Initiating Coverage

Tata Chemicals

27 May 2019

Reuters: TTCH.NS; Bloomberg: TTCH IN

Chemical Giant Leveraged To Soda Ash Upcycle

Tata Chemicals (TTCH), an Indian salt and soda ash giant, is navigating through new waters as it seeks fresh pastures. The recent decision to hive off its consumer business is positive as this transforms TTCH into a focused chemicals and specialties company. The growth from specialties including, nutrition, and silica, will likely gather momentum from FY21 based on new capacity being set up at a cost of Rs5.7bn. The crop protection chemicals (CPC) subsidiary, Rallis India, is the weak link that could surprise on the upside based on its impressive portfolio including new products launched in the past two years. Sustained operational gains, cost leadership, and high capacity utilization should support healthy EBITDA margin in TTCH's chemistry products. We expect a re-rating in the stock based on volume growth prospects in chemicals and specialties, after the Rs 24bn capex. We initiate coverage on TTCH with a Buy rating and a SOTP-based target price of Rs749, up 17.8% from the current market price.

Key catalysts: i) Potential upswing in soda ash business over the next two to three years. ii) Growth in India chemicals business post-expansion. iii) Re-rating prospects.

Mithapur expansion, to support chemicals revenue growth and margins: We see chemicals segment contributing 64%/61% to the company's revenues in FY20/FY21, respectively, and, 75%/69% to EBITDA in FY20/FY21, respectively (vs. 66% of revenues and 75% of EBITDA in FY19).

Consumer business: We have modeled this in our base case estimates pending the demerger announced mid-May 2019. We expect the consumer business to contribute 18%/20% to revenues, and 17%/19% to EBITDA in FY20 and FY21, respectively, (vs. 16% of revenues and 16% of EBITDA in FY19).The deal valuation at Rs57bn implies 3.2x EV/sales on FY19 consumer segment revenues.

Specialty: The full impact of capex on new products on financials is likely over the next 18 months to two years. We would like to see the segment's earnings over the next few quarters to assess sustainable margin, much of which looks a high value business on paper. The proposed lithium battery and actives projects will likely take shape over the next three to four years.

Healthy cash flow: We see healthy operating cash flow and leverage ratios over the next two years.

Risks: i) Slowdown in automobile and container glass industries – key users of soda ash. ii) Excess supply from recent and ongoing capacity addition in soda ash. iii) Hit on higher margin Indian chemical operations could hurt returns. iv) Squeeze on cash flow could force the company to refinance debt repayment at higher interest rates.

Y/E March (Rs.mn)	FY17	FY18	FY19	FY20E	FY21E
Revenues	1,03,461	1,02,697	1,12,963	1,25,347	1,38,428
EBITDA	20,943	21,907	20,951	23,332	26,922
Consol. PAT adjusted*	8,796	12,263	10,936	11,497	13,874
EV/FCF (x)	7	4	(142)	(51)	10
EPS (Rs)	34.53	48.13	42.93	45.13	54.46
EPS (%)	26.3	39.4	(10.8)	5.1	20.7
EBITDA margin (%)	20.2	21.3	18.5	18.6	19.4
P/E	18.4	13.2	14.8	14.1	11.7
EV/EBITDA	8.7	8.3	8.7	7.8	6.7
Net debt/equity (x)	0.49	0.11	0.13	0.16	0.05
Pre-tax RoCE (%)	8.1	9.0	7.9	7.6	8.8
RoE (%)	11.9	12.9	9.3	9.0	10.2

**Excludes gain on fertilizer business sale; Source: Company, Nirmal Bang Institutional Equities Research*

BUY

Sector: Fertiliser/ Agrichemical

CMP: Rs636

Target Price: Rs749

Upside: 17.8%

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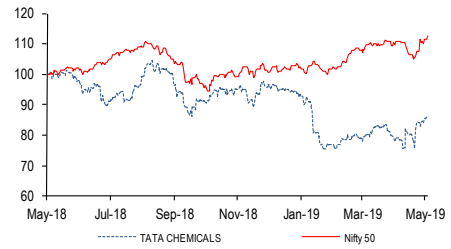
Key Data

Current Shares O/S (mn)	254.8
Mkt Cap (Rsbn/US$bn)	162/2.3
52 Wk H / L (Rs)	782/550
Daily Vol. (3M NSE Avg.)	12,30,562

Share holding (%)	4QFY19	3QFY19	2QFY19
Promoter	30.6	30.6	30.6
Institutions	48.0	48.2	47.3
Non-Institutions	21.4	21.2	22.0

One Year Indexed Stock Performance



Price Performance (%)

	1-M	6-M	1-Yr
Tata Chemicals	9.6	(10.3)	(12.1)
Nifty Index	1.4	11.6	12.4

Source: Bloomberg

Investment Thesis

Key growth drivers for TTCH

- **India soda ash demand CAGR (2012-17) of 3.9% for soda ash in India: It was** driven by growth in key end-user segments – detergent (40% of soda ash demand) glass (32% of demand), pulp & paper, and chemicals.
- **Global soda ash demand CAGR (2012-17) of 3-4%:** Key regions supporting demand include North East Asia (2.7%) , South East Asia (3.2%), Africa (3.3%) and India (3.9%).
- **Volume growth: The** Rs24bn capacity expansion at TTCH's Mithapur facility in Kutch, Gujarat, will boost soda ash capacity by 200,000tn/yr (5.6% of total company soda ash sales and sodium bicarbonate by 35,000tn/year (~15% of company's sales). The salt capacity is also proposed to be increased by 400,000tn/year. This will meet the additional salt requirement of soda ash expansion.
- **Leverage to upturn in soda ash business cycle** – TTCH with its volume in excess of 3.6mntn/yr, stands to benefit from the likely upswing in industry demand that will boost prices and operating rates. This combined with the 0.2mt/annum expansion will enhance the upside from the potential increase in soda ash prices anticipated over the next two to three years, according to a study carried out by IHS Markit, a global industry consultant.
- **New initiatives in nutrition business under specialty segment**: The 5,000tpa oligosaccharides project costing Rs2.7bn is likely to start commercial operations by the end of CY19. This is a high-value nutrition derivative that could generate healthy margins and returns over the long term, although currently it is reporting a loss at the EBIT level on modest revenues of Rs420mn. This may, however, not materially move the needle on earnings growth over FY20E-FY21E.
- **The consumer business:** (Tata Salt, and pulses, spices under Tata Sampann). The business has delivered robust growth in both revenues (up 22% YoY) and EBIT (up 33.8% YoY in FY19). The company announced on 15 May 2019 that the consumer arm is being hived off to group Consumer Company Tata Global Beverages or TBGL. The deal is being valued at around Rs57bn (at the TGBL price on 15 May 2019), based on the share swap ratio of **1.14 shares** of **TGBL for each share of TTCH.**

  Pending the formal transfer of the assets and all approvals for the demerger, our estimates include the consumer business.

We have discussed the impact of the demerger on the stock price in the valuation section.

Soda ash business

Tata Chemicals offers exposure to the third largest soda ash maker in the world, with 80% of its total capacity of 4.3mtpa located outside India across the US, UK and Kenya(Magadi). The soda ash mining operations in the US under its subsidiary TCNA is based on Trona reserves located in the natural soda belt Green River valley, Wyoming, in the US. The company makes 70% of its soda ash through the natural mining of Trona reserves – 60% in the US and another 10% in Magadi, Kenya, under its Africa operations.

The remaining 30% of its production comes from Mithapur chemical facility in Gujarat, India (8, 20,000tpa) and its UK operations at Northwich and Middlewich (3, 24,000tpa) based on the synthetic Solvay process using lime stone, salt, ammonia and coke.

Cyclical upturn on the anvil

Exhibit 1: Soda ash operations across geographies in FY19

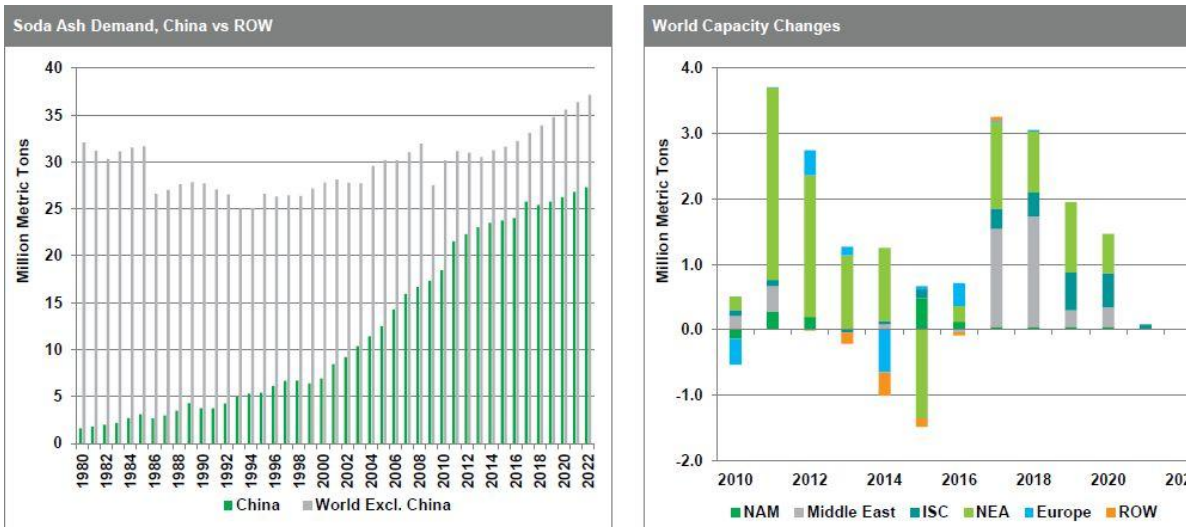
Geography	Soda ash production (mt)	Soda ash sales (mt)	Location	Process	Remarks	FY19 soda ash revenues (Rs.mn)
TCL- India	0.82	0.694	Mithapur Gujarat	Solvay Process	Synthetic process using limestone, ammonia, coke	13,439 *
TNCA -US	2.19	2.222	Wyoming,USA	Trona Mining	Extracted from natural soda ash mines	33,820
TCEL -UK	0.33	0.324	Northwich,UK	Solvay Process	Synthetic process using limestone, ammonia, coke	6,010 *
TCAHL- Kenya	0.29	0.286	Magadi,Kenya	Trona Mining	Extracted from natural soda ash mines	5,060
Total	**3.63**	**3.53**				**58329**

*NBIE estimates; *Source: Company, Nirmal Bang Institutional Equities Research*

The outlook for soda ash market globally is subdued in the near term based on the recent capacity addition of 2.5mt/year in Turkey based on the less energy intensive and competitive Trona process. The slowdown in automobile sales in India and the US, along with the closure of many container glass operations in the US hampered soda ash demand, which had a CAGR of 3.9% in India, and under 1% in both North America and South America over 2012-17, according to global consultant IHS Markit.

