Initiating Coverage | 2 April 2018 Sector: Chemicals

Tata Chemicals





Flight of rebirth

Sumant Kumar - Research Analyst (Sumant.Kumar@motilaloswal.com);+9122 6129 1569

Research Analyst: Chintan Modi (Chintan.Modi@motilaloswal.com); 3982 5422/Aksh Vashishth (Aksh.Vashishth@motilaloswal.com)

Investors are advised to refer through important disclosures made at the last page of the Research Report. Motilal Oswal research is available on www.motilaloswal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

Contents: Tata Chemicals - Flight of rebirth

Flight of rebirth
Company overview5
Transforming to a consumer product focused company8
Directing cash inflow toward efficient businesses9
Unleashing the specialty & consumer business potential12
Expanding horizons of speciality – nutraceuticals to enable flight
HDS – a future technology for tyre industry
Soda ash to show steady performance25
Farm inputs continue to aid growth
SWOT Analysis
Bull & Bear case
Transition into a net debt-free entity by FY2041
Valuation and view44
Key risks
Management overview48
Financials and valuations



In what is a myth, the eagle can live up to 70 years, but to reach this age, it must make a hard decision in its 40's. By the time it reaches the age of 40, its talons can no longer grab prey and its beak becomes bent. Its old, heavy wings make it difficult to fly. It is left with only two options: die or go through a painful process of change. The process requires that the eagle fly to a mountain top and sit in its nest. There, it knocks its beak against a rock till it falls off. Then it waits for a new beak to grow, following which it plucks out its talons. When its talons grow back, the eagle starts plucking its old-aged feathers. After five months, the eagle takes its legendary *flight of rebirth* and lives for 30 more years.

Tata Chemicals

BSE Sensex	
33,255	

S&P CNX

10,212

Stock Info

Bloomberg	TTCH IN
Equity Shares (m)	254.8
52-Week Range (INR)	781 / 558
1, 6, 12 Rel. Per (%)	1/3/3
M.Cap. (INR b)	176.1
M.Cap. (USD b)	2.7
Avg Val, INRm	565.0
Free float (%)	69.2

Financial	Snapshot	(INR b)
	_		-

Y/E Mar	FY18E	FY19E	FY20E
Net Sales	105.8	115.5	126.3
EBITDA	22.6	24.7	27.2
PAT	8.6	11.2	12.8
EPS (INR)	33.7	44.0	50.3
Gr. (%)	0.0	30.5	14.3
BV/Sh (INR)	368.7	394.1	423.2
RoE (%)	11.3	11.5	12.3
RoCE (%)	7.8	9.1	9.9
P/E (x)	20.5	15.7	13.8
P/BV (x)	1.9	1.8	1.6

Shareholding pattern (%)

As On	Dec-17	Sep-17	Dec-16		
Promoter	30.8	30.8	30.8		
DII	31.5	27.9	29.7		
FII	11.5	15.1	18.6		
Others	26.2	26.1	21.0		
FILL L IN IN					

FII Includes depository receipts

Tata Chemicals Flight of rebirth



Sumant Kumar +91 22 3078 4702 Sumant.Kumar@motilaloswal.com Please click here for Video Link **CMP: INR692**

TP: INR940 (+36%)

Buy

Tata Chemicals (TTCH) is a 78-year-old commodities company, reinventing itself as a specialty and consumer products company. It has a diversified portfolio of businesses: (a) soda ash and sodium bicarbonate, where it enjoys global leadership, (b) fertilizers, which it is exiting from, (c) agricultural inputs, through subsidiary, Rallis India, (d) consumer products such as branded iodized salt, pulses and spices, and (e) a fledging specialty products business – materials such as highly dispersible silica (HDS) and nanomaterial, and nutritional products like oligosaccharides and polyols. It also has sizable financial investments that it can liquidate to fund its growth.

Flight of rebirth

Transforming into a growth company; re-rating imminent

- TTCH is using its cash cows soda ash and sodium bicarbonate to build growth businesses such as consumer and specialty products. In the consumer business, it enjoys leadership in the domestic table salts market and is fortifying its pulses and spices portfolios. In the specialty products business, it is developing nanomaterial and nutritional solutions.
- Massive cash generation of INR39.7b via divestment of the urea and phosphatic fertilizers business and sale of investments coupled with steady accruals from the soda ash business would help TTCH repay debt. Its interest outgo is likely to decline from INR4.1b in FY17 to INR2.1b in FY20.
- As TTCH scales up its growth businesses and deleverages its balance sheet, we expect its consolidated RoCE to improve considerably, in turn driving a stock rerating. We believe it would be fair to assign ~30% premium to its five-year average EV/EBITDA of 7.5x. Our SOTP-based target price of INR940 (implied EV/EBITDA of 9.7x FY20E) implies 36% upside. We initiate coverage with Buy.

Using cash cows to invest in growth businesses

TTCH is the global leader in soda ash and sodium bicarbonate. These are mature, commodity businesses, growing at 3-4% per year and yielding consistent cash flows. TTCH is using these cash cows to build growth businesses such as consumer and specialty products. The company should be able to enhance focus on these businesses following its exit from the regulated fertilizer business. We expect the contribution of specialty and consumer products to increase from 27% in FY17 to 33% by FY20, based on the progress in its existing portfolio, though the company's internal target is to reach 50% via the launch of new products. TTCH enjoys leadership in the domestic table salts market and will continue focusing on growing its other specialty and consumer products, including nutraceuticals and silica. We expect specialty and consumer products revenue to grow at a CAGR of ~14%, outpacing the overall growth of 9% over FY18-20.



To be net debt-free by FY20; RoCE to improve considerably

Divestment of the fertilizer business and sale of Tata Global Beverages shares should result in cumulative gross cash inflow of ~INR39.7b in FY18. Internal accruals would add further to cash flows. TTCH is also focusing on working capital, which has reduced by INR21b in two years. Strong cash flows will allow part repayment of debt and also help invest in higher-RoCE businesses like specialty and consumer products. TTCH is investing in manufacturing facilities for new materials (such as HDS and nanomaterial) and nutritional solutions (such as oligosaccharides and polyol). At full potential, these businesses should generate RoCE of 20-25%. We expect the company to be net debt free by FY20 from net-debt-to-equity of 0.7x in FY17. Interest outgo should reduce from INR4.1b in FY17 to INR2.1b in FY20, enabling 22% CAGR in continuing business profitability over FY18-20.

Focus now on consumer...

TTCH has been a pioneer in developing the market for iodized salt in India, and enjoys a share of 25% in the country's powdered salt market. It has a distribution network of 1.7m retail outlets, reaching 143m households across India. Compared to the other prominent FMCG companies in India that have an average retail reach of 5m-6m outlets, we believe TTCH has ample headroom available for growth. Leveraging on the network, TTCH has expanded its horizons to include branded pulses, spices, besan (pulse flour) and water purifiers, where it is yet to realize full potential.

...and specialty products

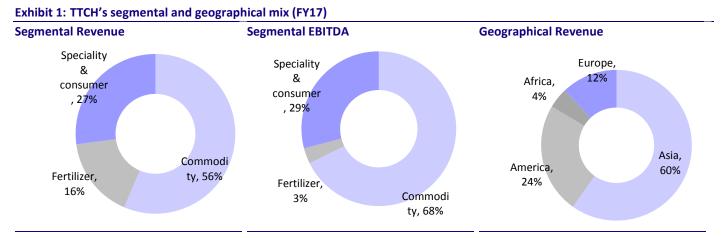
TTCH is also entering nutritional solutions. We believe nutraceuticals presents a huge global opportunity, with an estimated B2B market size of ~USD60b in 2016 and B2C market size of ~USD182b, which is expected to grow at 9% CAGR till 2021. At full utilization, we expect the current planned nutraceuticals capacity addition (likely to be commercialized by 1QFY20) to contribute 4% of consolidated sales and 5% of consolidated EBITDA. This would increase to 9% of consolidated sales and 10% of consolidated EBITDA on doubling capacity, and 13% of consolidated sales and 15% of consolidated EBITDA on tripling capacity, with global B2B market share at just 0.1-0.3%. Besides, it is foraying into yet another technology-enabled, differentiated business – highly dispersible silica (HDS). HDS is a substitute for carbon black, which had a market of INR50b in India in 2016.

Initiating coverage with a Buy rating

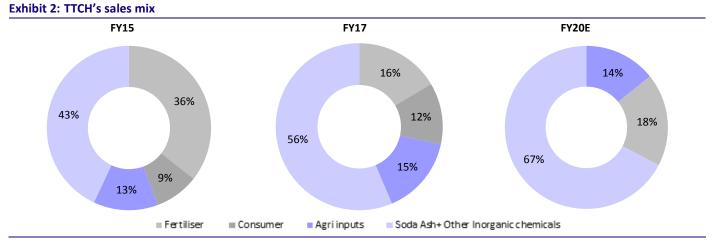
TTCH has traded at a one-year forward EV/EBITDA of 7.5x (average) for the last five years. Our SOTP-based target price is INR940 (implied EV/EBITDA of 9.7x). Considering the increased focus/business transformation toward higher-RoCE segments (specialty and consumer products) and the divestment of a regulated business (fertilizers), we believe it is fair to assign ~30% premium to its five-year average EV/EBITDA. We expect TTCH to continue its journey to become a larger specialty and consumer play. As at the end of FY17, net debt stood at INR52b. We expect the company to become net-debt-free by FY20, with (i) cash generated from the divestment of the fertilizer business, (ii) sale of investment in Tata Global Beverages shares, (iii) internal accruals, and (iv) potential sale of investment in group companies. Average free cash flow yield over FY19-20 is estimated at ~9%. We initiate coverage with a **Buy** rating and a target price of INR940 –36% upside.

Company overview

- Tata Chemicals (TTCH) started its journey in 1939 from Mithapur, Gujarat. It is now a global company with businesses in inorganic chemicals & crop nutrition, crop protection and consumer products.
- The company is the world's second largest soda ash producer with combined capacity of ~4.2m tons. With manufacturing facilities in India, UK, Kenya and US, TTCH is the world's most geographically diversified soda ash firm, with almost two thirds of capacity comprising natural soda ash.



Note: Specialty consumer includes salt, other consumer and agri inputs, Source: Company, MOSL



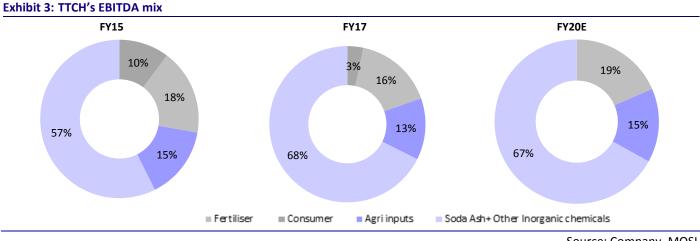
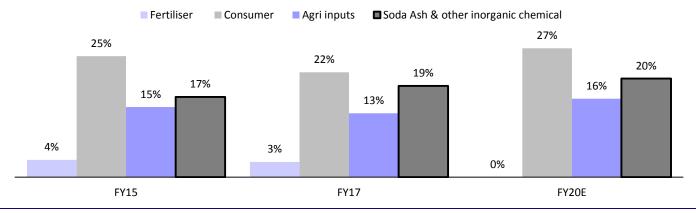


Exhibit 4: TTCH's EBITDA margin mix



Source: Company, MOSL

Exhibit 5: TTCH's business segments



Living Essentials

- •TTCH aims to provide nourishment and nutrition to millions of consumers across India through iodized and iron-fortified salt, high protein unpolished pulses, aromatic spices, as well as nutritional products and ingredients -- Nx (low-calorie sugar substitute) and NQ range.
- •Tata Swach is an innovative, low-cost, nanotechnology-based, offline water purifier, providing safe water to the masses through a social enterprise model.



Industry Essentials

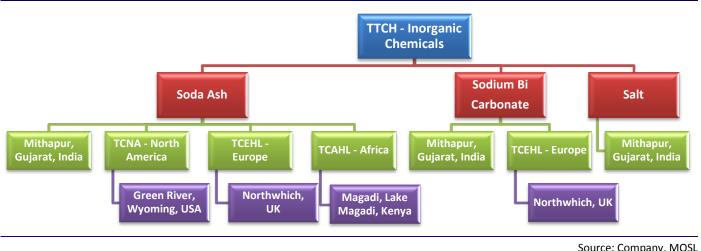
- •TTCH strives to provide sustainable inorganic chemistry solutions to customers across the globe. The key products, soda ash and sodium bicarbonate are vital ingredients to diverse industries including glass, detergents, sodium silicate, textiles, food, feed, mining and chemical processing.
- •The company's business strategy is delivering value-added, differentiated products and solutions while driving cost competitiveness.



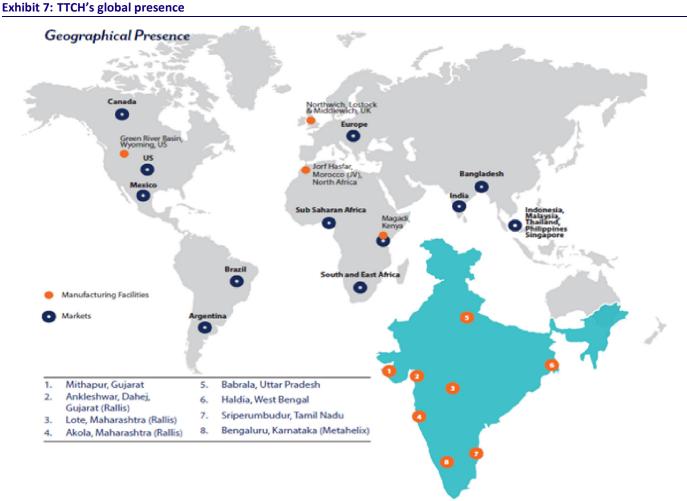
Farm Essentials

- •TTCH offers multiple farm inputs that are required to improve crop health and productivity. These include fertilizers, pesticides, specialty nutrients, seeds and agro-services.
- •Tata Kisan Sansar and Rallis Kisan Kutumb are networks that offer information on new and improved agronomic practices and facilitate use of agricultural inputs.

