Tatva Chintan Pharma Chem

Speciality Chemicals

Core business normalising; new products pipeline maturing

In FY23, Tatva Chintan (TATVA) earnings were hurt from a downcycle in its SDA business, which should resume growing FY24 onwards. The addition of a significant new customer to its SDA has the potential to propel growth in the near future. PASC segment will likely reap the benefit of products under qualification and long-term growth on the back of a robust pipeline and cleaner chemistry positioning. Electrolyte salt business anticipates inflection from CY25, as its customers win commercial projects, alongside TATVA establishing itself as a supplier for energy storage solutions in super-capacitor, zinc and sodium batteries. Flame retardant customers have indicated start of purchase soon, finding strength in bromine prices recovering, and China's TBBA inventory normalising.

We incorporate TATVA's fund raise, and equity dilution into our estimates and cut our FY24E EBITDA by 7.5%, but increase FY25E by 3.3%. Our EPS cuts of 22%/5% for FY24E/FY25E entail the equity dilution hit. Consequently, our revised target price stands at INR 2,000 (earlier INR 2,110) with an unchanged 30x FY25E PE multiple. Maintain **BUY**. **Risks:** 1) Failure to qualify for large PASC products, and add new customer in SDA. 2) Lower-than-expected margins.

SDA revenues to recover; likely impetus from customer addition

SDA revenues through the past six quarters were hurt from a slump in China's commercial vehicles (CV) sales, and de-inventorisation by catalyst producers (**refer case studies 2&3**). China's CV volumes have been seeing a slight resurgence (FY24-TD), and will likely continue building on gradually. Separately, TATVA is going through 'qualification' with a large customer and anticipates commercial supplies from early-24 – this should enable thicker SDA revenues. TATVA's earnings earlier were mired in higher-cost inventories, now being liquidated, and infrequent operation of assemblies, which will likely benefit from volumes recovery.

European Union (EU) has proposed Euro-7 norms – stricter pollution norms for heavy duty vehicles, which could potentially drive higher sales for SDAs (new norms require ~40–50% more SDA/vehicle). Euro-7 is likely to see implementation from Jul'27. TATVA is also in the process of developing SDAs for a circular economy (plastic wastes); and ultra-purity chemicals for semi-conductor application – these have high option value, in our view.

Financial Summary

Y/E March (INR mn)	FY22A	FY23A	FY24E	FY25E
Net Revenue	4,336	4,236	5,624	8,567
EBITDA	1,082	606	1,046	2,146
EBITDA Margin (%)	25.0	14.3	18.6	25.1
Net Profit	959	491	630	1,563
EPS (Rs)	43.3	22.1	26.9	66.8
EPS % Chg YoY	66.3	(52.6)	31.2	148.1
P/E (x)	36.6	77.2	58.8	23.7
EV/EBITDA (x)	31.9	60.0	34.4	17.2
RoCE (%)	21.7	8.1	8.6	16.9
RoE (%)	30.0	9.2	9.8	18.6

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Market Data

Market Cap (INR)	37bn
Market Cap (USD)	445mn
Bloomberg Code	TATVA IN
Reuters Code	TATV BO
52-week Range (INR)	2,624 /1,582
Free Float (%)	21.0
ADTV-3M (mn) (USD)	1.0

Price Performance (%)	3m	6m	12m
Absolute	(12.8)	(4.7)	(37.0)
Relative to Sensex	4.6	15.8	17.3

ESG Disclosure	2021	2022	Change
ESG score	-	-	-
Environment	-	-	-
Social	-	-	-
Governance	-	-	-

Note - Score ranges from 0 - 100 with a higher score indicating higher ESG disclosures.

Source: Bloomberg, I-sec research

Earnings Revisions (%)	FY24E	FY25E
Revenue	(1.2)	(1.5)
EBITDA	(7.5)	3.3
EPS	(22.2)	(5.2)

Previous Reports

06-05-23: Q4FY23 results review

05-11-22: Q2FY23 results review

PACS new products pipeline maturing; could drive growth in FY25E

TATVA has been focusing on applying its strength of cleaner processes in producing new products. Company is shifting its largest product monoglyme to continuous flow manufacturing, thereby reducing cost, improving impurity profile, and applying cleaner/greener processes preferred by MNCs.

TATVA has begun supplying the-much-awaited earth metal extraction chemical for its large export customer. Company has been sharing commercial-scale samples of its early-stage agrochemical and pharmaceuticals intermediates from Q2FY24. It anticipates to commence production of agrochemical intermediate from early-24; and pharmaceutical intermediate from early-25.

We would closely watch TATVA's PASC business. We believe the segment offers strong sustained growth opportunity as innovators will prefer intermediate produced from cleaner chemistries, which could become a sustained competitive advantage for TATVA.