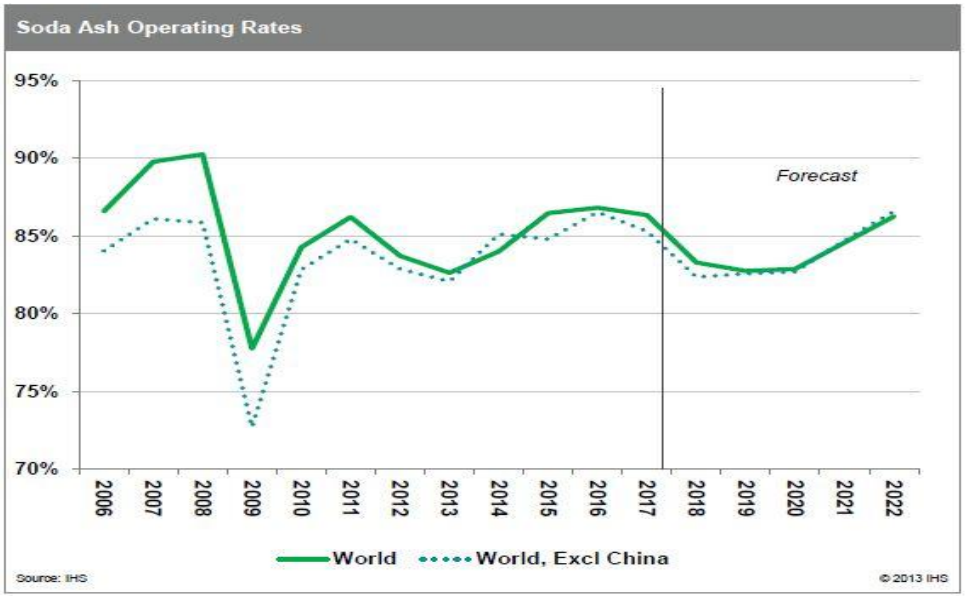
However, IHS Markit is of the view that **the outlook of 3%-4% compounded growth in global demand over the next three to four years will support the increase in soda ash industry capacity utilization from around 83% to more than 86% over CY20E-CY22E**. This, along with capacity rationalization in China's soda ash industry that depends heavily on the less competitive modified Solvay process – could, in our view, support an uptrend in soda ash prices and margin over the next two to three years. **The TTCH management has, in fact, given guidance of tighter markets and improving prices over the current financial year**. According to TTCH CEO, prices need to rise substantially (from the current level ofUS$280/tn SE Asia) to reach a reinvestment level that will attract fresh capacity in soda ash.

Exhibit 2: Global operating rates



Source: IHS Markits, Nirmal Bang Institutional Equities Research

Exhibit 3: Soda ash operating rates

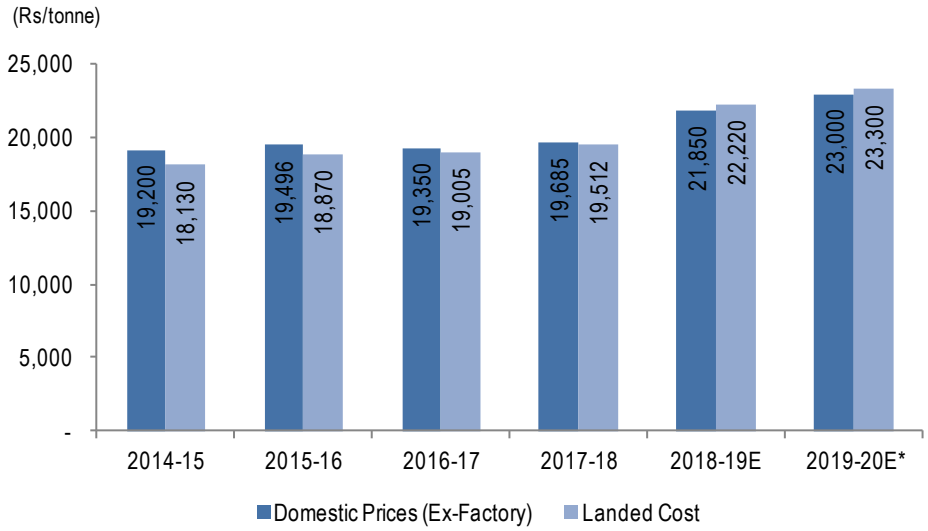


Source: IHS Markits, Nirmal Bang Institutional Equities Research

India outlook

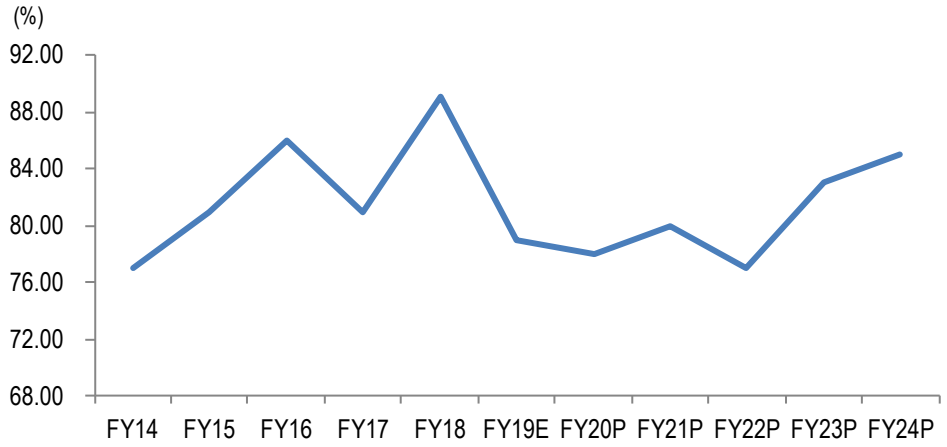
Crisil Research is also positive on Indian soda ash demand-supply outlook which supports improvement in operating rates in India. This, in turn, is likely to support a rising trend in Indian soda ash prices, which averaged Rs 19,685/tn as compared with the landed costs of imports at Rs19,512/tn in FY18.

Exhibit 4: India soda ash price trend



**Domestic prices in 2019-20E are on an average Rs 22,000-Rs24, 000 and landed costs are on an average Rs22, 300-Rs24, 300; Source: Crisil Research, Nirmal Bang Institutional Equities Research*

Exhibit 5: Indian soda ash operating rates



Source: Crisil Research, Nirmal Bang Institutional Equities Research

Our analysis shows that **every US$10/tn increase in soda ash price implies an upside of 1.9%, 4.7% and 5.8%, to revenues, EBITDA, and EPS, respectively, based on our FY21estimates.**

If we juxtapose the upswing in the soda ash cycle with volume growth post Mithapur soda ash expansion, the upside to margins and earnings get enhanced even further.
If we take only volume growth, a 10% increase in sales volume implies 4.3% upside in revenues and 12.9% in EPS based on FY21E earnings

If we combine the impact of the upside on both price and soda ash capacity expansion of 0.2mt, we could see a potential upside of 4.9% in revenues and 14.8% in EPS based on our FY21E earnings. The following exhibit illustrates the leverage that soda ash offers to the soda ash industry cycle.

Exhibit 6: Impact analysis – Soda ash upcycle

Case	Soda ash vol./price	Revenues	EBITDA	PAT	RoCE	FCF	EPS	TP
Base case	4	138,428	26,922	15,676	8.79	18,173	54.5	749
Bull cases								
Expansion (%)	10	144,370	29,715	17,855	10.07	19,502	61.6	820
TCL India (mt)	0.2	142,432	28,804	17,144	9.65	19,068	59.2	797
Price upside (US$/tn)	10	141,100	28,178	16,656	9.36	18,771	57.6	781
Volume + price impact	Expansion (0.2mt) +price upside (US$10/tn)	145,244	30,126	18,175	10.3	19,697	62.5	830
Bear case								
Downside case 1	Price down US$10/tn	135,755	25,666	14,696	8.2	17,576	51.3	717
Downside case 2	No expansion+ price down	135,755	25,666	14,696	8.2	17,576	51.3	717

Note: Mt = Million Tonne, Tn= Tonne; Source: Company, Nirmal Bang Institutional Equities Research

Tata chemicals has **a globally competitive soda ash business**. The Trona-based soda ash business typically enjoys lower energy costs compared with the synthetic routes. Global studies show that the cash cost of Trona process is less than US$100/tn vs. the cash cost of more than US$200/tn for the synthetic route.

Expansion plan

The company is investing Rs24bn in the Mithapur facility to expand the capacity of soda ash, sodium bicarbonate(bicarb), cement and salt. These are expected to be completed over three to four years from September 2018 (date of announcement), accoridng to the company. This should help the firm take advantage of the expected upswing in the soda ash industry cycle.

Exhibit 7: Capex Details

	Capacity	Cost	Likely completion date	Remarks
Soda ash	200 KMT	US$100mn	3-4 years in phases (announced on September 2018)	Mithapur expansion plan of US$370mn; approx. US$40 mn is the preparatory capex.
Salt	400 KMT	US$100mn		
Sodium bicarb	35 KMT	US$15mn		
Energy and environment		US$90mn		
Cement	300 KMT	US$25mn		
Debottleneck US operations	200 KTPA			
Greenfield nutraceuticals - Nellore plant	5000 TPA	Rs2.7bn	Commissioning in 2019	For nutrition solutions.
HDS project & Cuddalore silica plant acquisition	Configuration under development	Rs2.95bn	Commissioning in 2019	For highly dispersible silica.
To set up battery actives manufacturing & lithium ion battery recycling plants	In planning phase		By FY22-FY23	Business plan work in progress.

Source: Company, Nirmal Bang Institutional Equities Research

Soda ash business drivers:

i. Trona route contributes 70% of TTCH's soda ash output

ii. 65% of global capacity is based on the synthetic process – this implies that global average cost of production is going to be driven by the synthetic producers whose cost of production is 2x that of Trona-based producers. However, given that competitive dynamics of soda ash market is driven by regional demand and supply and freight logistics. This explains why Tata's US soda ash EBITDA margins are relatively modest at less than 20% despite the low material and energy costs. The freight cost for TCNA is almost 25% of revenues.

iii. To the extent to which Trona reserves are limited and restricted to certain geographies, the overall cost and price curve will be incrementally driven by the synthetic process. The fact that China's soda ash capacity - nearly 40% of thw world's - is based on the modified Solvay route which suggests that the cost and price curve will keep rising as China's share of output of this chemical increases. And on the flip side, if China cuts production it can lower the cost and price curve.

iv. Lime stone reserves are also limited and hence companies like TTCH with high quality lime stone reserves in the Kutch region in Gujarat enjoy a competitive advantage

In fact if we compare the standlaone and consolidated financials, we note that TTCH India business is more profitable than the other geographies.

TTCH India's EBITDA margin average 25.35% over FY18-FY19 vs. TCNA US margin of 20.6%.