Exhibit 6: TTCH's inorganic business segment



Source: Company, MOSL



Transforming to a consumer product focused company

Specialty and consumer products to contribute 33% of revenue by FY20

- Under its commodity portfolio, TTCH operates the soda ash and sodium bicarbonate business, wherein it is a global leader. This business acts as a cash generator (steady in terms of growth: average of 3-4%).
- It also has growth engines in the form of the specialty and consumer products the company should be able to enhance focus on this business following its exit from the regulated fertilizer business.
- We expect the contribution of the specialty and consumer business to increase from 25% in FY18 to 33% by FY20 (based on its existing portfolio), while the company's internal target is to reach 50% via the launch of new products.

Specialty and consumer (S&C) to contribute 33% to total revenue by FY20

The commodity business (73% of revenue) as of FY17 includes soda ash, sodium bicarbonate, cement and fertilizers. The S&C business (27% of revenue in FY17) includes salt, agri inputs, pulses, spices and nutritional solutions. As planned, TTCH has exited the highly regulated fertilizer business (urea and phosphatic), allowing it to focus more of the efficient S&C business – the contribution of this business is expected to increase to 33% by FY20, considering the current product portfolio. However, the company aims to take the total contribution of the business to 50% based on its planned product pipeline. EBITDA of the S&C business is expected to grow at a CAGR of 14.6% over FY18-20 to INR8.8b while EBITDA of the commodity business is likely to grow at a CAGR of 6.4% to INR17.8b.

Exhibit 8: Contribution of specialty & consumer business to increase to 33% in FY20

	Specialty and Consumer Business		Co	ommodity Bu	siness			
76%		73%	75%		69%		67%	
 24%		27%	25%		31%		33%	
FY16		FY17	FY18E		FY19E		FY20E	

Source: Company, MOSL

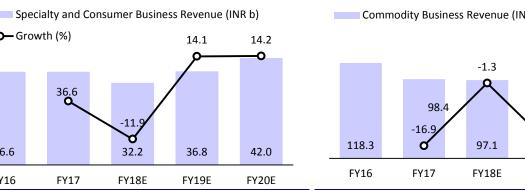
70

86.7

FY20E

Exhibit 9: S&C business revenue to grow at ~14.2% CAGR over FY18-20E

Exhibit 10: Commodity business to decline at CAGR of 5.5% over FY18-20E



Source: Company, MOSL

Commodity Business Revenue (INR b) -O-Growth (%)

081.0

FY19E

36.6

FY16

-O- Growth (%)

36.6 **Q**

FY17

Directing cash inflow toward efficient businesses

Selling of stake in group companies and exit from regulated fertilizer business to help generate cash flows

- The divestment of the fertilizer business and the sale of investment in Tata Global Beverages are expected to result in cumulative gross cash inflow of ~INR39.7b in FY18. Internal accruals should also further aid cash flow.
- The company is also focusing on working capital, which has reduced by INR21b over the past two years. Strong cash flows will allow part repayment of debt and also help to invest in higher-RoCE businesses like specialty & consumer.
- We expect TTCH to be net debt free by FY20 from net-debt-to-equity of 0.7x in FY17. This will also help reduce interest outgo from INR4.1b in FY17 to INR2.1b in FY20, boosting profitability.
- Part cash flow will also be invested in manufacturing facilities to develop scale in the specialty business of new materials (such as HDS and nanomaterial) and nutritional solutions (such as oligosaccharides and polyol). At full potential, these businesses should generate RoCE of 20-25%.

Reduction in debt via sale of fertilizer business and investments

TTCH sold its urea and customized fertilizer business in Babrala to Yara Fertilizers India in August 2016 for INR26.8b. The transfer of assets to Yara was completed on 12 January 2018. It also sold its phosphatic fertilizer business in November 2017 for INR3.75b excluding outstanding subsidy amounts. The transaction is expected to be completed by March 2018.The move was driven by TTCH's plan to build the consumer and inorganic chemical businesses, and to focus on the farm business through subsidiaries, Rallis and Metahelix. This should help TTCH to focus more on the commodity and specialty & consumer businesses, and thus, foster growth.

TTCH was also able to reduce its working capital by selling the urea business – note that the fertilizer business is government-regulated and requires significant investments. Sale of the urea segment proved beneficial for TTCH as working capital in this business accounted for 31% of the company's overall working capital.

TTCH has reduced debt through focus on working capital, ultimately leading to a reduction in the debt-to-equity ratio to 0.7x in FY17 from 1.1x in FY16.

Exhibit 11: Urea business WC investment constitutes 31% of total investment in WC				
Particulars	TTCH INR m	For Urea Business	Urea Business as a % of Total TTCH	
Inventories	15,075.4	1,266.8	8%	
Trade Receivable	29,227.7	8,344.2	29%	
Less: Trade Payable	13,468.5	89.1	1%	
Net	30,834.6	9,521.9	31%	

Particulars	INR m
Urea business	
Deal Value (1)	26,820
Book Value (2)	10,210
Subsidy as a part of deal (3)	7,400
Capital appreciation (1-2-3)	9,210
Tax @30% on capital appreciation	2,763
Profit/Net Cash from sale of Urea (Excluding Subsidy) (A)	16,657
Net Cash from sales of Urea (Including Subsidy) (G)	24,057
Tata Global Beverage	
	0.211
Sales of TGBL shares (43.18 mn share @ 213.35) (H)	9,211
BV of TGBL	6,500
Profit from sale (B)	2,711
Phosphatic Fertilisers business	
Deal Value (D)	3,750
Book Value of Business (E)	8,863
Loss from sale of phosphatic fertiliser (D-E) (F)	-5,113
Complex fertiliser subsidy outstanding as on Q3FY18 (I)	7,840
Total Cash inflow (Including loss from sale from phosphatic fertilizer and urea subsidy (G+H+D+F+I)	39,745
Profit from Sale of Urea & phosphatic fertiliser and TGBL (A+B+F)	14,255

Source: Company, MOSL

Stake sale in Tata Global Beverages generated cash of INR9.2b

The Tata Group has been in constant talks to reduce the complexity in group holdings, which would help group companies to carry core assets on its balance sheets, and thus, allocate capital efficiently. Cross-holdings in companies where shares of different companies are held by each other are being reduced. As a result of the strategic restructuring, TTCH sold its holdings in Tata Global Beverages to Tata Sons for a consideration of ~INR9.2b in September 2017. Such restructuring in the Tata Group will keep significant free cash flows at TTCH's disposal.

What lies ahead...

Apart from the above, TTCH has other non-core investments amounting to INR16.8b at its disposal, which could be potentially sold as part of its strategic restructuring.

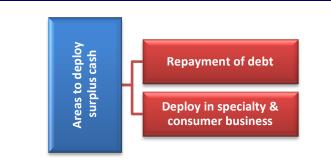
Exhibit 13: Non-core investments held by TTCH

Particulars	No. Shares (In m)	Market Price	Market Value (In INR m)
The Indian Hotels Co. Ltd.	8.9	136	1,211.5
Oriental Hotels Ltd.	2.5	43.7	110.4
Tata Investment Corporation Ltd.	0.5	763.6	363.4
Tata Steel Ltd.	2.5	578.5	1,441.7
Tata Motors Ltd.	2.0	338.8	666.2
Titan Company Ltd.	13.8	943.9	13,050.5
Market Value of Non-Core Investments			16,843.6

Note: Price as on 27th March 2018, Source: Company, MOSL

Potential areas to allocate cash generated from divestment process

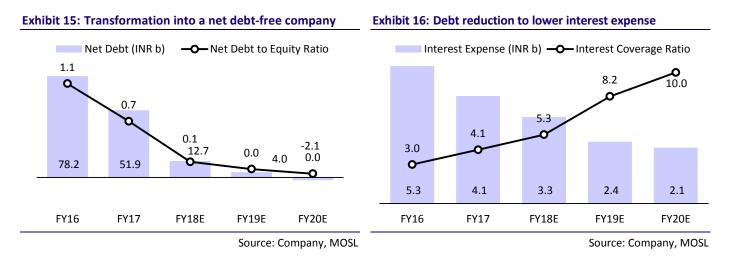
Exhibit 14: Potential areas to allocate cash from non-core assets



Source: Company, MOSL

Repayment of debt to save interest outgo, boost profitability

The funds received from the sale of the fertilizer business and available cash in hand could be used to repay debt and to invest in consumer business, leading to savings in interest expense, and ultimately, increasing earnings. Debt repayment would lead to 48% reduction in interest cost from INR4.1b in FY17 to INR2.1b in FY20. The management intends to use the cash from sale of fertilizer business and investments to retire India debt (INR20.5b in FY17). We assume long-term debt repayment of INR15b in the standalone entity through the sale of fertilizer business and investment in Tata Global Beverage. We also assume debt repayment of INR2.5b each in the US and Europe & Africa businesses in FY18.



Unleashing the specialty & consumer business potential

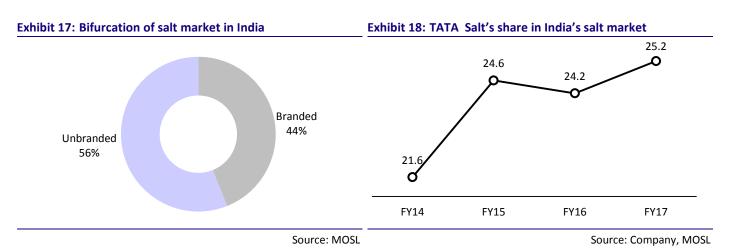
Leveraging on Tata Salt's distribution strength

- TTCH has been a pioneer in developing the market for iodized salt in India, and enjoys a share of 25% in the country's powdered salt market.
- It has a distribution network of 1.7m retail outlets, reaching 143m households across India. Compared to the other prominent FMCG companies in India that have an average retail reach of 5-6m outlets, we believe TTCH has ample room for growth.
- Leveraging on the network, TTCH has expanded its horizons to include branded pulses, spices, besan (gram flour) and water purifiers, wherein it is yet to realize full potential.
- It is also entering nutritional solutions, backed by years of deep understanding and scientific research. Besides, it is foraying into yet another technology enabled, differentiated business – highly dispersible silica.

Tata Salt's sweet success to continue

Estimated annual consumption of edible salt in India is 6m tonnes. Demand for edible salt is expected to grow at ~1.5%. The market continues to move toward higher share of branded salt, with increasing awareness about product quality, visible purity and iodine content. Specialty salts like rock salt and black salt have increased presence in modern format stores.

Tata Salt continues to be the leader in the national branded salt segment, and 'I-Shakti' is the third-largest brand in terms of market share. TTCH commands a market share of 25% in the Indian salt market (29% if 'I-Shakti' salt brands are also taken into consideration). Tata Salt Lite continues to be the leading brand in the low sodium salt segment, and Tata Salt Crystals leads in the crystal salt segment. As the brand continues to grow, a number of products designed to cater to specific needs of the consumer have been added to the portfolio in recent years, such as Tata Salt Lite, Tata Salt Plus and Sprinklers. In FY17, the company launched rock salt and black salt in attractive crusher formats, which were well received in the launch markets.



Salt is likely to deliver sales CAGR of ~5.5% over FY18-20. TTCH's market share in some markets is as high as 35-40%, while in some other markets, it is way below 25%. It has lower market share in the South and East – the regions where the company intends to strengthen focus. TTCH plans to focus on growing its market share by increasing its distribution reach and manufacturing capacity. It reaches

about 1.6m retail outlets compared to prominent FMCG players' reach of 5-6m retail outlets, implying significant headroom for growth. TTCH will increase its capacity from 1mt to 1.5mt in phases over the next five years. TTCH has also added team members to fulfill its growth targets. Tata Salt's distribution has always focused on wholesale channels. This strategy has led to lower focus on on-ground sales. TTCH is now shifting its focus from wholesale to retail channels.

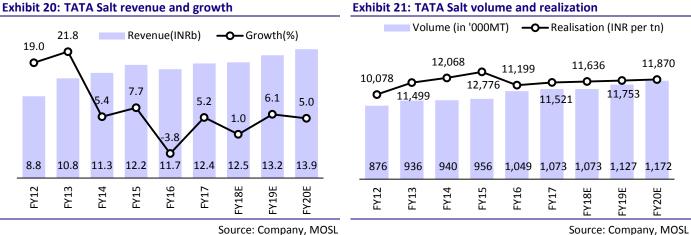
Existing salt distribution network to foster growth in consumer business

Tata Salt commands 25% share in the Indian salt market. However, if we consider only the branded segment, it commands 66% share, clearly a leader in the salt market in India. Tata Salt reaches 143m households across the country annually. It is the largest distributed brand, with a reach of 1.7m retail outlets across India. This could be used to foster growth of consumer products (pulses, spices, nutritional and other products) in TTCH's pipeline.

Exhibit 19: TTCH's salt products range



Source: Company, MOSL



Source: Company, MOSL

Expanding consumer business horizon through Tata Sampann brand

TTCH, via its Tata Sampann umbrella brand, offers unpolished high protein pulses range, low-absorb besan (gram flour) made from 100% chana dal, and the uniquely developed range of spices. The focus is to capitalize on demand for wholesome food with good taste.

