDI inflow.

Noting that the domestic chemical industry's growth is largely driven by country's consumption growth story, the report said the per capita consumption of chemicals in the country is 1/10th of world average with India a low consumption country even among developing nations.

"Indian consumption is low. This makes India a very attractive destination to invest and grow," the report said.

The study also noted that Indian chemical companies have started focusing on global markets for investments.

Recently, India's largest agrochemical company, UnitedPhosphorus, announced the acquisition of Arysta Lifescience for about USD 4.2 billion.

Among the other mega projects, Saudi Aramco showed interest in investing USD 44,000 million in mega petrochemical project, ONGC plans investment of USD 11,000 million in greenfield oil and gas project and Sabc is investing USD 4,300 million in brownfield petrochemical complex.

Deepak C Mehta, chairman-FICCI national chemical committee and chairman and managing director, Deepak Nitrite, feels the significantly growing domestic market and the upheaval in international markets, particularly with respect to China, augur well with opportunities for the Indian chemical industry to rapidly grow in size and capability.

"As India gains increased traction from major countries, looking at investment in the Indian chemical sector, both driven entrepreneurs and a positive government need to put their combined vigour to grow the chemical industry multi-fold in the coming decade," Mehta said.

The country must target to become the third largest player in the next few years, he added. According to BASF India chairman and managing director Raman Ramachandran, the chemical industry will be a key enabler and catalyst in achieving the target of USD 1 trillion manufacturing economy by 2028, from the current USD 380 billion.

"The projected high local demand will provide us a strong platform to also establish ourselves as major suppliers of specialty chemicals to the world with right investments."

"Thus, the chemical sector is very strategic to achieving our country's vision encompassed in Make in India, Swachh Bharat, Housing for All and Power for All," he said.

Technology Disrupting the Construction Sector



ANUJ PURI,
Chairman, Anarock
Property Consultants

« REAL ESTATE

Technology has disrupted almost every facet of the real estate business today. However, the creation of the core product is and will remain the most important aspect of this business, and advanced technologies are certainly playing a major role there. By adopting innovative technologies like automation in construction, innovative designs, sustainability, use of prefabricated material and online marketing, developers can value-engineer their product.

Let's look at some of the existing and upcoming technology disruptions in real estate construction.

3D PRINTING

Among the many new technologies already adopted by the construction sector, 3D Printing (large-scale printing of homes) is anticipated to change the way real estate is built over the next decade. Though still very nascent, 3D Printing can potentially replace a substantial amount of construction across major segments, including residential, commercial or even retail.

This will be a massive paradigm shift in real estate development. Apart from seriously reducing waste, cost and labour requirements, 3D printing will help builders penetrate the hitherto inaccessible areas of dense urban centres, where it is impossible to set up heavy machinery for construction.

Given the rapid rate at which technology is reimagining everything in modern life, it would perhaps be rash to tag 3D printing in construction as 'hopelessly futuristic'. It will happen sooner than we may expect. While 3D printing in the construction sector is yet to kickstart in India, an entire two-storey house was 3D printed from concrete in Beijing in just 45 days - from start to finish.



The potential of this highly disruptive construction technology is therefore beyond dispute.

Of course, there are considerable costs involved in this technology. 3D printing machines usable in the construction sector can cost as much as \$2,000,000. Also, their current capacities are limited to structures of less than 33 feet (10 meters) in height, with a throughput of less than 550 pounds (250 kilograms) per hour.

In other words, 3D printing technology in the construction sector can change the way real estate functions but currently they are largely limited to printing small buildings. For large-size buildings including multi-storey offices or large malls, machines of considerably higher capacities would be needed.

BUILDING INFORMATION MODELLING (BIM)

An existing construction technology which is fast gaining ground is Building Information Modelling (BIM) software that allows designers to produce 3D mock-ups of planned structures along with critical information about costs and construction timelines.

Many small and medium organizations are shying away from the adoption of BIM technology as it involves high implementa-

tion fees and training costs, including the cost of hiring experts, training the existing workforce - apart from the investment in the technology itself. Since many of India's developers simply don't have budgets to meet these additional expenditures, they prefer to follow traditional methods.

However, BIM technology has certainly found a foothold in India. Some examples of companies using BIM software include the Nagpur Metro Rail Corporation (NMRC) that adopted 5D BIM technology for practical completion of the project and create an Issue-Based Information System (IBIS) for each phase of the project.