Exhibit 8: Geographic segment Financials FY18-FY9

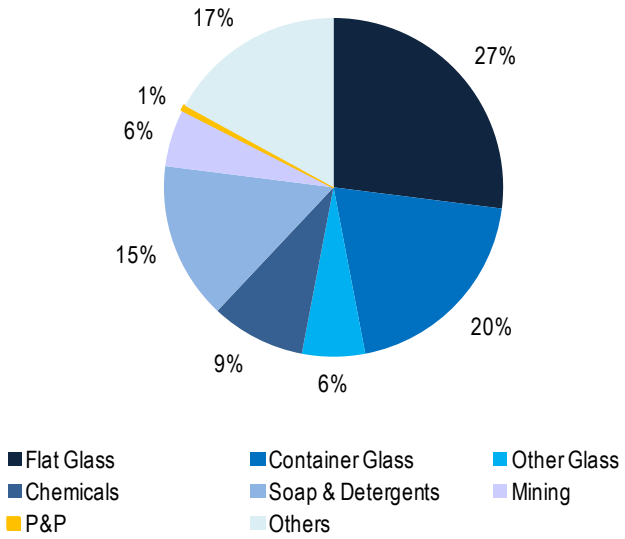
Region (Rs.mn)	Revenues		EBITDA		EBITDA margin %	
	FY18	FY19	FY18	FY19	FY18	FY19
TCL India	35,240	40,810	9,220	10,020	26.16	24.55
TCNA -US	32,570	33,820	6,880	6,780	21.12	20.05
TCEL	14,360	14,490	2,180	1,050	15.18	7.25
TCAHL	4,810	5,060	820	590	17.05	11.66
Rallis India	18,090	19,840	2,650	2,410	14.65	12.15

Source: Company, Nirmal Bang Institutional Equities Research

Soda ash demand drivers

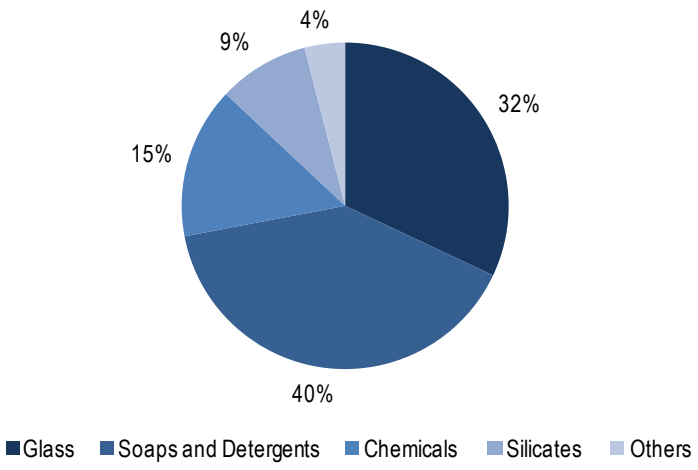
Globally, soda ash demand of 59.5mt (CY17) is driven by glass – 53% share as compared with India, where detergents account for 40% soda ash demand. Other user segments in the global market are detergents 15% and chemicals 9%. China has a lion's share of global demand at 44%or around 25mt/year.
Indian soda ash demand pie of around 4mt/year is dominated by detergents at 40% and glass at 32%. Other user industries are chemicals 15% and silicate 9%.

Exhibit 9: Global soda ash demand pie (%)



Source: Alkali Manufacturers Association Of India

Exhibit 10: India soda ash demand pie (%)



Source: Alkali Manufacturers Association Of India

Soda ash demand supply outlook

The Indian soda ash capacity as of March 2018 was 3.52mt/yr, according to industry data. The annual apparent consumption is estimated at 4mt/yr based on reported production of 3.1mt/yr and imports of 0.9mn tn/yr (22% of demand). This implies India has 6.7% share in global demand and 4.5% share in global capacity. India demand grew 12% in FY18, according to TTCH annual report.

Global capacity as of CY17 was reported at 71mt/yr (by consultant IHS Markit). China dominates the industry with a capacity of 27.5mt/yr, a shade below 40% share in global capacity. World soda ash capacity is estimated to increase by 5.9mt to 77mt/yr by CY19E and then stabilise at 77.25mt/yr over CY20E-22E as no fresh capacithy additionis expected. This supports our positive view on the potential upturn is industry prices and margins over this period. Global annual demand for soda ash could increase from 59.5mt to 69mt CY22, assuming a CAGR of 3% in consumption. **We therefore estimate that industry utilisation rate could touch the 86%-89% range as compared to the 85%-87% range estimated by IHS Markit.**

Exhibit 11: Global soda ash demand and supply outlook

	CY17	CY18	CY19E	CY20E	CY21E	CY22E
Demand (mt)	59.5	61	63	65	67	69
Capacity (mt)	71.1	74.1	77	77.2	77.2	77.2
Capacity utilization (%)	**83.72**	**82.74**	**82.01**	**84.20**	**86.73**	**89.33**

Note: Mt = Million Tonne; Source: IHS Markit, Nirmal Bang Institutional Equities Research

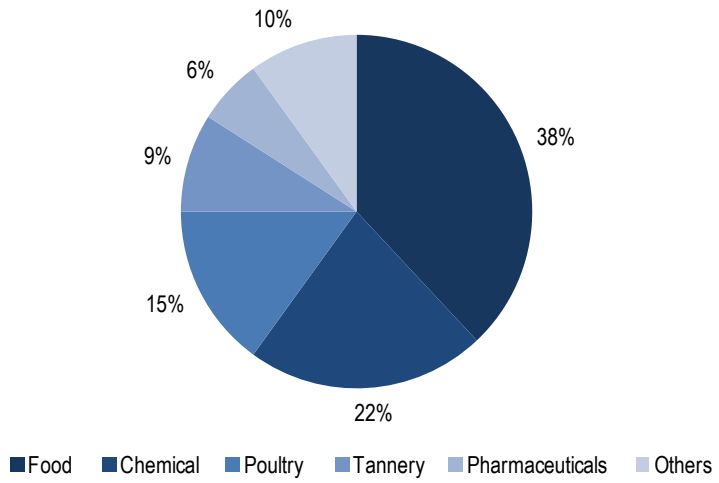
Sodium bicarbonate

TTCH also has a niche sodium bicarbobate business with annual sales volume of more than 0.2mt that is evenly split between India (0.1mt/yr) and the UK (0.1tn/yr) in FY19.

Sodium bicarbonate is used in chemical grade, food grade and medical grade applications. TTCH has branded sales of sodium bicarbonbonate under brand names Medikarb, Sodakarb and Alkakarb. The Medikarb brand finds use in pharmaceutical excipients and API requirements, which has to meet tight specifications and get approval before being commercially sold for these applications. The Medikarb brand launched in 3QFY18 fetches a premium based on its selling price of Rs45.000/tn as compared to Rs23,000/tn for the standard grade. Indian demand for this chemical grew 13% in FY18, according to the company.

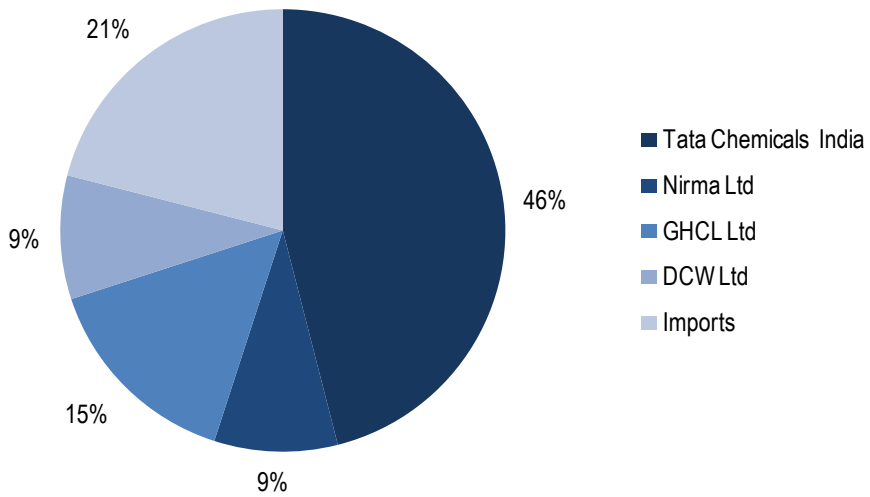
TTCH is expanding its Indian sodium bicarbonate capacity for the medical grade market by 35,000tn/year as part of its Mithapur expansion plan. This implies a near 35% upside to its sodium bicarbonate volume in the premium Medikarb category. This volume growth post-expansion along with the higher realisation augurs well for it chemical business margin.

Exhibit 12: Sodium bicarbonate India demand pie in FY18



Source: Alkali Manufacturers Association Of India

Exhibit 13: TTCH dominates domestic sodium bicarbonate market with 46% share in supply



Source: Alkali Manufacturers Association Of India

Understanding TTCH business segments

TTCH operates in three segments, according to the reclassification of its segment financials in FY19

1. **Basic chemistry products (chemicals):** i) Soda ash produced at Mithapur, India, Northwich, UK, Green Valley, Wyoming, USA and Magadi in Kenya. ii) Sodium bicarbonate from plants located in the UK and India, salt – India and the UK (industrial grade under Britisk Salt).iii) Cement, small qualitities of caustic soda, marine chemicals, chlorine gas and bromine products produced at Mithapur in India.

2. **Specialty products** – This includes: a) Human nutrition products from its existing facilitiy in Sriperumbadur, Tamil Nadu – (700tn sales) that comes under India standalone financials. b) The consolidation of subsidiary Rallis India's crop protection chemicals and seeds.

3. **Consumer segment** – i) Sale of branded salt - Tata Salt. ii) Pulses and spices under Tata Sampann brand. The company has reported that it is also testing detergents under the latter brand receiving an encouraging customer response in FY19. This will cease to be a part of the company financials once the demerger is completed.

Exhibit 14: TTCH accounting segment reports - revenues

(Rs.mn)	FY18	FY19	Ch YoY(%)
Revenues			
Basic Chemistry products	76,729	83,091	8.3
Consumer products	15,122	18,473	22.2
Specialty products	18,434	20,263	9.9
Less: Inter-segment revenues	7,022	9,034	28.7
Add: Unallocated revenue s	190	171	(9.8)
Total consolidated revenues	103,454	112,963	9.2

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 15: TTCH accounting segment reports - EBIT

Segment EBIT* (Rs.mn)	FY18	FY19	Ch YoY (%)
Basic chemistry products	14,611	13,036	(10.78)
Consumer products	2,347	3,139	33.76
Specialty products	2,039	1,721	(15.59)
Consolidated EBIT	16,727	15,237	(9)

**Segment EBIT includes other income; Source: Company, Nirmal Bang Institutional Equities Research*

Exhibit 16: Company products/segments

Consumer products	Basic chemistry products	Specialty products	Tata Swatch
Table salt	1.Chemicals	1.Pesticides under Rallis India	Non-electric purifiers
Pulses	Soda ash	2.Seeds	Electric purifier
Spices	Dense soda ash	3.Nutrional solutions	Instasip travel purifier
Mixes	Natural light soda ash	Sweeteners	
Besan	Synthetic light soda ash	4.Specialty crop nutrients	
Water purifier	Sodium bicarbonate	5.Advanced materials	
	Cement		
	Industrial salt		
	Allied chemicals		
	2.Advance materials		
	Nano zinc oxide		

Source: Company, Nirmal Bang Institutional Equities Research

TTCH geographic spread reported in company result presentations

- TTCH's business also straddles across different geographic entities TCL India, TCNA (North America), TCEL (Europe), TCAL (Africa) and its 50% sujbsidary Rallis India.
- The 'chemicals' business is spread across TCL India, TCNA(North America), TCEL(Europe), and TCAL(Africa).
- TCL India includes a part of the "chemcials' portfolio, the 'consumer' business, and one small part of the 'specialty" segment covering nutrition products.
- Rallis India's CPC and seeds businesses, which forms a lion's share of the 'specialty' segment,according to its formal segment reporting as per accounting standards.