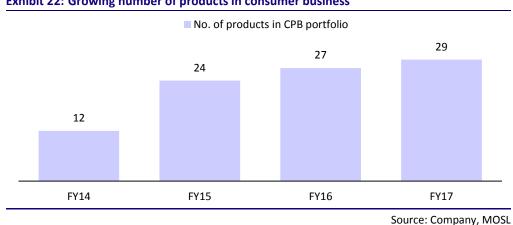
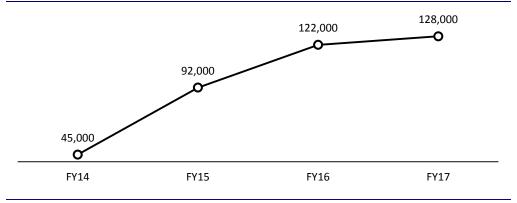


Exhibit 22: Growing number of products in consumer business

Pulses – focus on grade-A stores

The pulses market in India is largely unbranded. However, many business houses have entered the market over the past few years. Due to the government's policy changes for regulating stock movement and prices, there was a downward trend in the pulses commodity cycle in CY16, because of which branded players suffered. TTCH has taken necessary steps to eliminate such risks, and intends to focus on grade-A category of stores.





Source: Company, MOSL



Exhibit 24: TATA Sampann's wide portfolio of pulses

Source: Company, MOSL

Besan: TTCH's differentiated health-focused products ready to tap opportunity

The besan (gram flour) market is estimated at INR200b, but the product is associated with guilt, because of its heavy usage in fried snacks. Besan is mostly used in the making of fried snacks such as pakoras, bhajjis, sev and gathiyas. To make snacks crispier, they are often deep fried, which leads to higher oil absorption. This increases the chances of weight gain and other health issues. Therefore, consumers look for ways to prepare besan snacks with less oil while retaining the same taste and crispiness. TTCH has launched besan that absorbs less oil and is healthy.

The besan market is largely unbranded in India, and there is a significant opportunity to introduce superior branded variants by driving the 'Low Oil Absorb' differentiation. The differentiated offering commands up to 10-15% premium over ordinary unbranded besan. TTCH's portfolio consists of 'Tata Sampann Low Oil Absorb Besan' and 'Tata Sampann Fine Besan'. Since the launch in January 2016, TTCH has achieved volumes of 13,000 tonnes.

Exhibit 25: TATA Sampann – another innovative product in basket



Source: Company, MOSL

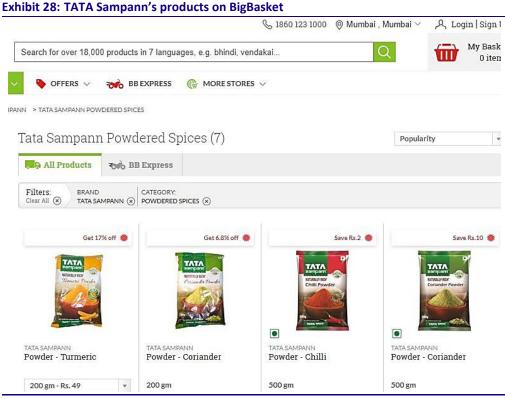
Exhibit 26: TATA Sampann's products on Amazon



Exhibit 27: TATA Sampann's products on Grofers

Exhibit 27: TATA Sampann's pro			
22% OFF	25% OFF	49% OFF	18% OFF
Tata Sampann Arhar Dal/Toor Dal	Tata Sampann Garam Masala	Tata Sampann Besan	Tata Sampann Unpolished Arhar Dal/Toor Dal
1 kg	100 gm	500 gm	500 gm
₹119 ₹92 Add To Cart	₹ 80 ₹60 Add To Cart	₹54 ₹26 Add To Cart	₹60 ₹49 Add To Cart
16% OFF	15% OFF	25% OFF	16% OFF
Tata Sampann Chilka Unpolished Green Moong	Tata Sampann Unpolished Yellow Moong Dal	Tata Sampann Turmeric Powder/Haldi	Tata Sampann Sabut Unpolished Green Moong
500 gm	500 gm	200 gm	500 gm
26% OFF	25% OFF	24% OFF	25% OFF
Tata Sampann Chana Dal	Tata Sampann Red Chilli Powder	Tata Sampann Kitchen King Masala	Tata Sampann Punjabi Chole Masala
500 gm 🗸	200 gm	100 gm	100 gm
₹56 X dd To Cart	₹64 ₹48 Add To Cart	₹ 70 ₹53 Add To Cart	₹64 ₹48 Add To Cart
5% OFF	24% OFF	24% OFF	12% OFF
Tata Sampann Chitra White Rajma	Tata Sampann Meat Masala	Tata Sampann Chicken Masala	Tata Sampann Dhuli White Urad Dal
500 gm	100 gm	100 gm	500 gm

Source: Grofers, MOSL



Source: Company, MOSL

Spices: Adding flavor with health-focused objectives

The total branded spices market in India is around INR150b in size. Chilli, turmeric and coriander account for 80% of the pure spices market. The market is fragmented and commoditized, with over 3,000 local brands. Garam masala, meat masala, chicken masala, and kitchen king masala, among others are the popular blends cross regions.

TTCH has developed a portfolio of four pures (Chilli, Turmeric, Coriander, Shahi Lal Mirch) and eight blends (Punjabi Chole Masala, Dal Tadka Masala, Kitchen King Masala, Garam Masala, Meat Masala, Paneer Masala, Chicken Masala and Pav Bhaji Masala). These are 100% pure and unadulterated, with guaranteed levels of active ingredients, ensuring the best quality. It is currently present in 16 states, with the highest market share being in the state of Punjab (around 5%). Going forward, TTCH plans to scale up the spices business by leveraging TATA Salt's distribution network and expanding direct reach to outlets beyond its current coverage. Foraying into the global markets is also a priority, as the opportunity landscape is widening. New variants, product formats and customized offerings are consistently being developed.

Exhibit 29: TATA Sampann spices



Source: Company, MOSL

Exhibit 30: Business value chain for Salt, Pulses, Besan, Spices and Nutritional Solutions

Business Value Chain Of Products	Salt		Puls	ses and Besan	Spic	ces	Nut	ritional Solutions
Raw Material	*	Sea Salt/ Brine Access / Procurement	· 🍫	Sourcing from Farms and Mandis	*	Sourcing as per requirements	*	Sucrose
Processing	*	Vacuum Evaporated / Third Party refining	*	Milling / Outsourced operations	*	Processing operations with business partners	*	Other processing aids
Products	*	Iodised VE Salt, Tata Salt, Tata Salt Lite, Tata Salt Plus, Tata Salt Crystal, Flavoritz, Rock Salt, Black Salt, I-Shakti Salt, I-Shakti Cooking Soda		Unpolished Dals/ Low Oil Absorb Besan, Toor Dal, Moong Dal, Masoor Dal, Chana Dal, Urad Dal, Low Oil Absorb Besan, Fine Besan, Low Oil Absorb Pakoda Mix	*	Spices, Chilli, Turmeric, Coriander, Shahi Lal Mirch, Punjabi Chole Masala, Dal Tadka Masala, Kitchen King Masala, Garam Masala, Meat Masala, Paneer Masala, Chicken Masala, Pav Bhaji Masala	*	Biotransformation Purification, Fossence, Gossence,Tata Nx Lite & Sweet . Tata Nx Zero Sugar
Packaging	*	Multiple SKUs at CFAs under HACCP / FSSAI standards	*	SKUs of multiple sizes and dal types	*	5 sachets in a pack format		
Logistics	*	Through Rail and Road	Roa	d	*	Road	*	Warehouse
Distribution Same distribution channel as salt would act as a catalyst to foster growth	To S To F	istributor Stockist and Retailer Institution	To 9 To 1 2. Ii	vistributor Stockist and Retailer nstitution Val on Call	To S To I 2. In	istributor Stockist and Retailer Istitution Pal on Call	Wai	ehouse
End Use	*	Household	*	Household	*	Household	*	Industries - Bakery Confectionary, Nutraceuticals
								Source: Compar

Source: Company

Expanding horizons of speciality – nutraceuticals to enable flight

Huge opportunity to change Tata Chemical's business dynamics

- TTCH would focus on both B2B and B2C space in the nutraceuticals industry, aiming at bulk supply to global as well as domestic companies. Its plant at Nellore, Andhra Pradesh is likely to commence in 4QFY19 and commercialization is expected in 1QFY20.
- We estimate the size of the B2B global nutraceuticals industry at ~USD60b in 2016, growing to ~USD92b in 2021.
- We expect the segment to generate EBITDA margin of 24-25%, with RoCE at 20-25%.

Global nutraceuticals market to grow at CAGR of 7.5% over 2016-21

Nutraceuticals are food or fortified food products that not only supplement the diet but also assist in treating or preventing disease, providing medical benefits. The nutraceutical market mainly constitutes functional foods and beverages and dietary supplements. Dietary supplements are present in the form of tablets, capsules and liquids. The nutraceutical ingredients include pre-biotic and pro-biotic vitamins, minerals, fibers, proteins, omega-3 and structured lipids, amino acids, and various other ingredients.

Nutraceutical ingredients find application right from cereals, grains, nuts, vegetables, fruits, dairy products, poultry products, sea food and confectionery items to non-alcoholic beverages like juices, energy drinks, sports drinks, etc. Few examples of functional foods are yogurts with pro-biotics, drinks with herb blends, soya beverages rich in proteins, etc. The functional food category is seeing the highest growth in energy drinks, healthy snacks and breakfast products.

According to Research & Markets, the B2C global nutraceuticals industry is valued at USD198.7b (in 2016). It is expected to grow at a CAGR of 7.5% over 2016-21 to USD285b. The functional global beverages market was valued at USD71.5b in 2016 and is expected to grow at a CAGR of 8.1% over 2016-21 to USD105b. The functional global food market was valued at USD64.6b in 2016 and is expected to grow at a CAGR of 7.4% over 2016-21 to USD92.3b.

Currently, the US, Europe and Japan account for most (93%) of the total global nutraceuticals market. The market, however, seems to have attained maturity in all the three regions. Therefore, the nutraceutical players across the world are now turning their attention to emerging markets like India and China. India is one of the most rapidly-growing nutraceuticals markets in the Asia-Pacific region. According to ASA & Associates, the nutraceuticals industry in India was worth about USD2.2b in 2015 and is estimated to grow at a CAGR of 20% over 2019-20 to USD6.1b.

Focus on nutraceuticals space to transform Tata Chemicals

TTCH's nutritional solutions plant at Nellore, Andhra Pradesh is likely to commence in 4QFY19 and commercialization is expected in 1QFY20. The company intends to set up a state-of-the-art biotechnology unit with a capacity of 5,000TPA and the capex for the plant will be INR2.7b. The plant is for manufacturing of fructooligosaccharides (FOS), a natural sweetener used in infant milk powder, cereals & dairy, and galacto oligosaccharide (GOS), which belong to the group of prebiotics.

TTCH is entering into the B2B space of nutraceuticals, with focus on bulk supply to overseas companies. It has already built a global supply chain and relationships across the globe. We estimate the size of the B2B market at ~USD60b (assumed cost of goods sold of global B2C players) in 2016. Assuming similar growth of 7.5% in the global B2C nutraceuticals industry, the B2B market is estimated to reach USD92b in 2021.

We did a scenario analysis assuming asset turnover of 1.5x and 2x. According to our analysis, EBITDA margin of the business would be 24% (at 1.5x asset turnover, and assuming RoCE of 20% and working capital to sales at 35%) in Scenario-1 (refer exhibit-33) and 25% (at 2x asset turnover, and assuming RoCE of 25% and working capital to sales at 40%) in Scenario-2 (refer exhibit-33).

At the current planned capacity, the nutritional solutions segment is expected to contribute 3-4% to consolidated sales and 4-5% to consolidated EBITDA (refer exhibit 31 & 32). Assuming doubling of capacity, the segment is expected to contribute 7-9% to consolidated sales and 8-10% of consolidated EBITDA. Assuming tripling of capacity, the segment is expected to contribute 10-13% of consolidated sales and 11-15% of consolidated EBITDA with global B2B market share at just 0.3%.

Scenario	Revenue (INR m)	EBITDA (INR m)	Global Market Share	Contribution to Consolidated sales	Contribution to Consolidated EBITDA
Current capacity (5000 TPA capacity) (Announced)	4125	1100.0	0.07%	3%	4%
Scenario 1 (10,000 TPA capacity)	8250	2200.0	0.14%	7%	8%
Scenario 2 (15,000 TPA capacity)	12375	3300.0	0.21%	10%	11%

Exhibit 31: Case-I (Asset turnover 1.5x)

Source: Company, MOSL

Exhibit 32: Case-2 (Asset turnover 2x)

Scenario	Revenue (INR M)	EBITDA (INR M)	Global Market Share	Contribution to Consolidated sales	Contribution to Consolidated EBITDA
Current capacity (5000 TPA capacity) (Announced)	5,500	1375.0	0.09%	4%	5%
Scenario 1 (10,000 TPA capacity)	11000	2750.0	0.18%	9%	10%
Scenario 2 (15,000 TPA capacity)	16500	4125.0	0.28%	13%	15%

Exhibit 33: Tata Chemical's Nutritional Solutions segment Profit & Loss A/C (Estimated)

INR Mn	Scenario I (Asset turnover 1.5x)	Scenario II (Asset Turnover 2x)
Net block	2,750	2,750
Working Capital (as % of sales)	35%	40%
Working capital	1,443.8	2,200
Capital employed	4,194	4,950
RoCE	20%	25%
Asset Turnover	1.5	2.0
EBIT	838.75	1,238
Revenue	4,125	5,500
Depreciation	138	138
EBITDA	976	1,375
EBITDA Margin	24%	25%

Source: Company, MOSL estimates

Seeding the specialty and nutritional portfolio

TTCH's innovation center (IC) in Pune supports the diverse needs of its businesses along with synergistic programs with Tata Group companies. The nutritional solutions unit, operating as a start-up, will focus on building scale in the specialty businesses. MoU was signed with the Andhra Pradesh government to invest INR2.75b for a greenfield biotechnology manufacturing unit for food ingredients and formulations developed at TTCH's IC. During the year, the IC developed a highly dispersible silica formulation that is suitable for tyre applications, and the company is planning to manufacture precipitated highly dispersible silica (HDS) in Gujarat.