In Amritsar, a rapid transit system was constructed using Virtual Design and Construction technology. Spread over 4 km, this rapid transit system is one of the finest examples of the application of BIM technology in India.

VIRTUAL/AUGMENTED REALITY TECHNOLOGY

Construction companies worldwide and also in India have begun using Virtual/Augmented Reality technology to enhance construction worker safety training. VR allows workers and work managers to visualize the more serious construction site hazards and prepare for them adequately. Firms also use apps that link

VR/AR tech to their BIM software. This allows contractors and developers to create virtual walkthroughs of a structure even before it is complete, enabling them to make more informed design decisions early in the construction stages and save on both time and costs.

Other major technologies disrupting construction

Drones: Although expensive, the use of drones is gaining popularity for managing and inspecting sites. Drones allow developers to map a site and create 2D as well as 3D images. Most of the advanced drones use a coordinate-based system which helps achieve absolute accuracy in measurements.

Brick-laying robots: Construction is a highly labour-intensive industry. However, labour costs can be significantly reduced, and quality and precision standards considerably increased by using robotics for the repetitive, mechanical functions such as bricklaying. We have already seen the introduction of a semi-automated mason aptly called 'SAM'. This robot, which lays bricks rapidly and precisely, has been designed and engineered by Construction Robotics. It is the first commercially available bricklaying robot which works in collaboration with human masons. For all its innovativeness, it is definitely only the first iteration of many even more efficient machines to come.

TO CONCLUDE:

All this is important if we consider that while technology can and is replacing humans in various ways and that an entirely new alternate 'online universe' has now opened up, humans themselves will always require constructed buildings to live and work in. There is no immediate foreseeable way of catering to all the physical needs of mankind purely by means of technology.

In other words, real estate will remain relevant no matter how rapidly technology evolves - the virtual space has inherently insurmountable limitations when it comes to serving organic life-forms. However, a lot of 'human inputs' related to the conception and creation of the required real estate can and is either being replaced or improved upon by technology.



Does Market Cap/GDP Ratio Tell About Market Valuation

If you were to read analyst reports on market valuations, the most common measure is market P/E. Undervaluation and overvaluation does work quite well at a market level. For example, if you have bought into the markets in 2003 or in 2009 when the P/E ratio was closer to 12, you would have surely made a lot of money. Similarly, if you had sold out at P/E ratios of above 25 in 2007 and 2010, you would have managed to buy back into the market at lower levels. But there is a problem with this measure. It only considers the total earnings of listed companies in the market. What about many large companies and businesses that are either government owned or are not listed? That is where the Market Cap to GDP ratio comes in handy.

Market Cap / GDP ratio = Market cap of listed stocks / Annual real GDP

How much does this work out to? India's current market cap of all listed stocks is around \$2.3 trillion while the real GDP is \$2.6 trillion. Remember, India has already emerged as the 6th largest economy in the world beating France in the last 1 month. The ratio will look be as under in the Indian context...

Market cap / GDP = 2.3 trillion / 2.6 trillion = 0.8846 or 88.46%

Why you need to be wary of this measure (Market Cap / GDP ratio)?

There are 3 things you need to be wary of before using this measure. Firstly, market cap is a stock while GDP is a flow. Essentially this becomes ratio of a stock to a flow, almost like the Price to Sales ratio. One can argue that these are not strictly comparable. Secondly, stock market only covers the value of all the listed companies in the country but the GDP is the value of all incomes which includes unlisted private companies, small businesses, MSMEs, proprietorships, partnerships, government companies, government departments etc. Hence, the numerator and the denominator may not be strictly comparable. Thirdly, a lower Market Cap / GDP ratio is not always a sign of undervaluation. It also depends on how much is the stock market penetration of your economic activity. That is why the Market Cap / GDP ratio is much above 100 in advanced countries like the US, UK and Singapore where more of business comes under the formal sector. So 88% cannot be assumed to be a sign of undervaluation in the Indian context.

How the Market Cap / GDP ratio has moved in India over the years?

Since the beginning of 2018, the ratio has come down from above 100% to 88%. That is because, the index has been static but it is also because there is been a huge wealth destruction in mid caps and small caps. Actually, in year 2017 the market cap / GDP

ratio of India crossed the 100% mark after a gap of almost 10 years. One can straight away interpret this as a sign of overvaluation. This is also happening because the government is bringing more and more sectors into the capital market ambit. Imagine the impact when defence also comes under the ambit of capital markets in a big way.