Exhibit 17: Geographic segment financials (As per company presentation)

TCL India (Rs.mn)	FY18	FY19
Revenues	35,240	40,810
EBITDA	9,220	10,020
PBT	9,040	12,200
PAT	6,240	9,180
EBITDA margin (%)	*26.16*	*24.55*
PAT margin (%)	*17.71*	*22.49*

TCNA –US (Rs.mn)	FY18	FY19
Revenues	32,570	33,820
EBITDA	6,880	6,780
PBT	4,390	4,540
PAT	5,270	3,090
EBITDA margin (%)	*21.12*	*20.05*
PAT margin (%)	*16.18*	*9.14*

TCEL (Rs.mn)	FY18	FY19
Revenues	14,360	14,490
EBITDA	2,180	1,050
PBT	590	(530)
PAT	590	(380)
EBITDA margin (%)	*15.18*	*7.25*
PAT margin (%)	*4.11*	*(2.62)*

TCAHL (Rs.mn)	FY18	FY19
Revenues	4,810	5,060
EBITDA	820	590
PBT	380	210
PAT	380	210
EBITDA margin (%)	*17.05*	*11.66*
PAT margin (%)	*7.90*	*4.15*

Rallis India (Rs.mn)	FY18	FY19
Revenues	18,090	19,840
EBITDA	2,650	2,410
PBT	2,270	2,200
PAT	1,680	1,550
EBITDA margin (%)	*14.65*	*12.15*
PAT margin (%)	*9.29*	*7.81*

Tata Chemicals – Consolidated* (Rs.mn)	FY18	FY19
Revenues	103,450	112,960
EBITDA	21,900	20,950
PBT	15,710	16,430
PAT	12,910	11,640
EBITDA margin (%)	*21.17*	*18.55*
PAT margin (%)	*12.48*	*10.30*

**Includes consolidation adjustments:*
Source: Company, Nirmal Bang Institutional Equities Research

TCL India

TCL India is involved in India chemcials business based out of Mithapur, Gujarat, as well as the consumer and specialty segments. TCL India is the biggest and most profitable pie in TTCH's consoildated financials with FY19 revenuesand EBITDA at Rs40.1bn, and Rs10bn, respectively. Revenues were up 15% and EBITDA marginwas good at 24.6%, although down 162bps from a year ago.
India leads in terms of share of revenues (35.8%), EBITDA (48.1%), and PAT (78.9%). FY19 PAT surged 47% YoY driven by a sharp increase in other income.

Nutrition business

High value project for 5,000tpa Fructo and Galacto-Oligosaccharides

The company is investing in a Rs2.7bn project to set up 5,000tn/year oligosaccharides plant to cater to applications in animal feed, human dietary needs etc. This is undergoing trial and test runs and is expected to start commercial operations by 3QFY20, once the company gets approval for exports.

Silica products

The company has acquired Alllied Silica's silica plant in Cuddalore, Tamil Nadu, at a cost of Rs1.23bn on a slump sale basis.

The firm is also setting up a project for highly dispersible silica (HDS) of undisclosed capcity at an investment of Rs1.7bn; Overall the company is investing Rs2.95bn in silica business, including the above acquisition.

TTCH is evaluating markets like rubber, chemicals and other applications for its silica products. It is not clear as to when and how much silica-based chemcials will add to the company's revenues. We are factoring in silica revenues on a small scale from FY21.

The interesting aspect is that HDS could substitute petroleum-based carbon black in tyre manufacture. Carbon black prices have been ranging at US$340-350/tn (Rs25,000-30,000/tn). HDS helps add wear and tear resistance and anti-skid properties in car tyres and also reduces fuel consumption based on the improved performance of tyres. ***The US market has reportedly seen good traction in silica-based car tyres, while the heavy vehicle segment is less enthusiastic about this.***

UK business under TCEL

TCEL manages the European busienss based is the UK and is involved in manufcaturing soda ash (324,000tn) using the Solvay route as in India, bicarb (100,000tn) and industrial salt (4,00,000 tn) under subsidiary Bristish Salt. These activities are based near the Winnington salt basin in Chesire, which gives access to key raw materials like brine and limestone.

The company also has a small energy business to generate and sell power.

TCEL clocked revenues of Rs14.49bn in FY19 vs. Rs14.36bn a year ago. EBITDA margin came in at 7.2% vs.15.2% a year ago. The hit on margins wasmainly because of lower sales of soda ash (down 8%) following operational issues and higher energy costs as a result of the sharp rise in coke prices. The management is hopeful that the UK operations will catch up with the other businesses and perform to their full potential from FY20, which will support EBITDA of at least GBP25mn (Rs 2.1 bn).

The management expects the UK business to improve and get back to FY18 level that will likely support annual EBITDA of GBP 25mn (Rs 2.2bn).

TCNA

TCNA operates more than 60% of the company's soda ash business that is based on natural trona reserves in the Green Valley river trona belt in Wyoming USA, one of the largest such natural soda ash mines in the world. Revenues in FY19 were reported at Rs.33.8bn (29.7% of TTCH revenues, the second-highest contributing region) – a growth of 3.8% YoY. EBITDAmargin was healthy at 20%, coming next only to TCL India, although marginally down from a year ago.

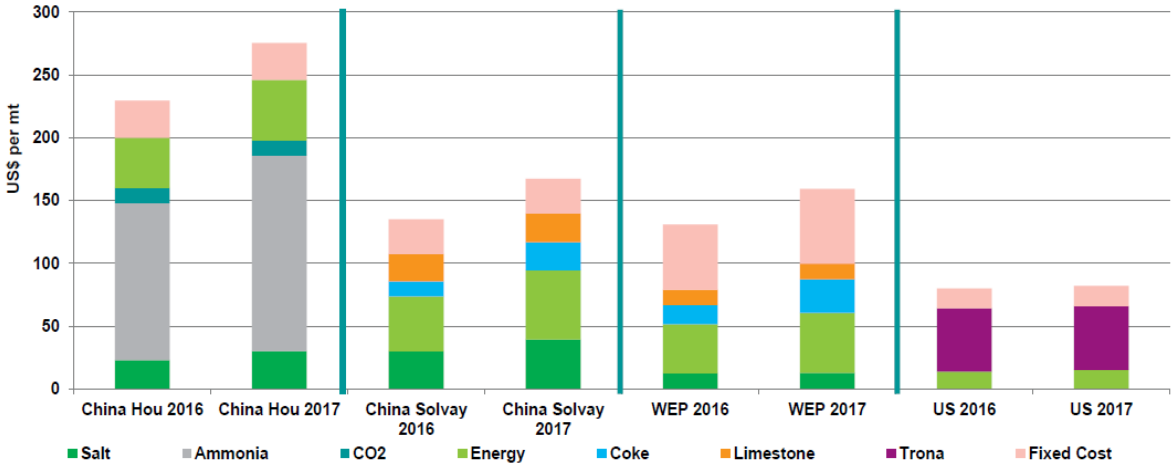
FY19 EBITDA came in at Rs6.78bn or 32.5% of TTCH's EBITDA, which is the second-largest after TCL India's share of 48%.

TCNA reported FY19 PAT of Rs3.1bn, a sharp decline from year-ago figure of Rs5.3bn, which the company attributed to the decline in soda ash volume resulting from a rare power failure and some operational

setbacks. These problems are being addressed and hence unlikely to impact operations in future, according to TTCH management.
Although the natural mining operations in the US enjoy low energy and material costs, the higher freight and other expenses offset this advantage (as per FY18 annual report). Freight costs are around Rs3,700/tn or US$53/tn, which is close to 25% of TCNA revenues. This is because of the need to ship soda ash from the mines to far-off consumption points in the US and key export markets located in Europe, Africa and Asia. Please note that 50% of the US soda ash production of close to 13mn tonne has to be exported as the US domestic demand forms only around 6mn tonne, which is less than half the country's output.

Exhibit 18: Cost comparison across geographies

Raw material and energy costs for China, US and West Europe



Source: IHS Markit, Nirmal Bang Institutional Equities Research

Rallis India -The dark horse in TTCH stable

TTCH holds 50.3% stake in Rallis India, which is involved in crop protection chemicals across herbicdes, fungicides and insecticides, seeds and biofertilisers. The seeds business is under its subsidiary Metahelix, which is to be merged with the former.

Rallis India generates more than 30% of its revenues from international operations, which is evenly spread across Latam, Europe and Asia.

It also runs a contract research manufacturing services (CRAMS) operation at Dahej. Rallis India is developing specialty chemicals for global firms in agrochemicals, polymers and animal care industries. The company has contracts with Solvay and Kureha Chemicals to manufacture poly ether ketone ketone (PEKK), and metconazole, respectively.

The company's CPC manufacturing facilities are located in Ankleshwar and Lote Parasuram. Metribuzin, Pendimethalin and Acpehate are the backbone products of Rallis India for the international business.

The company has been able to revive its new products' contribution from 7% over FY14-FY17 to 11% of revenues by FY18. It has launched 20 products in the past three years in domestic market in various combinations and plans to launch 11-12 new products in the coming two to three years. Five of these are expected to be launched in FY20. It is focusing on opportunities in technical grade and formulation products going off patent over the coming years.The firm also has a modest biofertilizer businesss.

Notwithstanding the impressive portfolio and the many years of experience in the CPC domain, the track record of Rallis India has been a bit mixed. The revenue growth has averaged 3% and EPS growth 1% in the past five years. In FY19, Rallis India suffered a 7% decline in earnings, despite a 10.8% growth in revenues, the highest in six years. The hit on earnings wasbecause of the pressure on EBITDA margin as a result of increase in raw material costs, with the cost of raw materials/sales increasing from 44.7% to 53.2% YoY. This depressed EBITDA margin by 270bps to 12.1%. Going forward, we expect Rallis India to sustain double-digit revenue growth, although earnings are likely to remain subdued as we expect the high raw material prices for technical grade pesticide intermediates (AIs) to persist at least in 1HFY20, based on the recent UPL analyst

meet (Upl Q4FY19 Result Update). Once raw material prices cool off, we expect Rallis India to see a revival in earnings growth from FY21.

Overall Rallis India contributes 17.6% to revenues and 12.6% to PAT before minority interest to TTCH.

Rallis India has a net 8% impact on TTCH's consolidated earnings, or Rs3.1/sharein FY19, This may not look very material, but if Rallis India were to say double earnings in five years, it can add cRs6/sh to TTCH consolidated earnings.

Please refer to the valuation section to understand the impact of Rallis India on TTCH's TP.

Exhibit 19: Rallis India - summary financial estimates

	FY17	FY18	FY19	FY20E	FY21E
Revenues	16,635	17,909	19,840	22,022	24,444
EBITDA	2,636	2,645	2,409	2,331	3,139
Consolidated net profit-adjusted	1,391	1,676	1,554	1,438	1,939
EPS	7.15	8.62	7.99	7.40	9.97
RM/sales %	49.6	44.7	53.2	55	53
EBITDA margin %	*15.8*	*14.8*	*12.1*	*10.6*	*12.8*
PAT margin %	*8.4*	*9.4*	*7.8*	*6.5*	*7.9*
RoCE- pre-tax %	*18.4*	*20.1*	*18.0*	*14.8*	*12.4*
RoAe %	*13.9*	*14.6*	*12.5*	*10.8*	*13.5*
Growth %					
Rallis India revenues	8.8	7.7	10.8	11.0	11.0
EBITDA	15.1	0.3	(8.9)	(3.2)	34.7

Source: Company, Nirmal Bang Institutional Equities Research

Future outlook and key drivers for Rallis India

The company is likely to see improved performance over time based on its reasonable diverse product portfolio and the ability to launch new products. We are taking a cautious view on our assumptions and financial outlook for Rallis India, considering its mediocre performance in FY19.