The nutritional solutions business unit offers optimal nutrition through dietary solutions in the form of highly differentiated, science-based innovative ingredients and formulations. TTCH's bio-easy platform brings together knowhow of biogenomics, food technology, material sciences and biotechnology to ensure that the right nutrient is delivered in the right way to the consumer. This involves collaboration and co-creation with customers in a project mode.

FY17 was the second full year of operations of the greenfield proof-of-concept manufacturing unit at Sriperumbudur near Chennai. During the year, the unit produced several grades of fructo-oligosaccharides (FOS) and FOS-based formulations and sold a total of 680 tonnes of FOS across India. Albeit being a new product, it has garnered wide acceptance as a prebiotic healthy sweetener for categories such as dairy, bakery and confectionery. Based on market requirements and formulation capabilities, the business has introduced new variants of healthier and natural sweeteners that are alternatives to cane sugar for both institutional and retail segments. Additionally, at the request of key customers and to leverage synergies with company-manufactured products and formulations, complementary products were added to the product portfolio. In FY17, the business achieved a turnover of INR269m, more than 300% increase over the previous year.

Exhibit 34: Artificial sweeteners



Source: Company, MOSL

During the year, TTCH initiated critical clinical studies and technology ramp-up for downstream processing and spray drying. The business has also initiated market seeding with customers in the US to gain insights; this will aid business development efforts in anticipation of the upcoming commercial-scale 5,000 tonnes manufacturing unit at Nellore, Andhra Pradesh.

HDS – a future technology for tyre industry

Tata Chemicals on right track, with filing of eight patents

- Highly dispersible silica (HDS) is a substitute for carbon black, which has an INR50b market in India. It scores over carbon black on various parameters – reduced rolling resistance, reduced emissions and better aesthetic appeal.
- TTCH is set to manufacture HDS, with an initial capacity of 50,000TPA, which will enable it to grab ~12% share in India's HDS market at full utilization.
- Assuming fixed asset turnover of 1.5x and RoCE of 20%, we expect HDS business to generate a revenue of ~INR4.5b in first year of operations, with a margin of ~23%.

HDS – impressive prospects

HDS is a product used in tyres, primarily for rubber reinforcements. It is expected to benefit the tyre industry by lowering rolling resistance for improved vehicle fuel economy, reducing greenhouse gas emissions, increasing traction for improved safety/handling and improving wear resistance compared to traditional compounds. In addition, HDS has an aesthetic appeal, wherein it can be mixed with different colours – it acts as a catalyst for the preparation of tyres in different colors.

The current compound used in tyres for the same purposes is carbon black. It constitutes almost 13% of a tyre's total cost. In the near future, HDS has a good chance to replace carbon black and become an important input material in new-age tyre manufacturing. In 2016, the market size of carbon black in India was INR50b.

Exhibit 35: HDS scores over carbon black

HDS	Carbon Black
Expensive than Carbon black	Cheaper to produce
Better performance	Lower performance
Increased fuel efficiency	Lower efficiency
Environment and human friendly	Carcinogenic (Cancer Causing)

Source: Company, MOSL

HDS segment margin likely to be in the range of 22-23%

TTCH is setting up a manufacturing unit in Gujarat for precipitated HDS, mainly used in the rubber and tyre industries, with a total capacity of 50,000TPA. The total investment will be INR2.95b. Trial runs are expected to commence in 4QFY19 and commercialization is likely in 1QFY20. Technology for the HDS has been developed at the IC (innovation center) in Pune, for which eight patents have already been filed. We expect the company to grab ~12% share in India's HDS market at full capacity utilization. We estimate EBITDA margin of the business at 22-23%, assuming RoCE of 20-25%.

Exhibit 36: Tata Chemical's HDS business Profit & Loss a/c (estimated)

Particulars (INR Mn)	Scenario I (Asset turnover 1.5x)	Scenario II (Asset Turnover 2x)
Net block	2,950	2,950
Working Capital (as % of sales)	30%	30%
Working capital	1,327.5	1,770.0
Capital employed	4,278	4,720
RoCE	20%	25%
Asset Turnover	1.5	2.0
EBIT	855.5	1,180
Revenue	4,425	5,900
Depreciation	147.50	147.50
EBITDA	1,003	1,328
Margin	23%	23%

Source: Company, MOSL estimates

Soda ash to show steady performance

Cost advantage over its peer, as 70% of capacity is natural soda ash

- TTCH's soda ash realizations have seen robust growth over FY12-17 across geographies: 6% in India, 11% in Europe, 8% in North America, and 5% in Africa. However, volume decline led to flattish growth in consolidated soda ash revenue.
- Going forward, we expect consolidated soda ash revenue to grow at a CAGR of 5% over FY17-20, driven by both volume and realization growth.

World's second largest soda ash manufacturer

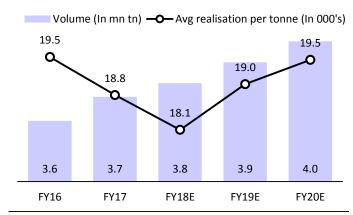
With a capacity of ~4.2m MT of soda ash and 0.2m MT of sodium bicarbonate across its manufacturing facilities in India, UK, Kenya and US, TTCH has a competitive advantage of being the world's most geographically diversified soda ash company. Almost 70% of its soda ash capacity is manufactured via the natural route. The plants at Mithapur (India), Wyoming (the US), Northwich (the UK) and Magadi (Kenya) have their own unique operational philosophy.

Name of the	ТАТА	TATA Chemicals	TATA Chemicals	TATA Chemicals
company	Chemicals India	North America Inc.	Europe Holdings Limited	Magadi
Type of soda ash	✓ Synthetic	 Natural 	✓ Synthetic	 Natural
Place of operations	✓ India	 United States of America 	✓ United Kingdom	 South Africa
Raw Material	 ✓ Limestone, coke, coal, natural gas, CO2, Ammonia 	 Coal, Natural gas, HFO 	 Limestone, coke, coal, natural gas, CO2, Ammonia 	 Coal, Natural gas, HFO
Logistics	✓ Road, Rail and sea	 Road, Rail and sea 	✓ Road, Rail and sea	 Road, Rail and sea
Distribution	 ✓ Direct 73%, Channel Partners 27% 	 Direct 73%, Channel Partners 27% 	 ✓ Direct 73%, Channel Partners 27% 	 Direct 73%, Channel Partners 27%
Unique operation philosophy	 Mithapur: It is an integrated inorganic chemicals complex, manufacturing soda ash, edible salt, sodium bicarbonate, cement, marine and caustic chemicals. 	Wyoming: Manufacturing facility consists of an underground trona mine and a surface refining plant that processes the ore into soda ash.	Northwich: It is one of the continent's leading producers of sodium carbonate, soda ash, salt, sodium bicarbonate and other products.	Magadi: It is Africa's largest soda ash manufacturer and one of Kenya's leading exporters. At the facility, soda ash is obtained by washing and calcining trona, a naturally occurring form of sodium sesquicarbonate, extracted from Lake Magadi in Kenya.

Exhibit 37: TTCH's operations in various geographies across the globe

	India	North America	Europe	Africa
FY19E FY20E	22%	47%	22%	10%
19E F	22%	46%	22%	10%
SE FY	22/0	10/0	22/3	10/0
FY18E I	23%	46%	21%	10%
FY17	22%	46%	23%	8%
FY16	23%	43%	24%	10%

Exhibit 39: Consolidated soda ash volume and realization per tonne



Source: Company, MOSL

Note: Europe revenue includes soda ash, sodium bicarbonate, salt and power

Global/Indian soda ash market to remain steady

Source: Company, MOSL

Emerging economies, especially China, have been the primary growth drivers for soda ash over the past decade, with increasing glass and detergent usage. However, the year 2016 saw demand slowing down in China, with an estimated growth rate of less than 1%. Several other regions, including the developed markets of North America and Europe, however, showed relatively healthy growth during the year. Global soda ash demand in 2016 is estimated to have grown ~1.9% to reach 56.6m tonnes. **Global demand is expected to grow at 2.1% annually through 2026.**

Indian market demand growth increased by ~7% in FY16-17, after almost flat volumes in the previous year. North American volumes are expected to be flat, with the exception of incremental demand from Mexico's container glass industry. US exports are likely to face stiff competition from new production from Turkey and Russia. The UK market remained reasonably flat for the year, with Tata Chemicals Europe retaining its market leadership, leveraging production based out of both the UK and US manufacturing facilities. Demand growth in the key markets of the company's African operations remained mixed.

Global soda ash capacity is estimated to have grown marginally by ~0.5m tonnes in FY17. Regional overcapacity and tightening governmental policies resulted in continued consolidation in China, leading to capacity remaining almost flat in FY16-17. However, capacity addition occurred in other regions, including the Indian subcontinent, the Middle East and Central Europe. **Global capacity is expected to grow at 2.1% annually through 2026, with Turkey leading capacity addition.** India continues to be a significant importer of soda ash, with 0.75m tonnes of imports in FY16-17. While the Indian market is supplemented by soda ash from the US and Kenya, UK demand is also catered to by substantial imports from the US.

Tata Chemicals

Exhibit 40: Soda ash uses globally (2017)

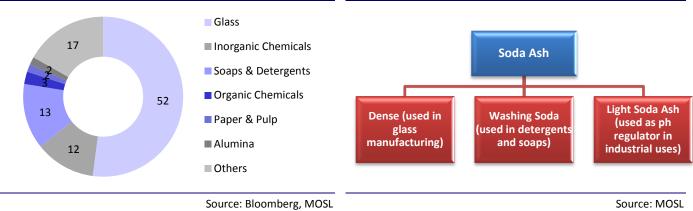
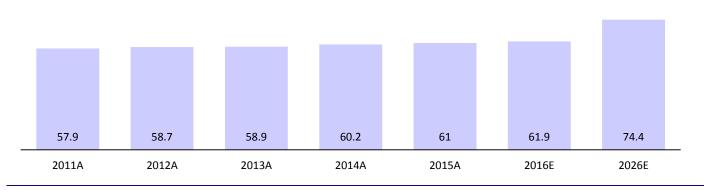
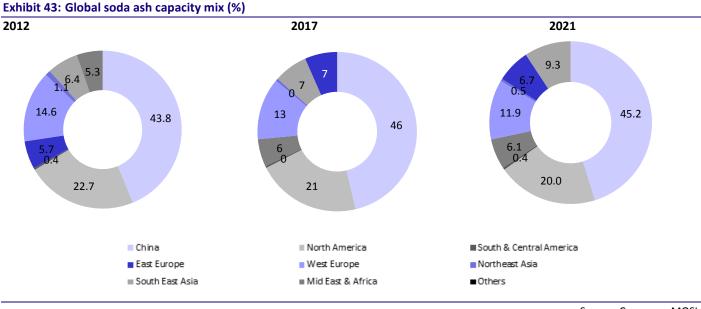


Exhibit 41: Types of soda ash

Exhibit 42: Global soda ash demand to grow at a CAGR of 2.1% over 2016-26 (m tonnes)

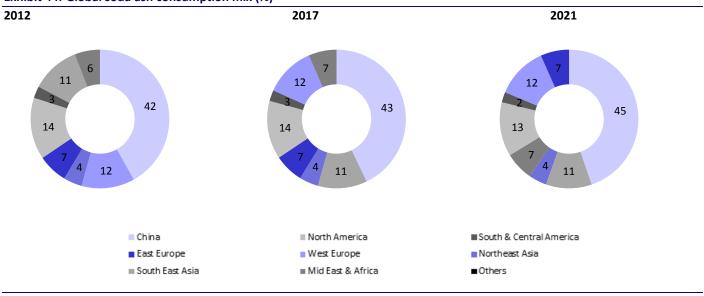


Source: IHS and USGS Soda Ash, MOSL



Tata Chemicals

Exhibit 44: Global soda ash consumption mix (%)



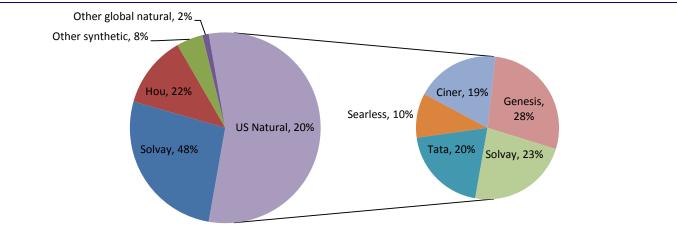
Source: Company, MOSL

Exhibit 45: Soda ash production process and its relative cost advantage

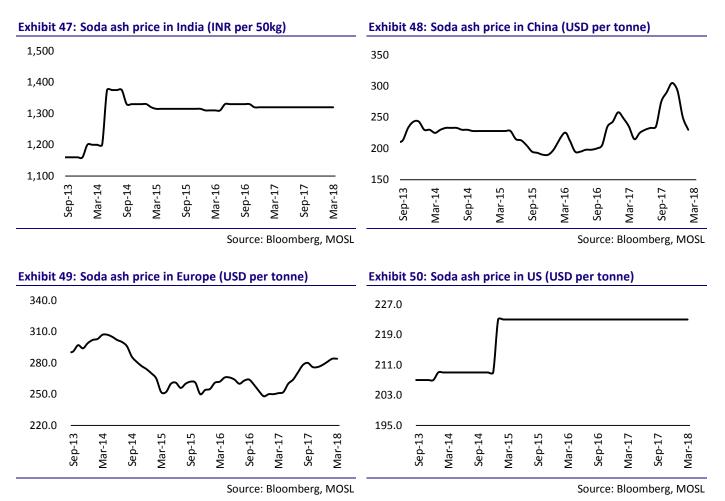
	U.S. Trona	Solvay	Hou
Process	Mining and refining trona	Synthetic production	Synthetic production
Raw Materials	Trona	Salt (brine), Limestone, Ammonia	Salt (brine), Ammonia, Carbon Dioxide
Energy Usage	4 – 6 MMBtu / ton	10 – 14 MMBtu / ton	10 – 14 MMBtu / ton
By- Products			Ammonium Chloride (co-product)
Relative Soda Ash Production Costs	1/2**3/4 cost of competing processes ¹ 1.0x U.S. Trona (Natural Gas)	1.4x 1.3x European China Solvay Solvay	2.0x China Hou