The Market Cap to GDP ratio is nowhere close to what it was in 2007, at the peak of market valuations. Remember, you also need to adjust to the fact that the coverage of the market has expanded substantially. That may not make the current market/GDP ratio fully comparable with the past data.

How to interpret the Market Cap / GDP ratio for India currently?

With the market cap / GDP ratio coming down to 88 in July 2018 there may not too much of a worry for the markets. In fact, there are 4 reasons why this ratio could actually be indicative of a market that is still reasonably valued...



After the GDP slowing to 6-7% post demonetization, the real GDP growth has shown signs of bouncing to above 7.5%. The Indian economy stands on the cusp of a growth revival. On a global scale, India is still attractive on Market Cap / GDP terms. At 88%, the downside risk may be limited for the market cap.

Corporate profit growth had given indications that the capital cycle is showing green-shoots of turning around. That means that the sales numbers across sectors should pull up and that will be a major positive for the GDP number. That will make the market cap / GDP ratio look a lot more benign.

The market cap / GDP may remain elevated due to the sharp rise in IPO collections in the last 1 year. This trend is likely to continue. During the fiscal 2017-18 the IPO markets have seen collections to the tune of \$12.5 billion and that has added to market cap without really impacting the GDP. One needs to keep that in mind.

Lastly, we cannot miss out on the technology efficiency angle. Use of technology has vastly improved the data collection and analysis techniques. That means that the underreporting of revenues will reduce and give a more realistic picture of the GDP.

(By arrangement with Angel Broking)

September sharp stock crashes, a disaster or opportunity for investors?



RAHUL AGARWAL,
Director Wealth
Discovery EZ Wealth

« STOCK MARKET

By Rahul Agarwal, Director Wealth Discovery EZ Wealth

After an euphoric month of August, Indian markets were setup for some reality check in terms of stock valuations, this coupled with worsening macro-economic parameters due to higher crude prices and record Rupee lows created a perfected recipe for steep corrections. September turned out to be one of the

worst months in recent history for the markets with both benchmark indices down by almost seven% for the month. Benchmarks, however do not tell the scale of market correction accurately, the real pain has been felt in the broader markets which is captured in the BSE Midcap and Small Cap indices both were down by 15% and 18% respectively. If we look at individual stocks majority of stocks trading on the Bombay stock exchange are down by 30-40%.

Whether this correction is a disaster or an opportunity depends on the perspective one holds, for long it has been argued that the Indian market is significantly overvalued in comparison to its emerging market peers, other alternative view is that the macro economics are good and just the corporate earnings have to catch

up to justify these valuations. It's our opinion that the current correction in the markets was long overdue and it's a healthy thing for efficient markets, although the downward tra-



jectory has been a tad steep but nonetheless it has forced some sanity in the markets at least in the terms of valuations.

The market volatility is not good for investors who do not have an appetite for such wild market gyrations, however this

volatility has given traders ample opportunities to make money. For investors who have entered the markets a little late into the August rally this correction would be extremely painful as they would be witnessing significant erosion in their portfolio valuation, an ideal course for such investors is to exit speculative names and book their losses and average down their cost in good names. For long term and value investors, this market crash is an opportunity to accumulate fundamentally strong names with a longer-term horizon. In real world it is almost impossible to time market bottoms therefore the strategy should be to average down as close as one can get to the market bottom and the best way to do this is to buy in small quantities on each dip.

In the current market correction, the price movement has been very drastic and broad-based, therefore there is value picking available in almost all sectors, a

good starting point would be to start looking at market leaders in each sector and then see how much they have corrected from their recent highs, if the correction is in the order of 30-40% then select the stock as an ideal candidate for further research. Once you are satisfied with the fundamentals then buy that stock at every market dip, in doing that one can accumulate good quality stocks at reasonable valuations.

Finally, it should be remembered that this is not the worst the Indian markets have seen, the corrections in 2008 were more drastic and long then this current one, Indian economy is much bigger and better poised to withstand short term blips in terms of adverse currency movement and higher crude prices. In due time the markets will be back to their normal course and at that point good quality stocks would be the first one to respond to positive cues and provide handsome returns for the brave investors.