Key drivers will be potential scale-up in its seeds business, monetisation of its recent product launches and the overall outlook for CPC demand growth and availability of raw materials.

The firm's ability to ramp up its CRAMS revenues could bouy its future growth and valuation prospects, going by the stock price outperformance of its Indian competitor PI Industries (Not Rated) that gets around 60% of its revenues from CRAMS.

Consumer business

The consumer business includes Tata brand salt, pulses and spices and the legacy water purifier business. Overall consumer revenues account for 16%% of TTCH revenues and 21% of EBIT, as per segment wise results reported for FY19. Based on our proforma reconciliation, we expect branded salt to account for 88% of consumer business revenues (Rs18bn) and 97% of consumer business EBITDA (NBIE estimate - Rs3.3bn) for FY19.

Exhibit 20: Proforma consumer financials

	FY18	FY19	FY20E	FY21E
Revenues	15,123	18,476	22,313	28,074
COGS	10,685	12,600	15,217	19,146
SG&A	1,992	2,568	3,101	3,901
EBITDA	2,445	3,308	3,995	5,027

Note: Revenues and EBIT as per company segment report, rest are proforma estimates
Source: Company, Nirmal Bang Institutional Equities Research

As per our reconciliation, overall consumer revenues for FY19 is Rs18.4bn out of which salt contributes Rs16.2bn and pulses & spices Rs2.24bn. Overall consumer EBITDA is Rs3.3bn out of which salt's share is Rs3.2bn and that of pulses & spices Rs106mn.

Improving cash flow and return ratios

Exhibit 21: Key assumptions

	FY19	FY20E	FY21E
Volume-mt			
TCL India	0.69	0.82	0.82
TCNA -US	2.22	2.30	2.34
TCEL	0.32	0.35	0.35
TCAHL	0.29	0.30	0.31
Sodium bicarb - India	0.10	0.11	0.11
Sodium bicarb - UK	0.11	0.11	0.11
Price			
Soda ash - US $/tn	217	222	227
Soda ash- India Rs/tn	22,000	22,500	23,625
RM/sales %- TTCH consolidated	15.04	15.00	15.00
Tax rate %	22.07	22.00	22.00
Soda ash revenue growth			
India	17.3	15.9	5.0
TCNA	3.8	6.1	3.8
TCEL	3.2	10.9	18.3
TCAH	5.2	8.1	6.9
Specialty segment – Rallis India			
Revenue growth %	10.8	11.0	11.0
RM/sales %	53.2	55	53
Revenues (Rs.mn)			
TCL India	13,439	15,578	16,357
TCNA	33,820	35,870	37,226
TCEL	6,010	6,667	7,888
TCAH	5,060	5,468	5,843
Company soda ash revenues (Rs.mn)	**58,329**	**63,583**	**67,315**
TCL India	2,369	2,825	3,139
TCEL	2,461	2,749	3,054
Company Bicarb. revenues	**4,830**	**5,574**	**6,193**
Rallis India revenues	19,840	22,022	24,444
Nutraceuticals revenues	423	836	1,015
HDS revenues			367.5
Company specialty revenues	**20,263**	**22,858**	**25,827**
Consumer business revenues	**18,476**	**22,313**	**28,074**
Total revenues	**112,817**	**125,347**	**138,428**

Note: Mt = Million Tonne, Tn= Tonne; Source: Company, Nirmal Bang Institutional Equities Research

Movement in key financial variables FY19-FY21E

- Overall revenue growth of 11% and 10.4% in FY20E and FY21E, driven by marginal growth in soda ash volume, and improvement in price outlook. We also expect the specialty business to contribute from FY21 once the nutraceuticals and HDS projects start commercial operations.
    - Basic chemistry segment will dominate the revenue pie at more than 60%, although we expect this to decline from 65.7% in FY19 to 61% FY21E. . This is because of the estimated increase in the share of specialty segment from 17.9% in FY19 to 18.7% FY21E. And that of consumer business from 16.4% in FY19 to 20.3% FY21E by over this period.
    - Growth rates: Basic chemistry 8.2% and 5.4%, specialty 12.8% and13%, consumer business 20.8% and 25.8%, over FY20E and FY21E, respectively.

Exhibit 22: Segmental summary of P&L, margins and returns

	FY19	FY20E	FY21E
Revenue (Rs. Mn)			
Basic chemistry*	74225	80176	84527
Specialty	20263	22858	25827
Consumer	18476	22313	28074
Company	112963	125347	138428
EBITDA (Rs. Mn)			
Basic chemistry	15692	17445	18381
Specialty	1951	1892	3359
Consumer	3308	3996	5026
Company	20951	23332	26767
Revenue Pie %			
Basic chemistry	65.71	63.96	61.06
Specialty	17.94	18.24	18.66
Consumer	16.36	17.80	20.28
Company	100	100	100
EBITDA Pie %			
Basic chemistry	74.90	74.77	68.67
Specialty	9.31	8.11	12.55
Consumer	15.79	17.12	18.78
Company	100	100	100

**net of inter divisional transfer Rs 9 bn for FY19*
Source: Company, Nirmal Bang Institutional Equities Research

- We expect a gradual improvement in EBITDA margin to 21.2% and this includes the impact of better pricing for soda ash, the impact of the growth in higher value specialty segment and the consumer group (we retain this is our base case model pending final demerger).

Exhibit 23: Summary of P&L, margins and returns

Tata Chemical consolidated (Rs.mn)	FY18	FY19	FY20E	FY21E
Revenues	1,02,697	1,12,963	1,25,347	1,38,428
EBITDA	21,907	20,951	23,332	26,922
Con.net profit-adjusted	12,263	10,936	11,497	13,874
Margins and returns %				
EBITDA margin	21.3	18.5	18.6	19.4
Con.net profit -adjusted	39.4	(10.8)	5.1	20.7
Pre-tax RoCE	9.0	7.9	7.6	8.8
ROE %	12.9	9.3	9.0	10.2

Source: Company, Nirmal Bang Institutional Equities Research

- We expect aggregate debt repayment to the tune of Rs 2.6bn over FY20E and FY21E, and growth in free cash flow lowering net debt and related ratios over the next two years.

Exhibit 24: Debt repayment to reduce net debt by more than 50%

(Rs.mn)	FY18	FY19	FY20E	FY21E
Gross debt	61,082	61,430	50,283	34,733
Interest costs	3,256	3,631	3,035	2,310
Con.net profit-Adjusted	12,263	10,936	11,497	13,874
RoE (%)	12.9	9.3	9.0	10.2
Net debt	15,333	19,385	25,314	8,792

Source: Company, Nirmal Bang Institutional Equities Research

- Excluding the consumer business, the estimated proforma revenue and EBITDA pie in FY21E will shift as follows:
  i. Revenue mix : Basic chemistry –76.6% and Specialty –23.4%
  ii. EBITDA mix - Basic chemistry –84.7% and Specialty –15.3%
- Operating cash flow to be healthy at Rs 12bn FY20E and Rs 24.4bn FY21E post aggregate capex of Rs 22bn. We expect free cashflow to turn positive by FY21E at Rs 18bn after slipping into the red over FY19 and FY20E as the impact of the ongoing capex. abates.
- We see return ratios improving: RoCE from 7.9% in FY19 to 8.8% and RoAE from 9.3% to 10.2%, by FY21E.

Valuations

Exhibit 25: TTCH -SOTP valuation summary

Based on FY21E	EV/E	FY21E EBITDA(Rsmn)	EV (Rsmn)	Net debt(Rsmn)	Equity value (Rsmn)	Impact on TP (Rs)
Chemicals	6	18,756	1,12,533	10297	1,02,237	401
Consumer	15.0	5,027	75,403		75,403	296
Specialty-Rallis India (on CMP-Rs150)#	9.0	3,139	28,304	(866)	29,170	52
Target valuation/TP		**26,922**	**2,16,240**	**9430**	**2,06,810**	**749**
Implied EV/EBITDA	8.0					
Implied P/E	13.8					
Upside to TP (%)						17.8
CMP (Rs)						**635.9**

#Rallies EV/E is implied multiple on our market based valuation; Source: Nirmal Bang Institutional Equities Research;

We are valuing TTCH using SOTP methodology given the different types of its businesses

- Chemical business on EV/E based on global soda ash peer group average, considering the global nature of the soda ash industry and that international operations account for 80% of its soda ash volume.
- Rallis India – the key contributor in specialty by valuing TTCH's 50.1% stake in Rallis India using current market capitalization and then applying a 10% conglomerate discount to this. On CMP, Rallis India trades at 15x our FY21E EPS for that stock.
- Consumer business – We value this using 15x EV/E on FY21E EBITDA vs. 21.7x for Indian peers in foods segment in our coverage universe. Our target EV/E implies P/Sales of 2.7x on FY21E vs. 4.7x for peers.

FCF yield

Our cash flow estimates indicate that TTCH trades at FCF yield (on EV) of 10.2% for FY21E. This, in our view, is attractive. Even if we assume 25% of the FCF is at risk, the FCF yield on FY21E remains healthy at 7.6%.

Implied EV/E and P/E on target price and how it compares with benchmarks

Our target price implies EV/E of 8x and P/E of 13.8x on FY21E earnings on our base case model including consumer business. This compares with five-year median P/E of 11.9x and global peer group average of 8.5x on CY20E earnings.

Proforma valuation ex-consumer implies 23.6% upside

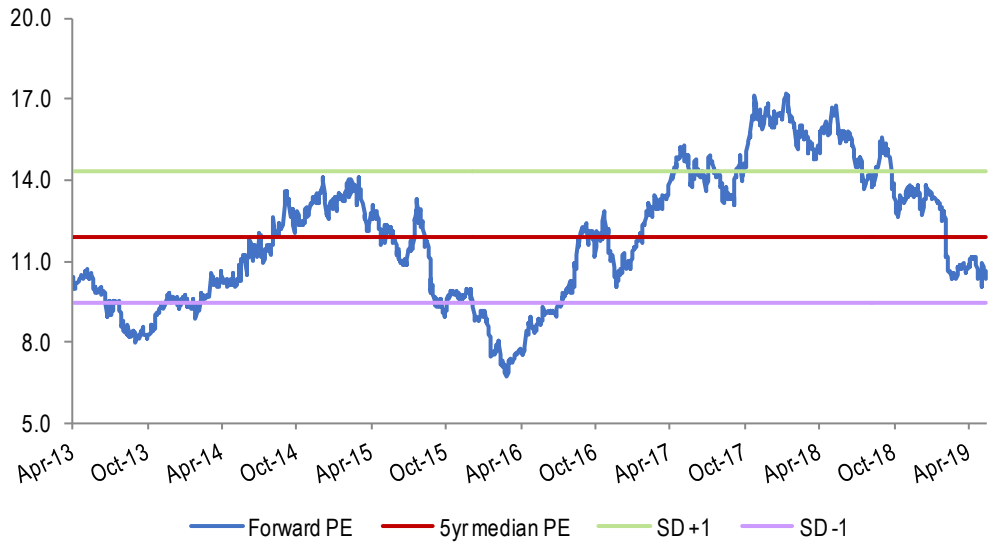
We have also estimated the proforma valuation and target price for TTCH ex – consumer on a post-demerger basis.