Source: Bloomberg, MOSL

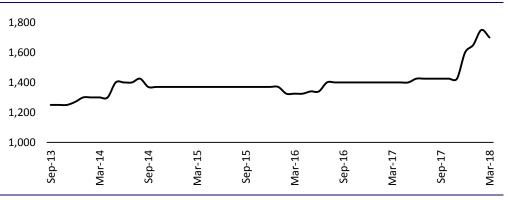
Exhibit 46: Soda ash production process capacity (2016) mix



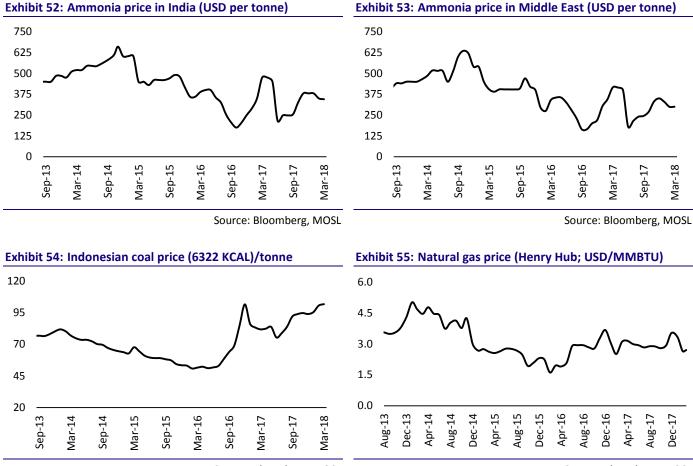
Source: IHS and USGS Soda Ash, MOSL







Source: Bloomberg, MOSL



Source: Bloomberg, MOSL

Source: Bloomberg, MOSL

Consolidated soda ash business to show steady performance

TTCH's consolidated soda ash and sodium bicarbonate revenue was almost flat over FY15-17. Realization grew at a CAGR of 1.8% and sales volume declined at 1.63% per year. EBITDA grew at a CAGR of ~4%.

We expect consolidated soda ash and sodium bicarbonate revenue to grow at a CAGR of 5% over FY17-20 to INR81.9b. Sales volume is likely to grow at a CAGR of 2% to 4.1m tonnes and realization at a CAGR of 2% to INR19,610/tonne. EBITDA is expected to grow at a CAGR of 7% to INR17.2b and EBITDA/ton at a CAGR of 5% to INR4,111.

India soda ash business to grow at healthy pace

Soda ash revenue grew at a CAGR of 7% over FY12-17, driven by higher realization. Realization grew at a CAGR of 6% and sales volume grew at a CAGR of 1%.

We expect revenue to grow at a CAGR of 3% over FY17-20 to INR17.2m. Sales volume would grow at a CAGR of 1% and realization would grow 2%.



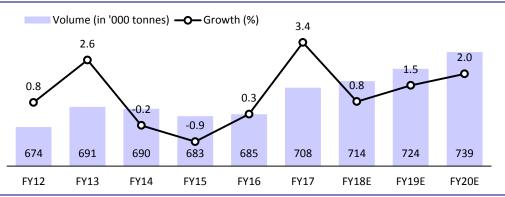


Exhibit 57: India soda ash revenue and growth

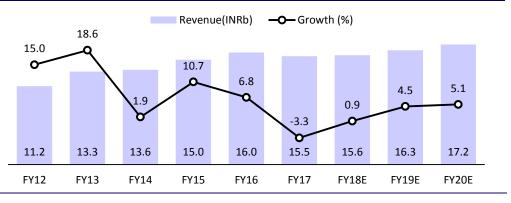


Exhibit 58: India soda ash realization per tonne and growth

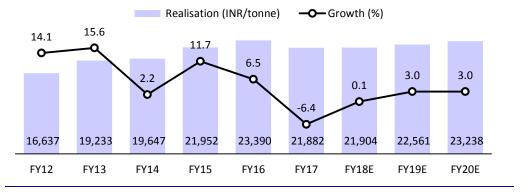
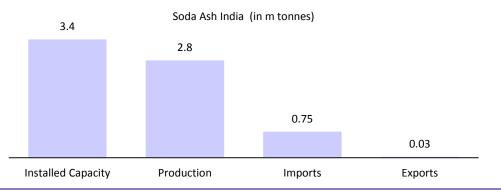
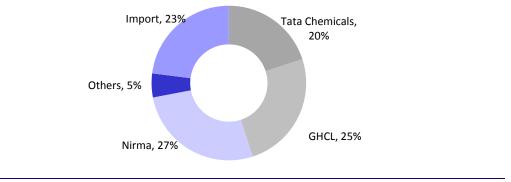


Exhibit 59: India soda ash scenario



Source: Company, Ministry of Commerce and Industry, various industry sources

Exhibit 60: Soda ash market share mix in India



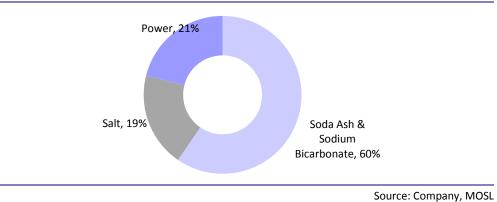
Source: Company and various industry sources

Tata Chemicals Europe likely to show steady performance

TCEHL (Tata Chemicals Europe Holdings Limited) revenue grew at a CAGR of 2% over FY12-17, driven by higher realization. Realization grew at a CAGR of 11% and sales volume declined at 8% per year. For TCEHL, the realization is a blended mix of soda ash, sodium bi-carbonate, salt and power. EBITDA declined at 4% per annum over FY12-17.

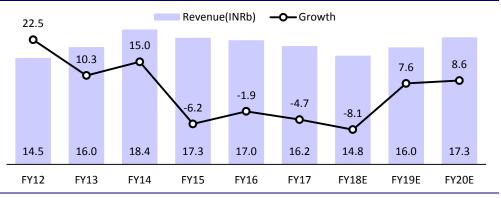
We expect revenue to grow at a CAGR of 2% over FY17-20 to INR17.3b. While sales volume would grow at a CAGR of 0.4%, realization would grow at a CAGR of 2%. EBITDA is expected to grow at a CAGR of 2.9% to INR2.5b. EBITDA/tonne is expected to improve from GBP45 in FY17 to GBP48 by FY20.





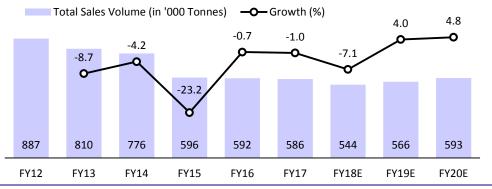
2 April 2018

Exhibit 62: TCEHL's revenue and growth



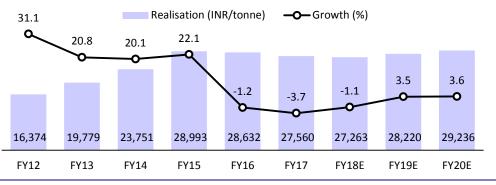
Source: Company, MOSL





Note: Europe sales – total sales volume includes soda ash and sodium bicarbonate Source: Company, MOSL





Note: Europe sales – realization includes soda ash, sodium bicarbonate, salt and power Source: Company, MOSL

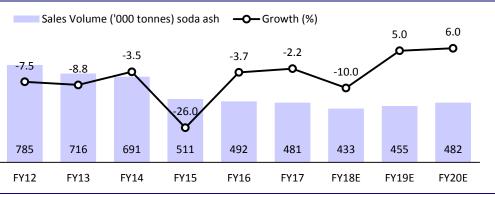


Exhibit 65: TCEHL's soda ash sales volume and growth

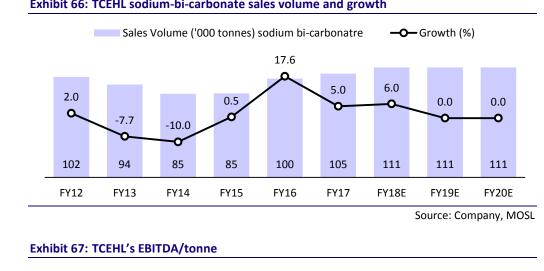
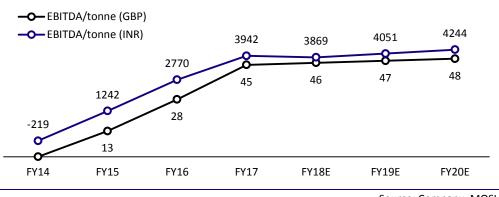


Exhibit 66: TCEHL sodium-bi-carbonate sales volume and growth



Source: Company, MOSL

Tata Chemicals North America operating performance likely to improve

Tata Chemicals North America (TCNA) revenue grew at a CAGR of 7% over FY12-FY17, driven by higher realization. Realization grew at a CAGR of 8% and sales volume declined at 1% per annum. EBITDA grew at a CAGR of 1% over FY12-17.

We estimate 5% CAGR in revenue over FY17-20 to INR37b. Sales volume would grow at a CAGR of 2% and realization at 2.7%. EBITDA is expected to grow at a CAGR of 9% to INR8b. EBITDA/tonne is expected to grow at a CAGR of 6.3% in INR terms to INR3,385 and at a CAGR of ~5% in USD terms to USD50.

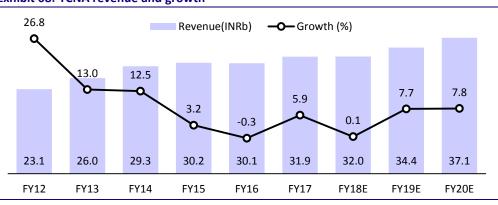
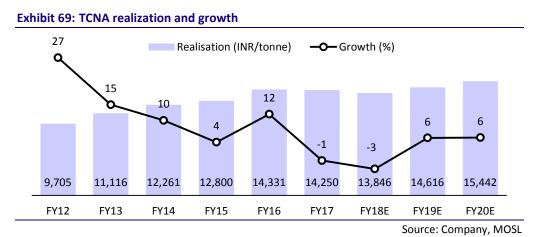
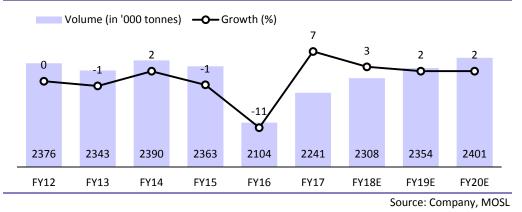


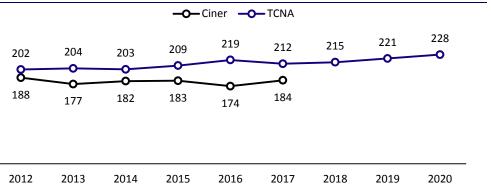
Exhibit 68: TCNA revenue and growth





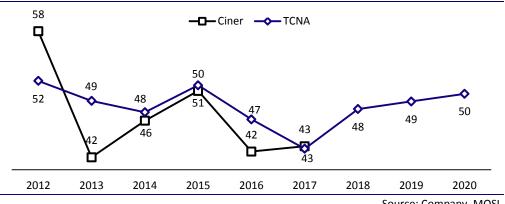






NOTE: Ciner is the world's largest natural soda ash producer, with a capacity of ~5.9m tonnes. Source: Company, MOSL





Tata Chemical Africa operating performance to improve

TCML's (Tata Chemicals Magadi Limited) revenue declined at 2% per annum over FY12-17, driven by lower sales volume. Realization grew at a CAGR of 5% and sales volume declined at 11% per annum. EBITDA declined at 14% per annum over FY12-17 to INR0.5b.

We expect revenue to grow at a CAGR of 10% over FY17-20 to INR7.8b. Sales volume would grow at a CAGR of 8% and realization at a CAGR of 2%. EBITDA is expected to grow at a CAGR of 33% to INR1.2b. EBITDA per tonne is expected to grow at a CAGR of ~23% over FY17-20 to INR3,453 (USD51).

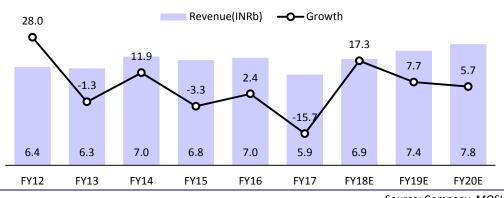
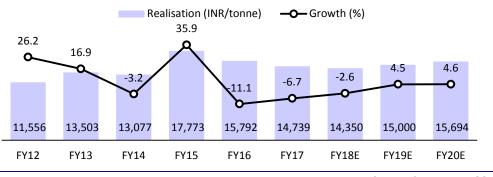


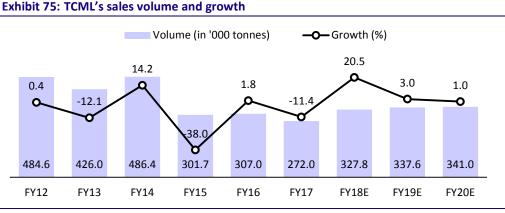
Exhibit 73: TCML's revenue and growth

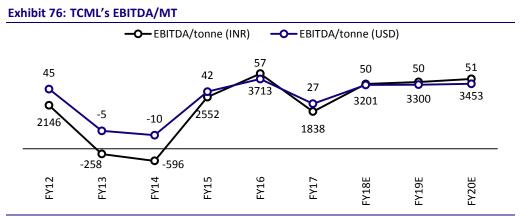
Source: Company, MOSL

Exhibit 74: TCML's realization/tonne and growth



Source: Company, MOSL

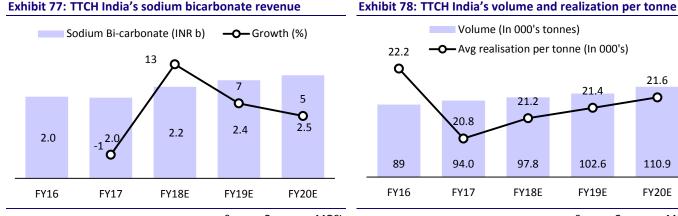




Source: Company, MOSL

World's fourth-largest sodium bicarbonate producer; sound long-term fundamentals

Sodium bicarbonate is commonly used as an ingredient in leather tanning, dyes and textiles, food additives, animal feed, pharmaceuticals, and air pollution control. TTCH is the world's third largest producer of sodium bicarbonate, with ~6% capacity share – it is the market leader in India and the UK. Sodium bicarbonate demand in India grew ~7% in FY16-17, as against ~4% growth in the previous year. The key drivers of demand included food, feed and other industrial applications. TTCH continues to believe in the long-term sound fundamentals of this business, and maintains a market share in excess of 50%. Going forward, the company plans to focus on developing and delivering new value-added offerings to its customers. Tata Chemicals Europe retained its market share in the UK with increasing exports volumes, which was also helped by the weakening sterling.



Source: Company, MOSL

Source: Company, MOSL

21.6

Ο

110.9

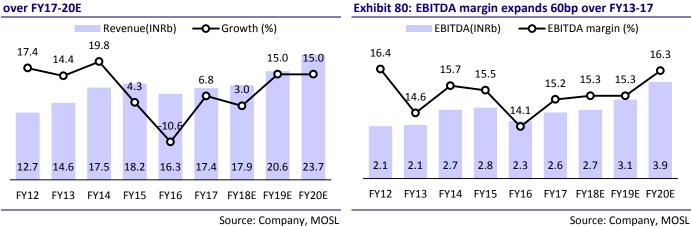
FY20E

Farm inputs continue to aid growth

New product launches to provide necessary boost

Rallis India – presence across the value chain

TTCH's subsidiary, Rallis India is one of India's leading agrochemical companies, with a comprehensive portfolio of crop protection products, plant growth nutrients, seeds, crop services and contract manufacturing. Rallis is closely connected to over 1m farmers through the Rallis Kisan Kutumb Program.

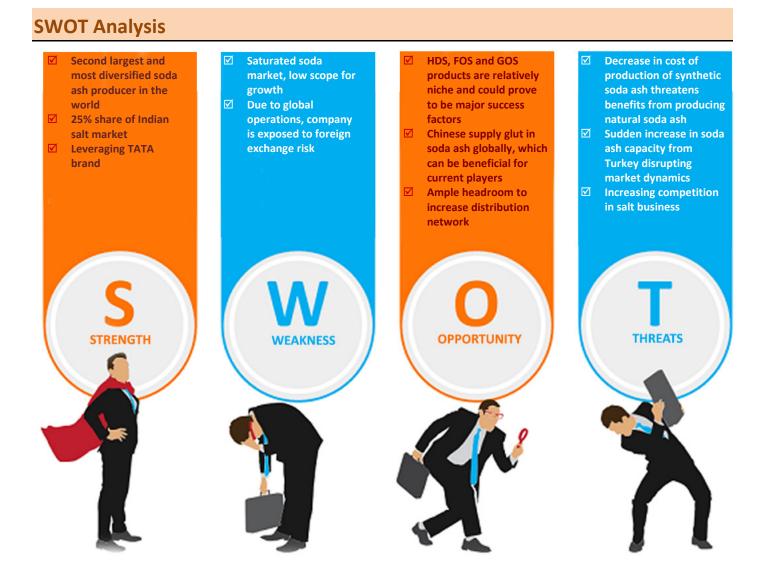


Metahelix – a focused Hybrid seeds company

Metahelix, a subsidiary of Rallis India, is an agricultural biotechnology company focusing on developing traits and technologies to improve productivity. Hybrid seeds and traits are commercialized. Metahelix also exports its seeds to selected countries. The current portfolio of products includes hybrid and research varieties of various field crops (such as paddy, maize, pearl millet and Bt cotton) and vegetable crops (such as tomato, hot pepper, okra, green peas and coriander). With significant improvements in the market shares, it has narrowed the gap with the second largest player in hybrid rice, and retained the second position in millet. In maize, it has significantly improved its position, with growth of 35% in sales volumes over the previous year. In addition to the strong business performance, Metahelix during the year further strengthened its brand presence, helping it to realize better prices in the market. On the seed production front, it strengthened its supply capabilities with the addition of newer locations. During the year, Metahelix launched 11 products.

Exhibit 79: Consolidated revenue to grow at a CAGR of 11% over FY17-20E

Tata Chemicals





Bull & Bear case

Bull case

- ☑ In the bull case, we have assumed higher sales growth (driven by an increase in price/volume) and operating margins.
- We had assumed 477bp EBITDA margin improvement over FY17-20 in the base case. However, on account of a decline in raw material prices in our bull case assumptions and benefits from economies of scale, we are assuming a 557bp YoY improvement over FY17-20.
- In the bull case, we assume that the company will not pass on the benefit of lower raw material prices, and thus, enjoy higher margins. We also estimate a drop in natural gas & coal prices and lower freight costs, benefiting (i) exports from North America, (ii) UK and India operations, a net importer.
- ☑ Further, the implied EV/EBITDA multiple is 10.9x FY20E v/s 9.7x in our base case, considering faster growth in the consumer business.
- ☑ Carrying the above assumptions, we get a bull case target price of INR1,147 (upside of 66%) based on FY20E EBITDA (v/s base case target price of INR940, upside of 36%).

Bear case

- ✓ In the bear case, we have assumed lower sales growth (driven by decrease in volume/ price) and operating margins over FY18-20.
- ☑ We are assuming EBITDA margin contraction of 170bp over FY18-20.
- ✓ We assume an increase in natural gas and coal prices beyond the current levels. Additionally, we assume that the company is unable to pass on the price increase, leading to margin compression.
- ✓ In our bear case, the implied EV/EBITDA multiple is 8.3x FY20E v/s 9.7x in our base case, assuming the consumer business fails to pick up.
- ✓ Carrying the above assumptions, we get a bear case target price of INR683 (downside of 1%) based on FY20E EBITDA (v/s base case target price of INR940, upside of 36%).

Exhibit 81: Scenario analy	ysis – bull case			Exhibit 82: Scenario analy	sis – bear case		
Bull Case	FY18E	FY19E	FY20E	Bear Case	FY18E	FY19E	FY20E
Sales (INR m)	1,05,804	1,16,775	1,29,190	Sales (INR m)	1,05,804	1,13,806	1,22,359
Sales growth (%)	-20.4	10.4	10.6	Sales growth (%)	-20.4	7.6	7.5
EBITDA (INR m)	22,854	25,924	28,809	EBITDA (INR m)	22,748	22,875	24,227
EBITDA Margin (%)	21.6	22.2	22.3	EBITDA Margin (%)	21.5	20.1	19.8
EBITDA growth (%)	2.8	13.4	11.1	EBITDA growth (%)	2.3	0.6	5.9
PAT (INR m)	9,958	12,088	14,030	PAT (INR m)	9,881	9,853	10,642
PAT Margin (%)	9.4	10.4	10.9	PAT Margin (%)	9.3	8.7	8.7
PAT growth (%)	0.3	21.4	16.1	PAT growth (%)	-0.5	-0.3	8.0
EPS (INR)	34.3	47.4	55.1	EPS (INR)	34.0	38.7	41.8
Implied EV/EBITDA (x)			10.9	Implied EV/EBITDA (x)			8.3
Target price (INR)			1,147	Target price (INR)			683
Upside/downside (%)			66	Upside/downside (%)			(1)

Source: Company, MOSL



Transition into a net debt-free entity by FY20

Core RoCE to improve from 11% to 18% over FY17-20

We expect TTCH to deliver revenue CAGR of 9.3% over FY18-20, with the specialty and consumer (S&C) business driving growth. The S&C business is expected to grow at a CAGR of 14% over FY18-20. We expect EBITDA margin to expand 467bp from 16.7% in FY17 to 21.4% in FY18 and remain at 21.5% over FY19-20. TTCH's exit from the fertilizer business and stake sale in other non-core assets should act as key cash generators for debt repayment. We expect TTCH's net debt-equity ratio to reduce from 0.7x in FY17 to almost nil by FY20. Consequently, interest coverage ratio should improve from 4.1x in FY17 to 10x in FY20. Adjusted PAT from continuing operations is likely to grow at 22% CAGR over FY18-20 to INR12.8b. We assume tax rate of 27% in FY18, and 28% in FY19 and FY20 against 24.7% in FY17. We expect core RoCE (excluding goodwill, investment and cash) to improve by 534bp to 18% by FY20 from 12.8% in FY18. We believe TTCH's performance should be gauged on core RoCE, as the company is in the process of selling non-core assets and investments – it will be deploying the high cash on its books in high RoCE businesses. Blended RoCE is likely to improve by 216bp to ~10% by FY20 from 7.8% in FY18.

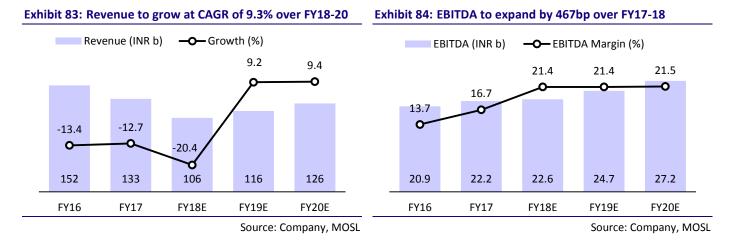


Exhibit 85: Transformation into a net debt-free company

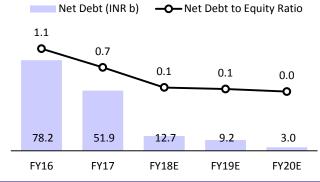
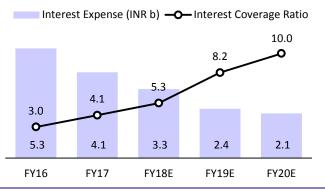


Exhibit 86: Debt reduction to lower interest expense

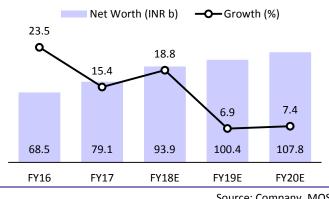


Source: Company, MOSL

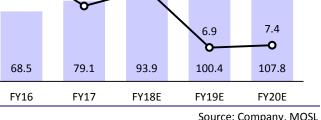
Tata Chemicals

MOTILAL OSWAL

Exhibit 87: Net worth to grow at ~11% CAGR over FY17-20



Source: Company, MOSL





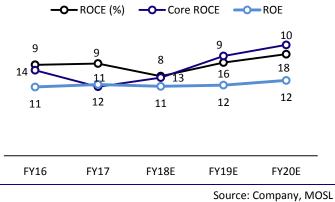
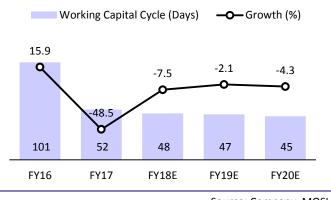