Exhibit 26: TTCH valuation post demerger of consumer business segment

	(Rs.mn)
TTCH proforma TP post-consumer de-merger Rs/share	**453**
Implied market cap.	115,379
Net debt post demerger FY21E	9,430
Enterprise value	**124,809**
EBITDA FY21E post demerger	21,895
EV/EBITDA FY21E post-demerger (x)	5.7
Current CMP adjusted for consumer business demerger Rs/share	340
Implied upside to CMP adjusted for consumer business demerger %	33.3
Implied P/E ex-consumer business (x)	10.5
Implied re-rating ex-consumer business vs. peers (%)	*23.6*

Source: Nirmal Bang Institutional Equities Research

Exhibit 27: Five-year median P/E band



Source: Nirmal Bang Institutional Equities Research

Exhibit 28: Global peer group financials and valuation

	Revenues US$mn			EBITDA US$mn			RoE %	P/E (x)	EV/EBITDA (x)
	FY19E	FY20E	FY21E	FY19	FY20E	FY21E	FY18	FY21E	FY21E
Solvay	11,770	12,193.496	12,672.056	2,585.5	2,711.7	2,840.5	11	8.3	5.3
CINER Resources	-	-	-	-	-	-	33	6.6	-
GHCL	478	510.444	543.744	110.9	122.2	142.3	20	5.5	3.8
Genesis Energy	2,812	2949.6	2606	693.6	740.3	774.5	(4)	12.8	9.7
Shandong Haihua Co.	-	-	-	-	-	-	19	9.2	6.7
Ciech SA	1,015	1,040.916	1,061.376	188.9	197.6	198.9	9	6.6	4.7
Sisecam	3,238	3,742.971	4,112.323	686.3	806.5	906.3	21	4.6	3.5
Sanyou Chemical	3,152	3,398.519	3,498.401	500.9	540.7	551.0	15	6.2	4.6
Peer group average								7.5	5.5

Note: December year-end for all peers except GHCL for whom it is March year-end; Source: Bloomberg, Nirmal Bang Institutiona Equities Research

Risks

1. **Cyclical risk**: Soda ash prices are driven by global demand and supply dynamics. It is a cyclical business. Key factors that could put pressure on prices and margins include: i) Excess capacity or new entrants. ii) Slowdown in key end-user markets including glass manufacture for automobile and construction applications.

2. **Business risk**: Delay or cost escalation in capex to hit growth prospects and margins of TTCH.

3. **Operations risk:** Fire, accidents, power failure or plant outages could hurt production volume and add to costs. Increase in royalty for mines could increase the cost of extraction of soda in the US and Africa. Similarly, any increase in royalty payment or change in limestone mining policy could impact the company's soda ash business based on the synthetic route used in India and the UK.

4. **Financial risk:** Lower output and prices or increasing costs could hurt margins and thereby hit free cash. This could force the company to increase borrowing that could impact its plan to reduce debt.

Annexure -1 – Industry overview

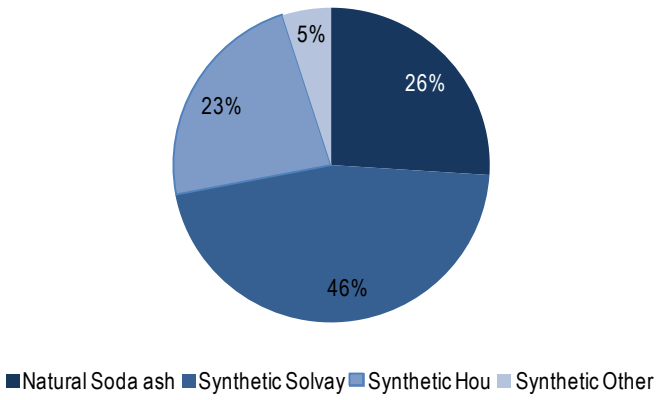
Global soda ash industry

Exhibit 29: Global soda ash capacity share

Top10 soda ash producers in 2018	Capacity (mt)	Share (%)
Solvay	7.3	10.3
Ciner	4.6	6.5
Tata	3.7	5.2
Genesis Alkali	3.7	5.2
Shandong Haihua	2.9	4.0
NIRMA	2.7	3.8
Ciech	2.4	3.4
Sanyou Chemical	2.2	3.1
Hubei Yuhua	2.1	2.9
Sisecam	1.9	2.7
Top 10 companies	**33.6**	**47.1**

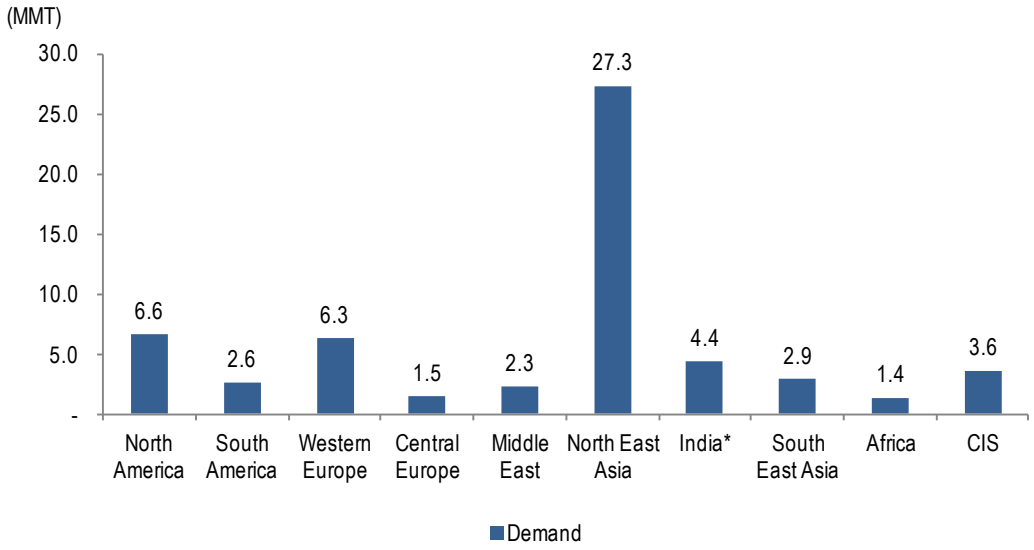
Note: Mt = Million Tonne; Source: IHS Markits, Nirmal Bang Institutional Equities Research

Exhibit 30: Soda ash manufacturing – share of natural and synthetic routes



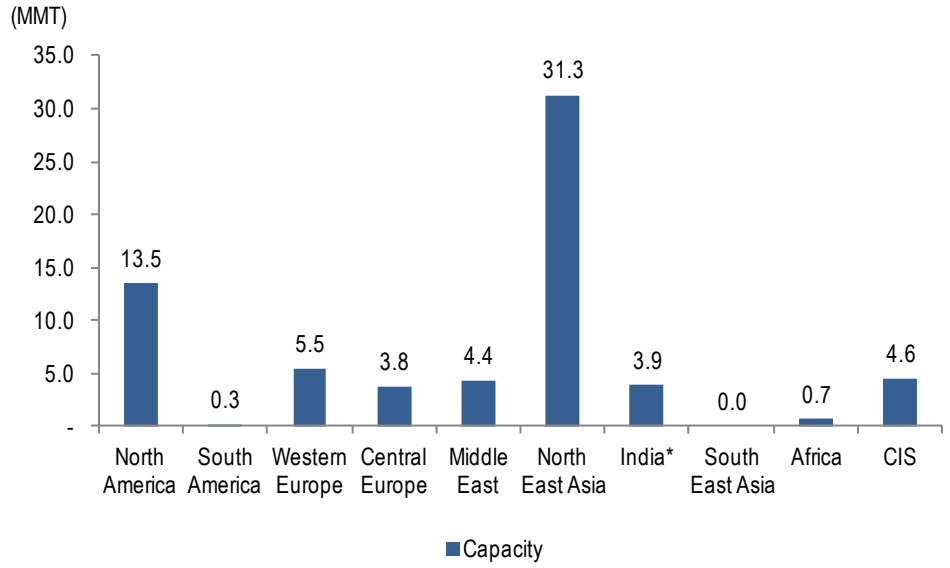
Source: IHS Markits, Nirmal Bang Institutional Equities Research

Exhibit 31: Global demand for soda ash by region



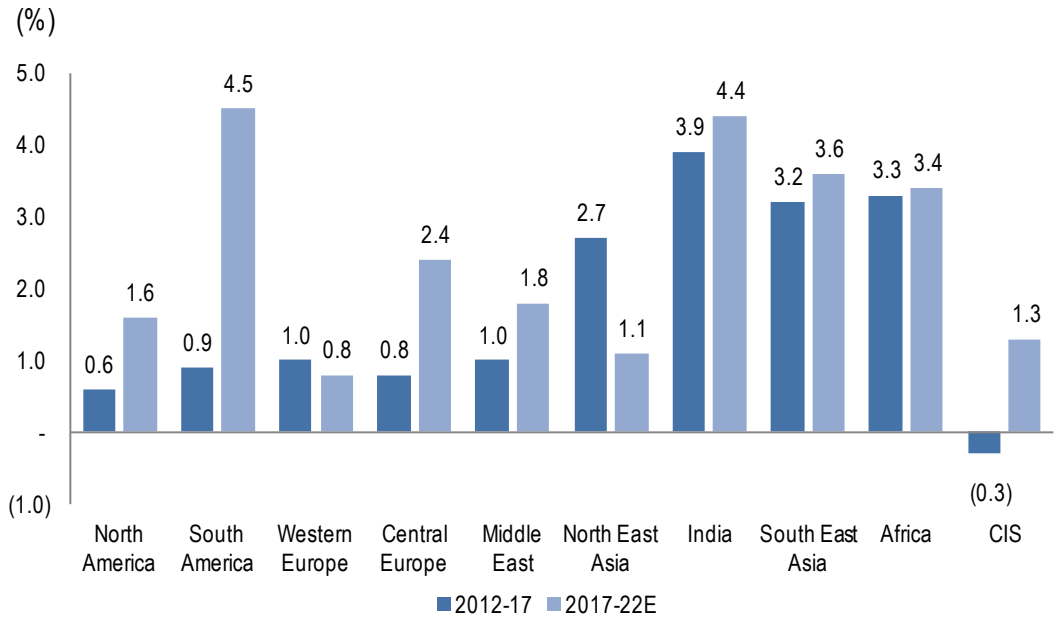
Note: Mmt = Million Metric Tonne; Source: IHS Markits, Nirmal Bang Institutional Equities Research