Exhibit 88: Improvement in WC cycle



Source: Company, MOSL

Exhibit 90: Adjusted PAT to grow at 22% CAGR over FY18-20

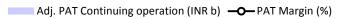




Exhibit 91: Key assumptions

Exhibit 91: Key assumptions						
Particulars (INR m)	FY15	FY16	FY17	FY18E	FY19E	FY20E
Standalone						
Inorganic Chemical-India						
Soda Ash India						
Volume (in tonnes)	683266	685000	708000	713664	724368.96	7,38,856.34
Growth (%)	-1%	0%	3%	1%	2%	2%
Realisation (INR per tonne)	21,952.36	23,389.93	21,882.34	21,904.23	22,561.35	23,238.19
Growth (%)	12%	7%	-6%	0%	3%	3%
Sodium Bi Carbonate India						
Volume (in tonnes)	88,066.00	89,000.00	94,338.00	99,054.90	1,01,036.00	1,03,056.72
Growth (%)	2%	1%	6%	5%	2%	2%
Realisation (INR per tonne)	21,154.59	22,220.43	20,713.75	22,370.85	23,489.39	24,194.07
Growth (%)	11%	5%	-7%	8%	5%	3%
Others (Inorganic Chemicals+ Cement)						
Revenue(INR m)	2,802	5,962	4,708	4,155	4,443	4,733
Growth (%)	-21%	113%	-21%	-12%	7%	7%
EBITDA-Inorganic Chemical-India	8,329	9,519	9,723	9,804	10,322	10,799
EBITDA margin (%)	26.1%	26.7%	28.2%	28.4%	28.4%	28.2%
Consumer (Salt+others)						
Revenue(INR m)	14974	16190	16037	14324	16182	18318
Growth (%)	15%	8%	-1%	-11%	13%	13%
EBITDA(INR m)	3,766	3,613	3,493	3,941	4,530	4,908
EBITDA margin (%)	25%	22%	22%	28%	28%	27%
TCNA						
INR/USD	61	65	67	64	66	68
Volume (in tonnes)	2362711	2103566	2241000	2308230	2354395	2401482
Growth (%)	-1%	-11%	7%	3%	2%	2%
Realisation (USD per tonne)	209	219	212	215	221	228
EBITDA/Tonne(USD)	51	47	43	48	49	50
TCEHL						
INR/GBP	99	99	88	84	86	88
Volume (in tonnes) (Soda ash+ Sodium	506000	F03000	F86000	F 4 4 2 0 0	ГСГОЛГ	F02117 7
bicarbonate)	596000	592000	586000	544200	565845	593117.7
Growth (%)	-14%	2%	8%	-3%	5%	6%
Realisation (GBP per tonne)	294	290	315	324	327	331
EBITDA/MT(GBP)	12.6	28.1	45.0	46.0	47.0	48.0
TATA Chemicals Africa						
Volume (in tonnes)	301686	307000	272000	327760	337592.8	340968.728
Growth (%)	-38%	2%	-11%	21%	3%	1%
Realisation (USD per tonne)	369	347	322	326	333	339
EBITDA/MT(USD)	42	57	27	50	50	51
Rallis India						
Revenue(INR m)	18218	16278	17380	17901	20587	23675
Growth (%)	4%	-11%	7%	3%	15%	15%
EBITDA	2827	2290	2634	2739	3150	3859
Margin (%)	15.5%	14.1%	15.2%	15.3%	15.3%	16.3%

Valuation and view

Initiating with Buy

Strategic transformation of business to drive value upward

TTCH is engaged in the manufacture of soda ash, consumer products and crop protection. It has taken strategic initiatives to: 1) rapidly grow the consumer business, including salt, pulses and spices via an expanded product portfolio, leveraging the Tata brand, strong distribution network of the salt business and strategic sourcing, 2) expand the portfolio, with the launch of new specialty and consumer (S&C) products, and 3) divest the regulated fertilizer business. We expect the share of S&C business to reach 33% by FY20, based on its existing product portfolio. Also, the launch of new products could act as a catalyst to drive the contribution higher. The company's future investments are also clearly directed toward higher-RoCE businesses (20-25%), such as investment of ~INR3b each in the highly dispersible silica and nutraceuticals businesses. These products are developed in-house, and the company plans to launch more products.

We have valued TTCH based on SOTP (refer exhibit 92) and arrived at a target price of INR940 (implied EV/EBITDA is 9.7x). The stock has traded at a one-year forward EV/EBITDA of 7.5x (average) for the last five years. Considering the increased focus/business transformation toward a higher-RoCE segment (specialty & consumer) and the divestment of a regulated business (fertilizer), we believe it is fair to assign ~30% premium to its five-year average EV/EBITDA. Net debt as on FY17 stood at ~INR52b. We believe the company should become net-debt-free by FY20 via (i) cash generated from the divestment of the fertilizer business, (ii) sale of investment in Tata Global Shares, (iii) internal accruals, and (iv) potential sale of investment in group companies. Average free cash flow yield over FY19-20 is estimated at ~9%. We initiate coverage on TTCH with a **Buy** rating.

The stock trades at 16x FY19E EPS of INR44 and 13.8x FY20E EPS of INR50.3, and at 8.4x FY19E EBITDA of INR24.7b and 7.4x FY20E EBITDA of INR27.2b. On a P/E and EV/EBITDA basis, the company has historically traded at a five-year average of 12.5x and 7.5x, respectively.

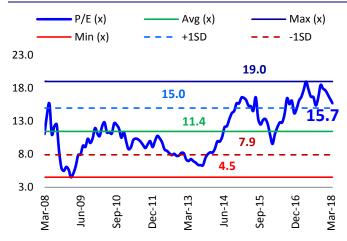
Exhibit 92: BUY with an upside of 36% (INR m)

Business	Methodology	Metrics	FY20	Multiple (x)	EV/ MCAP (INR m)
Commodity					
Inorganic Chemical India (Soda Ash & others) (Excluding Salt)	EV/EBITDA (x)	EBITDA	6,445	7	45,118
Tata Chemicals North America	EV/EBITDA (x)	EBITDA	8,129	10	81,290
Tata Chemicals Europe and Tata Chemicals Africa	EV/EBITDA (x)	EBITDA	3,694	6	22,167
Sub Total			18,269		148,575
Speicalty and Consumer					
Consumer (Incl Salt)	EV/EBITDA (x)	EBITDA	4,908	17	83,430
Rallis India Ltd (Tata Chemicals hold 50%)	20% discount to Current MCAP	Attributable Mcap	45,603	0.8	18,241
Total EV					250,246
Less: Debt FY20					40,523
Less: Minority Interest					26,239
Add: Cash & Liquid investment					42,586
Add: Value of quoted Investment		Market Capitalisation	16,843	0.8	13,475
Target Mcap					239,545
Outstanding share (m)					255
Target Price (INR)					940
CMP (INR)					692
Upside (%)					35.8%
Implied EV					263,721
Implied EV/EBITDA (X)					9.7

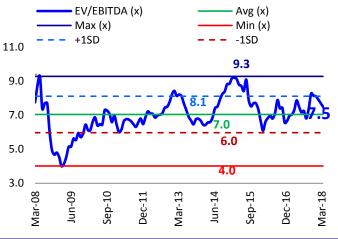
Exhibit 93: Peer Group comparison

Company Name	МСар	P/E(x)			EV/EBITDA (x)			RoE(%)		
	(USD b)	FY18E	FY19E	FY20E	FY18E	FY19E	FY20E	FY18E	FY19E	FY20E
Consumer										
Dabur India Ltd	8.8	44.3	37.1	32.0	34.5	28.5	24.5	25.4	26.7	28.6
Colgate-Palmolive India Ltd	4.4	44.1	37.4	31.2	25.9	22.6	19.2	49.9	55.5	61.9
Hindustan Unilever Ltd	44.4	58.8	48.3	40.8	40.5	33.4	28.3	76.5	91.4	107.9
ITC Ltd	47.7	28.9	25.4	22.6	19.0	16.7	14.7	22.8	23.8	24.8
Britannia Industries Ltd	9.2	60.6	48.6	38.8	40.6	32.5	25.9	33.9	35.8	40.1
Zydus Wellness	0.7	38.1	32.0	28.1	36.8	31.3	27.7	20.2	20.3	20.6
Pidilite Industries Ltd	7.4	53.3	45.6	39.7	33.7	29.1	25.0	24.2	24.5	24.7
Soda Ash										
GHCL Ltd	0.4	7.7	7.3	6.5	6.1	5.0	4.6	22.1	19.6	18.5
Ciner Resources LP	0.6	11.1	11.2	10.9	5.8	5.8	6.3	NA	NA	NA
FMC Corp	10.3	13.8	12.5	11.2	10.8	10.0	9.3	20.3	17.1	16.2









Source: Company, MOSL

Key risks

New capacity addition from Turkey

New soda ash capacity addition from Turkey would affect the market dynamics. Turkey's annual production capacity is expected to increase from 2.9 million tonnes in 2015 to nearly 5.4 million tonnes by 2018.

Governmental policy risks

There is currently an anti-dumping scheme in place by the Indian government against imports of soda ash. This is keeping prices stable and is avoiding the downward pressure on the prices. If this scheme is removed due to other political factors, there could be an adverse impact on TTCH's margins.

Operational risks

TTCH is a global organization, and there are a multitude of labor laws, environmental regulations and other factors for every country that TTCH operates in. There are operational risks for every country that can have an impact on the company's operations.

Foreign exchange risk

TTCH is a global organization that has sales in a number of different countries with a variety of currencies in play. The company has to hedge and manage risks relating to currency fluctuations, which could otherwise have a significant impact on the accounts of the company.

Management overview

R Mukundan, Managing Director and CEO

Mr Mukundan is an Engineer from IIT Roorkee. He joined the Tata Administrative Service in 1990, after completion of MBA from FMS, Delhi University. He is also an alumnus of the Havard Business School. During his 26-year career with the Tata group, he has held various responsibilities across the Chemical, Automotive and Hospitality sectors. He serves on executive committees of various industry forums – the Confederation of Indian Industry, Bombay Chamber of Commerce and Industry, Employers' Federation of India, All India Management Association, etc.

John Mulhall, Chief Financial Officer

Mr Mulhall joined Tata Chemicals in 2007 as the European Finance Director of its recently acquired subsidiary, Brunner Mond (UK), followed by positions in Tata Chemicals North America Inc, (VP and CFO) and Tata Chemicals International Pte in Singapore (CFO). He relocated to Mumbai in 2015. Prior to Tata Chemicals, Mr Mulhall worked in Finance for various UK manufacturing companies. He is a graduate of the University of Strathclyde and a member of the Institute of Chartered Accountants of Scotland.

Rackanchath Nanda, Chief Human Resources Officer

Mr Nanda started his career with the Murugappa Group in Chennai, where he spent nearly 15 years in a variety of roles – in Human Resources and also as the Head of Manufacturing and Commercial functions for the foods business. He has also led the Human Resource function for Amara Raja Group and the Dubai-based Landmark Group. Mr Nanda joined the Tata group in 2006 with his first role being at Tata Communications. He moved to Tata Chemicals in May 2012 and currently oversees the global functions of Human Resources. Mr Nanda has completed his postgraduation in human resources and has also done several professional certifications and executive development programs.

Rajiv Chandan, General Counsel & Company Secretary

Mr Chandan heads the Legal, Company Secretarial and Corporate Governance functions at Tata Chemicals. His experience is spread across diverse industries, including the Paper, Automobiles, Logistics, Cement, Chemicals, FMCG and Fertilizer sectors. Before joining Tata Chemicals, he was Vice President – Legal and Company Secretary, Lafarge Cement, India. Mr Chandan is a fellow member of the Institute of Company Secretaries of India, and has a Masters' degree in Commerce and a Law degree from the University of Mumbai.

Financials and valuations

Consolidated - Income Statement							· · · ·	R Million)
Y/E March	FY13	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
Total Income from Operations	150,343	162,274	175,708	152,202	132,889	105,804	115,508	126,324
Change (%)	7.0	7.9	8.3	-13.4	-12.7	-20.4	9.2	9.4
Total Expenditure	128,715	144,178	154,065	131,285	110,653	83,162	90,789	99,164
% of Sales	85.6	88.8	87.7	86.3	83.3	78.6	78.6	78.5
EBITDA	21,628	18,096	21,643	20,917	22,237	22,642	24,719	27,160
Margin (%)	14.4	11.2	12.3	13.7	16.7	21.4	21.4	21.5
Depreciation	5,339	4,712	4,631	5,261	5,347	5,258	5,413	5,771
EBIT	16,289	13,384	17,012	15,657	16,889	17,384	19,306	21,388
Int. and Finance Charges	4,639	5,795	4,609	5,255	4,112	3,303	2,358	2,136
Other Income	4,178	1,424	1,180	1,253	1,661	1,058	2,310	2,526
PBT bef. EO Exp.	15,828	9,013	13,582	11,655	14,439	15,139	19,258	21,779
EO Items	-6,699	-14,202	-1,997	0	0	14,255	0	0
PBT after EO Exp.	9,129	-5,189	11,585	11,655	14,439	29,395	19,258	21,779
Total Tax	3,025	2,888	3,511	2,484	3,573	7,937	5,392	6,098
Tax Rate (%)	33.1	-55.7	30.3	21.3	24.7	27.0	28.0	28.0
Minority Interest	2,100	2,243	2,109	2,207	2,282	2,465	2,662	2,875
Reported PAT - Continuing Ops.	4,004	-10,320	5,965	6,964	8,583	18,993	11,203	12,805
Adjusted PAT - Continuing Ops.	8,483	11,786	7,356	6,964	8,583	8,587	11,203	12,805
Change (%)	-10.9	38.9	-37.6	-5.3	23.3	0.0	30.5	14.3
Margin (%)	5.6	7.3	4.2	4.6	6.5	8.1	9.7	10.1
Reported PAT - Discontinuing Ops.	0	0	0	742	1,348	1,217	0	0
Reported PAT	4,004	-10,320	5,965	7,706	9,931	20,210	11,203	12,805
Adjusted PAT	8,483	11,786	7,356	7,706	9,931	9,803	11,203	12,805
Consolidated - Balance Sheet Y/E March	FY13	FY14	FY15	FY16	FY17	FY18E	(INI FY19E	R Million) FY20E
Equity Share Capital	2,548	2,548	2,548	2,548	2,548	2,548	2,548	2,548
Total Reserves	61,587	53,107	52,969	65,995	76,534	91,398	97,883	105,294
Net Worth	64,136	55,655	55,517	68,543	79,082	93,946	100,431	107,843
Minority Interest	5,361	6,552	6,735	25,985	26,239	26,239	26,239	26,239
Total Loans	83,840	83,931	83,788	90,904	70,719	49,394	44,928	40,523
Deferred Tax Liabilities	-56	1,910	2,062	12,348	12,144	12,144	12,144	12,144
Capital Employed	153,281	148,048	148,102	197,780	188,184	181,724	183,742	186,749
Gross Block	106,053	112,504	120,084	120,671	117,703	116,672	124,639	132,632
Less: Accum. Deprn.	65,282	69,677	76,081	5,490	9,839	15,097	20,510	26,281
Net Fixed Assets	40,771	42,827	44,003	115,181	107,864	101,575	104,129	106,351
Goodwill on Consolidation	66,287	67,243	69,586	17,619	16,984	16,984	16,984	16,984
Capital WIP	5,916	4,676	1,893	5,015	4,791	4,958	4,992	4,998
Current Investments	13	67	55	94	2,205	2,205	2,205	2,205
Total Investments	5,997	4,409	4,429	21,879	27,907	21,407	21,407	21,407
Curr. Assets, Loans&Adv.	81,830	81,705	88,109	83,769	78,269	69,991	72,467	76,638
Inventory Account Receivables	16,018 34,401	16,490 32,409	26,264 34,267	19,319 35,656	13,809 20,884	10,004 15,943	10,921 17,089	11,944 17,997
Cash and Bank Balance								
Loans and Advances	18,414	17,530	14,643	12,654	16,654	34,522	38,682	40,381
	12,997	15,276	12,936	16,140	26,923	9,522	5,775	6,316
Curr. Liability & Prov.	47,519	52,812	59,918	45,682	47,630	33,192	36,236	39,630
Account Payables	15,572	13,992	18,891	16,818	14,427	10,592	11,563	12,646
Other Current Liabilities	14,753	17,080	16,341	7,923	11,462	5,290	5,775	6,316
Provisions	17,194	21,740	24,686	20,941	21,741	17,310	18,898	20,667
Net Current Assets	34,311	28,893	28,191	38,086	30,639	36,799	36,231	37,008
Appl. of Funds	153,281	148,048	148,102	197,780	188,184	181,724	183,742	186,749

Financials and valuations

Ratios								
Y/E March	FY13	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
Basic (INR)								
EPS	33.3	46.3	28.9	27.3	33.7	33.7	44.0	50.3
Cash EPS	54.2	64.7	47.0	48.0	54.7	54.3	65.2	72.9
BV/Share	251.7	218.4	217.9	269.0	310.3	368.7	394.1	423.2
DPS	10.0	10.0	12.5	10.0	11.0	13.8	15.8	18.1
Payout (%)	75.7	-29.0	65.7	45.0	40.2	21.7	42.1	42.1
Valuation (x)	, 5.7	25.0	05.7	15.0	10.2	21.7		12.1
P/E			24.0	25.3	20.5	20.5	15.7	13.8
Cash P/E			14.7	14.4	12.7	12.7	10.6	9.5
P/BV			3.2	2.6	2.2	1.9	1.8	1.6
EV/Sales			1.4	1.8	1.9	2.0	1.8	1.6
EV/EBITDA			11.7	13.4	11.4	9.5	8.4	7.4
Dividend Yield (%)	1.4	1.4	1.8	1.4	1.6	2.0	2.3	2.6
FCF per share	-14.3	68.4	27.8	64.6	113.3	163.0	63.0	54.9
Return Ratios (%)	11.5	00.1	27.0	0 110	113.5	105.0	05.0	5115
RoE	13.3	19.7	13.2	11.2	11.6	11.3	11.5	12.3
RoCE	9.7	16.0	9.1	8.9	9.0	7.8	9.1	9.9
Core RoCE	23.9	38.5	22.2	14.0	11.3	12.8	16.3	18.1
RolC	9.4	17.0	9.5	8.6	8.6	9.8	11.6	12.9
Working Capital Ratios	5.1	17.0	5.5	0.0	0.0	5.0	11.0	12.5
Fixed Asset Turnover (x)	1.4	1.4	1.5	1.3	1.1	0.9	0.9	1.0
Asset Turnover (x)	1.0	1.1	1.2	0.8	0.7	0.6	0.6	0.7
Inventory (Days)	101	96	137	119	122	119	119	119
Debtor (Days)	84	73	71	86	57	55	54	52
Creditor (Days)	98	82	99	103	127	126	126	126
Leverage Ratio (x)		02		105	12,	120	120	120
Current Ratio	1.7	1.5	1.5	1.8	1.6	2.1	2.0	1.9
Interest Cover Ratio	3.5	2.3	3.7	3.0	4.1	5.3	8.2	10.0
Net Debt/Equity	1.0	1.2	1.2	1.1	0.7	0.13	0.04	-0.02
	2.0				017	0.120	0.01	0.01
Consolidated - Cash Flow Statement								(INR
Y/E March	FY13	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
OP/(Loss) before Tax	9,130	-5,189	11,585	12,935	16,522	15,139	19,258	21,779
Depreciation	5,339	4,712	4,631	5,714	5,522	5,258	5,413	5,771
Interest & Finance Charges	4,468	5,133	4,241	5,946	4,645	2,245	48	-390
Direct Taxes Paid	-3,584	-2,307	-3,612	-3,645	-4,516	-7,937	-5,392	-6,098
(Inc)/Dec in WC	-17,107	3,795	-11,245	-652	12,103	11,708	4,728	922
CF from Operations	-1,755	6,144	5,600	20,298	34,276	26,414	24,055	21,983
Others	3,965	17,232	7,136	3,022	1,033	14,255	0	0
CF from Operating incl EO	2,210	23,376	12,736	23,319	35,309	40,669	24,055	21,983
(Inc)/Dec in FA	-5,842	-5,938	-5,649	-6,865	-6,429	863	-8,000	-8,000
Free Cash Flow	-3,632	17,438	7,087	16,454	28,880	41,532	16,055	13,983
(Pur)/Sale of Investments	201	-59	-29	-90	-2,064	6,500	0	0
Others	3,772	390	928	-337	588	1,058	2,310	2,526
CF from Investments	-1,869	-5,607	-4,750	-7,292	-7,905	8,421	-5,690	-5,474
Inc/(Dec) in Debt	8,966	-9,894	-3,417	-6,098	-14,117	-21,324	-4,466	-4,405
Interest Paid	-4,641	-5,798	-4,430	-6,202	-4,456	-3,303	-2,358	-2,136
Dividend Paid	-3,033	-2,961	-3,026	-3,820	-3,056	-4,129	-4,719	-5,394
Others	0	0	0	-1,897	-1,776	-2,465	-2,662	-2,875
CF from Fin. Activity	1,292	-18,653	-10,873	-18,017	-23,404	-31,221	-14,205	-14,810
Inc/Dec of Cash	1,633	-883	-2,887	-1,989	4,000	17,869	4,159	1,700
Opening Balance	16,780	18,414	17,530	14,643	12,654	16,654	34,522	38,682
Closing Balance	18,414	17,530	14,643	12,654	16,654	34,522	38,682	40,381
	,							

REPORT GALLERY

RECENT INITIATING COVERAGE REPORTS



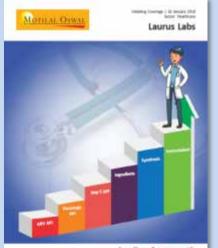


and some of the state of the state and Angel Plata Array er wei seledent ist ertre Menings Augustions Manisterer stadt ist für bei page of the Menins ist August



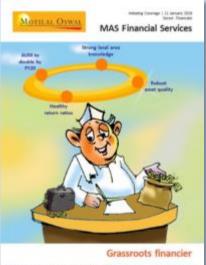
1 (1961 A-107 2746 (10) HOM (16) who all this last place all the Approach decision





Angling for growth

states front page Tals Newbords India 4 net with added to be the group inspected the larger hand, or the bad page of the Research Republi 100



And the lock from the state of the local that defines to said at the last page of the Descent Depart.

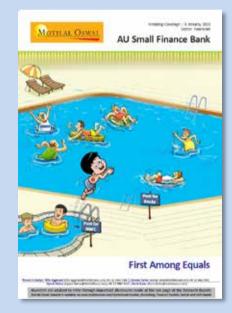


Magical times ahead!

ment bande - Banard bander Providere barbart and an or best bottet. Dass Mark - Banard Banger (Bang Dasspill and Banard and Banard - Banard and Acceleration of the second sec



1041-012-001402 -0-140-008-004 survey at start and start and page of the Tennes of Aligants, and Antion Discourse, Names Rooms, Name and Mill Same,





Lond André André André (La composition de la compositione de l

We have forward looking estimates for the stock but we refrain from assigning recommendation arch Analyst shall within 28 days of the inconsistency, take app measures to make the recommendation consistent with the investment rating legend. nvestment rating legend, the Re

Disclosures:

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Motilal Oswal Securities Ltd. (MOSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Investment Advisory Services, Depository participant services & distribution of various financial products. MOSL is a subsidiary company of Motilal Oswal Securities Link (NC) is a defined in the Regulatoris, is engaged in the business of providing stock broking services, a whole and the regulatoris is engaged in the business of providing stock broking services, a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a distribution of various financial products. MOSL is subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a distribution of various financial products. MOSL is subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a distribution of various financial products. MOSL is a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a distribution of various financial products. MOSL is a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a distribution of various financial products. MOSL is registered of India (SEB) and is a registered Trading Member with National Stock Exchange of India Ltd. (MSE) and Bombay Stock Exchange Linited (BSE), Metropolitan Stock Exchange Of India Ltd. (MSE) for its stock broking activities & is Depository participant with Central Depository Services Linited (CDSL) & National Securities Depository Linited (NSDL) and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products. Details of associate entities of Motilal Oswal Securities Linited are available on the website at http://onlinereports.motilaloswal.com/Dormant/documents/Associate%20Details.pdf Regulatory Enquiries against Motilal Oswal Securities Limited by SEBI:

SEBI pursuant to a complaint from client Shri C.R. Mohanraj alleging unauthorized trading, issued a letter dated 29th April 2014 to MOSL notifying appointment of an Adjudicating Officer as per SEBI regulations to hold inquiry and adjudge violation of SEBI Regulations; MOSL requested SEBI to provide all documents, records, investigation report relied upon by SEBI which were referred in Show Cause Notice. The matter is closed and MOSL had to pay Rs. 2 lakhs towards penalty for misplacement of original POA of client.

MOSL, it's associates, Research Analyst or their relative may have any financial interest in the subject company. MOSL and/or its associates and/or Research Analyst may have beneficial ownership of 1% or more securities in the subject company at the end of the month immediately preceding the date of publication of the Research Report. MOSL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn bokerage or other compensation or act as a market marker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report. Research Analyst may have served as director/officer, etc. in the subject company in the last 12 month period. MOSL and/or its associates may have received any compensation from the subject company in the past 12 months.

In the last 12 months period ending on the last day of the month immediately preceding the date of publication of this research report, MOSL or any of its associates may have: a) managed or co-managed public offering of securities from subject company of this research report,

b

received compensation for investment banking or merchant banking or brokerage services from subject company of this research report, received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report. d)

Subject Company may have been a client of MOSL or its associates during twelve months preceding the date of distribution of the research report.

MOSL and it's associates have not received any compensation or other benefits from the subject company or third party in connection with the research report. To enhance transparency, MOSL has incorporated a Disclosure of Interest Statement in this document. This should, however, not be treated as endorsement of the views expressed in the report. MOSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOSL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions

Terms & Conditions:

This report has been prepared by MOSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOSL will not treat recipients as customers by virtue of their receiving this report.

Analyst Certification The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Disclosure of Interest Statement

Tata Chemicals No

Analyst ownership of the stock

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com, Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOSL research activity and therefore it can have an independent view with regards to subject company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

For Hong Kong: This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Cortinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg No. INHOD0000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors". Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from which they believe the believe the base of the professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from which they believe the base of the professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from which the professional investor and will be engaged only with professional investors." registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S. Molial Oswal Securities Limited (MOSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts), and under applicable state laws in the United States. In addition MOSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional investors". This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities and Exchange Card finator from registration provided by Rule 15a-6 of the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S. Securities and Exchange Card finator in conduct business with Institutional Investors based in the U.S. Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provision of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

Unbillial Oswal Capital Markets Singapore Pte Limited is acting as an exempt financial advisor under section 23(1)(f) of the Financial Advisers Act(FAA) read with regulation 17(1)(d) of the Financial Advisors Regulations and is a subsidiary of Motilal Oswal Securities Limited in India. This research is distributed in Singapore by Motilal Oswal Capital Markets Singapore Pte Limited and it is only directed in Singapore to accredited investors, as defined in the Financial Advisers Regulations and the Securities and Futures Act (Chapter 289), as amended from time to time. In respect of any matter arising from or in connection with the research you could contact the following representatives of Motilal Oswal Capital Markets Singapore Pte Limited:

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document Including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Cartain transactions - including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness of fairness of the information and opinions contained in this document. The presentes the right to make modifications and alternations to this statement as may be required from time to time at endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alternations to this statement as may be required from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. The precision that is advisor to advected the valuable for all investors. Cartain transaction the tail is advected for the securities of united to the transparency of the view expressed in the report. This information is subject to change without any prior approval. MOSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. The recipient should take this into account thas have involved available for all investors as a separate, distinct and independent of each other. The recipient should take this into account thas have not prior than the advected that is advected the valuable in unbicky accessible media or develored through and yies of MOSL. The views expressed is the approximate than the advected the analyst and the advected through analysis and the analyst and the advected through advecte into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistribution or passed on, directly or indirectly, to any other person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, availability or use would be contrary to law, regulation or which would subject MOSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai-400 064. Tel No: 022 3080 1000. Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No.:022-30801085.

Registration details of group entities.: MOSL: SEBI Registration: INZ000158836 (BSE/NSE/MSE); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN 17397. Investment Adviser: INA000007100. Motilal Oswal Asset Management Company Ltd. (MOAMG): PMS (Registration No.: INP00000670) offers PMS and Mutual Funds products. Motilal Oswal Wealth Management Ltd. (MOAMG): PMS (Registration No.: INP00000409) offers wealth management solutions. *Motilal Oswal Securities Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance and IPO products. * Motilal Oswal Commodities Broker Pvt. Ltd. offers Commodities Products. * Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. offers Real Estate products. * Motilal Oswal Private Equity Investment Advisors Pvt. Ltd. offers Private Equity products