Exhibit 32: Global capacity for soda ash by region



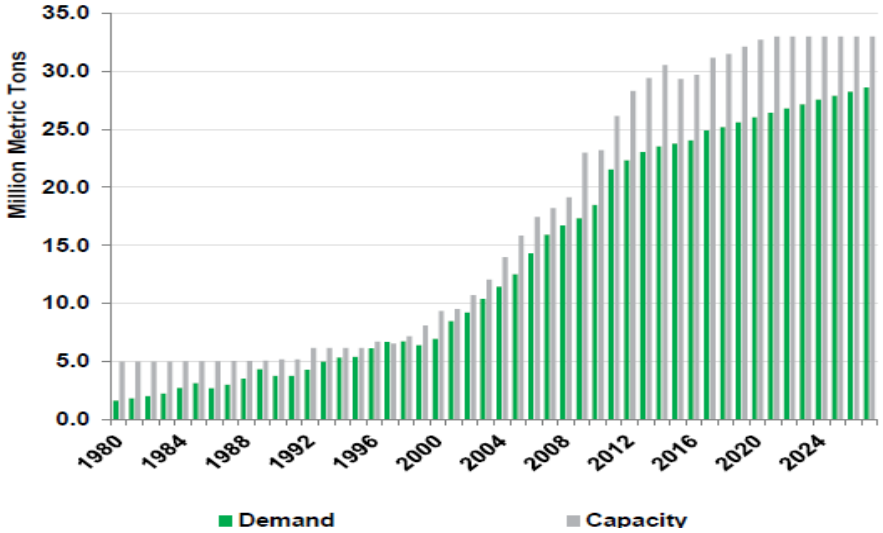
Note: Mmt = Million Metric Tonne; Source: IHS Markits, Nirmal Bang Institutional Equities Research

Exhibit 33: Geographic demand CAGR (%)



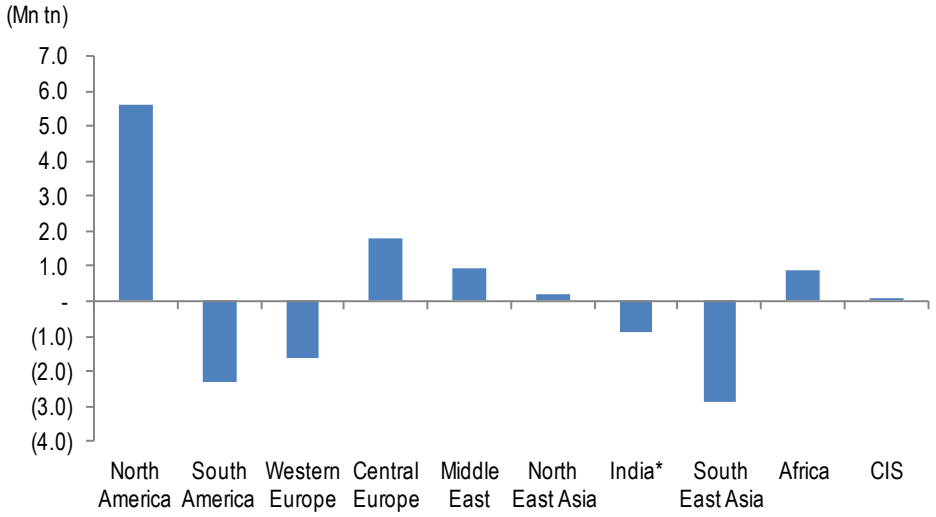
Source: IHS Markits, Nirmal Bang Institutional Equities Research

Exhibit 34: China demand and supply for soda ash



Source: IHS Markits, Nirmal Bang Institutional Equities Research

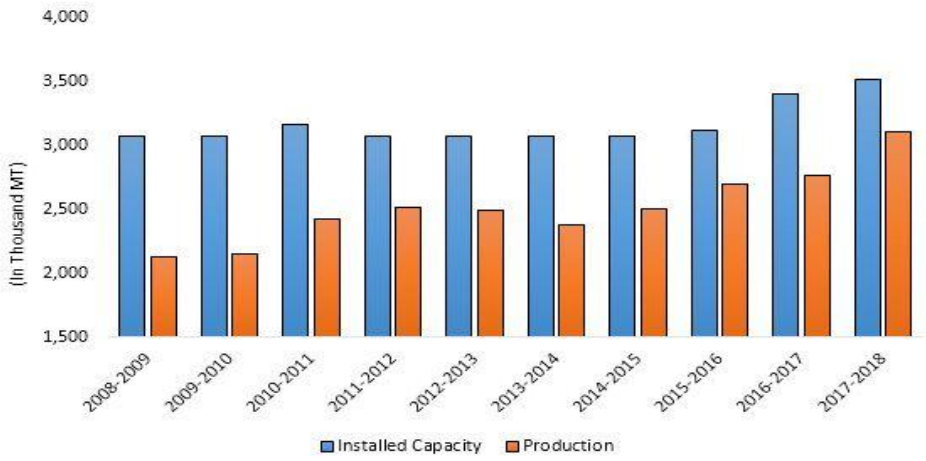
Exhibit 35: Net exports of soda ash across regions



Note: Mmt = Million Metric Tonne; Source: IHS Markits, Nirmal Bang Institutional Equities Research

India's soda ash industry

Exhibit 36: 10-year trend in Indian capacity and production of soda ash



Note: Mt = MetricTonne; Source: Alkali Manufacturers Association Of India

Installed capacity as on 31 March 2018was 3.52mn tonne and production in FY18 was 3.1mn tonne.

Exhibit 37: Consumption norms for soda ash production – Solvay process

Key raw materials	Per tn of soda ash
Salt	1.85tn
Coke	140kg
Power	240kwh
Limestone	2.01tn

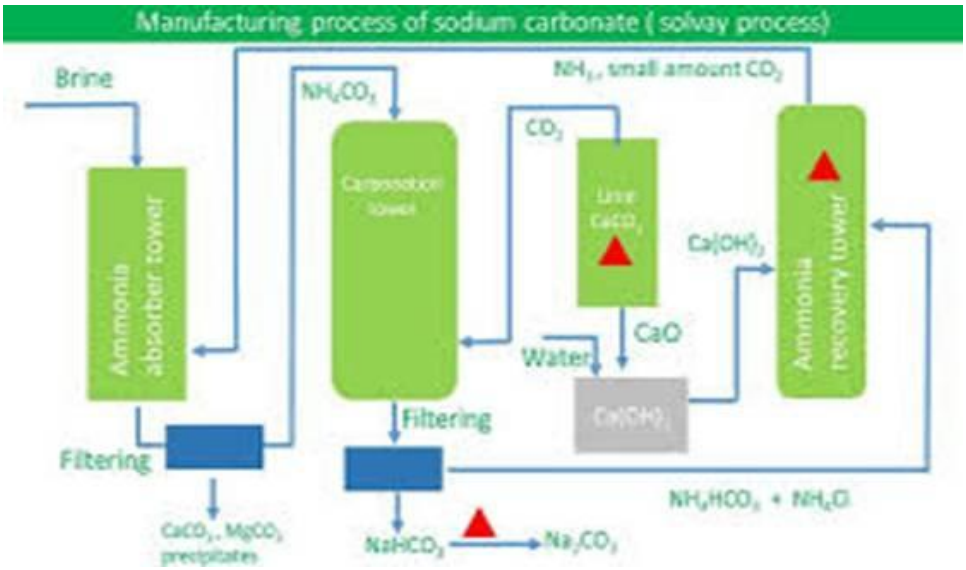
Note: Tn= Tonne; Source: Crisil Research, Nirmal Bang Institutional Equities Research

India soda ash manufacturing process

Synthetic process

The Solvay process or ammonia-soda process is the major industrial process for the production of sodium carbonate (soda ash, Na2CO3). The ingredients for this are readily available and inexpensive: salt brine (from inland sources or from the sea) and limestone (from quarries). The worldwide production of soda ash in 2005 has been estimated at 42 million metric tons, which is more than six kilograms per year for each person on Earth. Solvay-based chemical plants now produce roughly three-quarters of this supply, with the remainder being mined from natural deposits.

Exhibit 38: Manufacturing process of sodium carbonate



Source: Wikipedia

Natural process

A series of refining steps are required to produce soda ash from trona ore. Firstly, the raw ore from the mine is crushed and screened. The material is then fed to rotary calciners and heated. In this process, the trona decomposes to form crude soda ash, which is dissolved in water.

The insoluble shales are separated from the solution by a combination of settling and filtration steps and the resulting insoluble tailings are taken back into the mine as backfill. The soda ash solution is treated to remove organic materials yielding a high-purity saturated solution of sodium carbonate.

Next, the solution is fed to crystallizers where water is evaporated and sodium carbonate monohydrate crystals are formed. The industry-familiar term “mono-process” originates from this process step. The crystals are dewatered and washed using cyclones and centrifuges, and the solution is recycled to the evaporator units for further recovery of soda ash. The monohydrate crystals are fed to rotary kilns where they are dried to finished soda ash. Finally, the product is screened and sent to storage silos awaiting rail and truck load-out.

ANNEXURE – 2 Company information

Interim results TTCH and Rallis India- Summary

Exhibit 39: TTCH's 4QFY19 and FY19 performance

Tata Chemicals -Interim results (Rs.mn)	4QFY18	4QFY19	Chg. YoY	3QFY19	Chg. QoQ	FY18	FY19	Chg. YoY
Revenues	25,551	27,594	*8.0*	28,319	*(2.6)*	1,02,709	1,12,963	*10.0*
Increase/decrease in stock	(819)	(346)	*(57.7)*	(921)	*(62.4)*	(1,042)	(1,048)	*0.6*
Raw material consumed	3,653	3,995	*9.4*	4,720	*(15.4)*	13,906	18,036	*29.7*
Purchase of stock-in-trade	565	735	*30.3*	1,496	*(50.8)*	4,691	4,389	*(6.4)*
Raw material expenses	3,399	4,384	*29.0*	5,295	*(17.2)*	17,555	21,377	*21.8*
Employee costs	3,404	3,143	*(7.7)*	3,523	*(10.8)*	12,705	13,518	*6.4*
Power and fuel costs	3,431	3,882	*13.1*	4,004	*(3.0)*	12,725	14,801	*16.3*
Freight and forwarding charges	4,038	3,875	*(4.0)*	4,866	*(20.4)*	15,787	17,436	*10.4*
Other expenses	6,155	7,002	*13.8*	5,919	*18.3*	22,030	24,881	*12.9*
Total expenditure	20,426	22,285	*9.1*	23,606	*(5.6)*	80,802	92,013	*13.9*
Gross contribution	22,152	23,210	*4.8*	23,024	*0.8*	85,154	91,587	*7.6*
EBITDA	**5,124**	**5,309**	***3.6***	**4,712**	***12.7***	**21,907**	**20,951**	***(4.4)***
Depreciation &amortisation	1,339	1,505	*12.4*	1,441	*4.5*	5,180	5,714	*10.3*
EBIT	**3,785**	**3,804**	***0.5***	**3,272**	***16.3***	**16,727**	**15,237**	***(8.9)***
Other income	738	859	*16.4*	961	*(10.6)*	1,595	4,116	*158.2*
Finance cost	855	851	*(0.5)*	972	*(12.5)*	3,256	3,631	*11.5*
PBT (before exceptional)	3,668	3,811	*3.9*	3,260	*16.9*	15,066	15,722	*4.4*
Exceptional income/(exp) -E	48	979	*1,951.8*	(275)	*(455.4)*	643	703	*9.3*
PBT reported -X=P+E	**3,715**	**4,790**	***28.9***	**2,985**	***60.5***	**15,709**	**16,425**	***4.6***
Current tax	542	758	*39.9*	606	*25.1*	3,350	3,810	*13.7*
Deferred tax	(191)	(462)	*142.1*	110	*(521.1)*	(2,749)	(341)	*(87.6)*
Total tax	351	296	*(15.6)*	716	*(58.6)*	601	3,469	*477.0*
PAT (excl. exceptional)	**3,316**	**3,515**	***6.0***	**2,544**	***38.2***	**14,464**	**12,253**	***(15.3)***
Exceptional income/(exp) -E - continuing business	48	979	*1,951.8*	(275)	*(455.4)*	643	703	*9.3*
PAT incl. exceptional of continuing business	**3,364**	**4,494**	***33.6***	**2,269**	***98.1***	**15,108**	**12,956**	***(14.2)***
Associates inc./loss(+/-)	195	7	*(96.3)*	394	*(98.2)*	492	992	*101.5*
Less: Minority interest	416	414	*(0.5)*	468	*(11.6)*	2,694	2,309	*(14.3)*
Consolidated profit incl. exceptional - continuing business	3,143	4,087	*30.0*	2,195	*86.2*	12,906	11,639	*(9.8)*
Consolidated profit adj. (excl. exceptional - continuing business)	**3,095**	**3,108**	***0.4***	**2,470**	***25.8***	**12,263**	**10,936**	***(10.8)***

Source: Company, Nirmal Bang Institutional Equities Research

TTCH's Mithapur manufacturing facility

The Mithapur plant in Gujarat manufactures soda ash, edible salt, sodium bicarbonate, cement, marine and caustic chemicals. The plant handles more than 100 truck-load despatches of chemicals daily and has access to naturally evaporated brine.

FY18 production volume at Mithapur: soda ash - 817,000 tn, sodium bicarbonate - 106,000tn, iodized salt - 960,000 tn.

The company has a comprehensive plan to re-energize Mithapur with acapex of an estimated Rs24bn. Of this, Rs2.5bn has already been spent and the remaining is likely to be incurred for increasing soda ash capacity by 200,000tn, salt capacity by 400,000tn and cement capacity by 300,000tn. It is increasing sodium bicarbonate capacity by setting up a pharmaceutical grade plant (35,000tn/year capacity) to support the recently launched Medikarb product, a pharmaceutical grade sodium bicarbonate that is subject to various regulations. The firm currently produces more than 100,000 tn/year of bicarb across four categories - technical, refined, Alkakarb (animal feed) and Sodakarb (food grade).

Exhibit 40: Key shareholders

Key shareholders	%
Tata Sons Pvt. Ltd	23.47
HDFC Asset Management Co	9.02
Tata Investment Corp.	5.97
ICICI Prudential Asset Management	4.019
Aditya Birla Sun Life Asset Management	3.16

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 41: TTCH Key Management

Names	Designation
R Mukundan	Managing Director & CEO
Zarir Langrana	Executive Director-Heads the Global Chemicals Business of Tata Chemicals
John Mulhall	Chief financial officer
Shohab Rais	Chief Operating Officer, India
Dr Martin Ashcroft	Managing director, Tata Chemicals Europe
Scott Ellis	Managing Director, Tata Chemicals North America
Harish Nair	Chief Operating Officer, Magadi

Source: Company, Nirmal Bang Institutional Equities Research

Financials (consolidated)

Exhibit 42: Income statement

Y/E March (Rsmn)	FY17	FY18	FY19	FY20E	FY21E
Net Revenue	**1,03,461**	**1,02,697**	**1,12,963**	**1,25,347**	**1,38,428**
y/y		(0.7)	10.0	11.0	10.4
Raw Material Expenses	20,743	17,555	21,377	26,882	29,270
RM/Sales %	20.0	17.1	18.9	21.4	21.1
Employee cost	12,614	12,702	13,518	14,757	15,494
Power and fuel cost	11,631	12,725	14,801	13,998	15,541
Selling, Gen & Admin Exp	37,530	37,808	42,317	46,378	51,200
EBITDA	**20,943**	**21,907**	**20,951**	**23,332**	**26,922**
Depreciation	5,122	5,180	5,714	7,408	8,014
EBIT	15,821	16,727	15,237	15,924	18,907
y/y		5.7	(8.9)	4.5	18.7
Interest Expense	2,973	3,256	3,631	3,035	2,310
Other Income	1,661	1,595	4,116	3,500	3,500
PBT (adjusted)	**14,510**	**15,066**	**15,722**	**16,389**	**20,098**
- Income Tax Expense	3,460	601	3,469	3,606	4,421
Share of Asso Profit/(loss)	156	492	992	992	992
Less: Minority Interests	2,410	2,694	2,309	2,279	2,794
Consol PAT (adjusted)*	**8,796**	**12,263**	**10,936**	**11,497**	**13,874**
Consolidated PAT reported	**8,796**	**24,331**	**11,559**	**11,497**	**13,874**

* *FY18 Cons. PAT adjusted excludes gain on fertiliser business sale - Rs12,140mn*

Exhibit 44: Balance sheet

Y/E March (Rsmn)	FY17	FY18	FY19	FY20E	FY21E
Equity Share Capital	2,548	2,548	2,548	2,548	2,548
Reserves and Surplus	76,534	1,08,469	1,20,865	1,28,528	1,38,569
Shareholders Funds- Parent	**79,082**	**1,11,017**	**1,23,413**	**1,31,076**	**1,41,117**
Non controlling interest	26,239	27,172	29,147	31,425	34,219
Non-current liabilities					
Long Term Borrowings	43,610	53,940	47,829	46,758	31,208
Deferred Tax Assets / Liabilities	12,381	11,916	12,972	12,972	12,972
Other LT Liab + Prov*	18,737	17,709	16,203	16,203	16,203
Total non current liabilities	**74,728**	**83,564**	**77,003**	**75,933**	**60,383**
Current liabilities					
Trade Payables	13,182	14,786	14,753	17,081	18,604
Short Term Borrowings	7,211	1,402	3,525	3,525	3,525
Other Liab & Prov	35,662	20,846	21,209	11,334	11,505
Total current Liabilities	**56,056**	**37,034**	**39,486**	**31,939**	**33,633**
Total Capital And Liabilities	**2,36,105**	**2,58,787**	**2,69,049**	**2,70,373**	**2,69,352**
Net Block	1,12,731	1,14,358	1,24,386	1,32,731	1,30,987
Goodwill on consolidation	16,984	17,319	18,590	18,590	18,590
Other Investments	25,726	27,765	33,901	33,901	33,901
Other Non Curr Assets & Adv	6,920	8,950	11,189	11,189	11,189
Total non current assets	**1,62,360**	**1,68,391**	**1,88,066**	**1,96,411**	**1,94,667**
Currents Investments	2,205	918	22,523	22,523	22,523
Inventories	13,861	14,623	17,256	18,390	19,679
Sundry Debtors	20,922	13,079	14,525	23,446	21,907
Cash and cash equivalent	16,648	44,830	19,522	2,445	3,418
Other current assets	4,724	5,962	7,157	7,158	7,158
Ass class as held for sale and discount. oper	15,384	10,983	-	-	-
Total Current assets	**73,745**	**90,396**	**80,983**	**73,962**	**74,685**
Total Assets	**2,36,105**	**2,58,787**	**2,69,049**	**2,70,373**	**2,69,352**

** Includes discontinued operation*

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 43: Cash flow

Y/E March (Rsmn)	FY17	FY18	FY19	FY20E	FY21E
PBT	16,522	32,718	17,304	17,381	21,090
Add depreciation	5,524	5,306	5,714	7,408	8,014
add Interest expense	4,730	3,890	3,631	3,035	2,310
less Other income	(1,661)	(1,595)	(4,116)	(3,500)	(3,500)
Other adjustments*	1,661	(11,542)	(1,695)	(992)	(992)
Change in W/C	12,129	(5,691)	(3,781)	(7,527)	1,943
Op cashflow after W/C Chng	**38,905**	**23,087**	**17,056**	**15,805**	**28,865**
Income tax	4,516	5,147	3,810	3,606	4,421
Operating Cash flow (A)	**34,389**	**17,940**	**13,246**	**12,200**	**24,444**
Net Capex (Tang & Int. asst)	(6,429)	(7,306)	(1,413)	(15,753)	(6,270)
Invest. & Other Non Curr Asst	(279)	34,893	(8,375)	-	-
Bank bal not considered cash	(1,942)	(3,226)	(4,733)	-	-
Free cashflow	**25,739**	**42,301**	**(1,275)**	**(3,553)**	**18,173**
Change in Current Invest.	(1,171)	2,709	(21,605)	-	-
Investing Cashflow (B)	**(10,762)**	**26,144**	**(36,126)**	**(15,753)**	**(6,270)**
Borrowings	(14,117)	(12,406)	348	(11,147)	(15,550)
Other income	1,661	1,595	4,116	3,500	3,500
Dividends paid incl div. tax	(3,056)	(3,362)	(3,184)	(3,833)	(3,833)
Interest exp	(4,456)	(3,243)	(3,631)	(3,035)	(2,310)
Others	(1,613)	(1,722)	4,656	992	992
Financing Cashflow (C)	**(21,580)**	**(19,138)**	**2,305**	**(13,523)**	**(17,201)**
Ch in Cash and Cash equiv	**2,048**	**24,945**	**(20,575)**	**(17,076)**	**972**

**Includes discontinued operation*

Exhibit 45: Key ratios

Y/E March	FY17	FY18	FY19	FY20E	FY21E
Profitability & return ratios					
EBITDA margin (%)	20.2	21.3	18.5	18.6	19.4
EBIT margin (%)	15.3	16.3	13.5	12.7	13.7
Adj Net profit margin (%)	8.5	11.9	9.7	9.2	10.0
RoE (%)	11.9	12.9	9.3	9.0	10.2
Pre-tax RoCE (%)	8.1	9.0	7.9	7.6	8.8
RoIC (%)	6.5	9.2	6.6	6.4	7.3
Working capital ratios					
Receivables (days)	100	60	45	68	58
Inventory (days)	59	51	52	54	52
Payables (days)	52	50	48	50	49
Cash conversion cycle	107	61	48	72	61
Leverage ratios					
Net debt (Rsmn)	51,865	15,333	19,385	25,314	8,792
Net Debt (cash)/Equity (X)	0.49	0.11	0.13	0.16	0.05
Net Debt/EBITDA	2.48	0.70	0.93	1.08	0.33
Valuation ratios					
EV/sales (x)	1.75	1.77	1.61	1.45	1.31
EV/EBITDA (x)	8.66	8.28	8.66	7.77	6.74
EV/FCF	7.0	4.3	(142.3)	(51)	10
P/E (x)	18.42	13.21	14.81	14.09	11.68
P/BV (x)	2.05	1.46	1.31	1.24	1.15
FCF Yield (%)	14.19	23.32	(0.70)	(1.96)	10.02
Dividend Yield (%)	1.57	1.73	1.97	1.97	1.97
Per share ratios					
EPS	34.53	48.13	42.93	45.13	54.46
Cash EPS	54.63	68.47	65.35	74.21	85.92
BVPS	310.42	435.78	484.43	514.52	553.93
DPS	10.00	11.00	12.50	12.50	12.50

Source: Company, Nirmal Bang Institutional Equities Research

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