Electrolyte salt business to see inflection from CY25

TATVA has significantly invested in developing organic electrolyte salt for super-capacitor batteries, which are expected to see increased adoption in both automotive and renewal energy application. It has also developed electrolyte salt for zinc and sodium batteries, which are preferred solutions for energy storage systems for renewal energy.

Company has been working with four customers, and has supplied samples to another two. TATVA anticipates that two of its customers are now applying these solutions for commercial projects, which should drive revenue growth. We believe TATVA is creating a niche for itself in non-lithium electrolyte solutions.

FY22–25E EBITDA/EPS to grow at 25.6%/15.6% CAGR

We expect 25.5% revenue CAGR for TATVA over FY22–25E, notwithstanding disruption in FY23. We see growth being driven by recovery in SDA (CAGR: 15.6%), PASC (35%) and electrolyte salt (112%, on low base). Gross profit margin is unlikely to reach the 55% levels of FY22 as SDA –highest margin business– contribution will likely be ~40% (vs. 52% in FY22) during the forecast period; and flame retardant (new segment) has lower margins versus company average. EBITDA margin can attain historical levels of 25% due to operating leverage. Tax rate is likely to increase as Dahej-1 plant tax benefit has shifted to 50% rebate (vs. 100% earlier).

ICICI Securities

SDA: Past the worst; revenue growth from potential customer

Underlying growth driver for SDA intact

Structuring Directing Agent (SDA) are high-purity quaternary salt that helps in the formation of channels/pores during the synthesis of zeolites (basically, template for selective catalyst production). High purity and consistent quality SDAs are essential for the synthesis of precision zeolites. Zeolites help in trap NOx in their pores, and break it into less/non-harmful exhausts such as nitrogen and water. To achieve this high purity SDA, TATVA uses a proprietary electrolysis process, which creates an entry barrier for new entrants.

SDA production for auto-catalyst (selective catalytic reduction) is a highly controlled ecosystem with a few major catalyst producers (BASF, Johnson Matthey, Umicore among major ones); and runs the risk of performance guarantees. Therefore, the entire ecosystem works on a very strict approval process, and entry for new players is not only limited but also long-drawn. We understand, globally, only two players dominate SDA production for auto-catalysts – SACHEM (US) and TATVA (India).

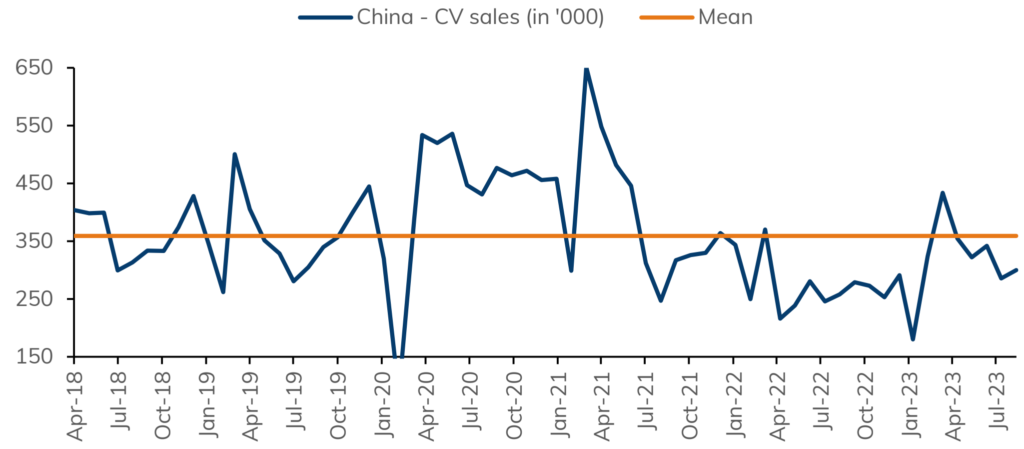
As per report (link), global automotive selective catalytic reduction (SCR) market is USD 13.9bn in CY23, and likely to reach USD 20.9bn by CY30 (CAGR of 6.1%). Catalytic reduction technology is primarily used to reduce harmful emission, such as CO_2 and NOx, from diesel engines. The technology provides effective solution to meet stringent regulation (Euro-VI) while maintaining vehicle performance and fuel efficiency. The heavy commercial vehicle segment is expected to dominate demand for SCR, and stringent pollution norms imposed on buses and trucks are driving the demand.

China CV sales drop and catalyst producers destocking underline FY23 washout

China CV average monthly sales were 361k in FY22 (Apr'21 to Mar'22). There was immense expectation for a China recovery, and easing of covid norms in FY23. However, China CV average monthly sales dropped to just 273k during FY23, forcing distribution to sell existing inventory, and freezing new purchases due to weak near-term outlook. Our case studies (**particularly 2&3**) highlight that catalyst manufacturers are focused at generating higher FCF, and reducing inventory.

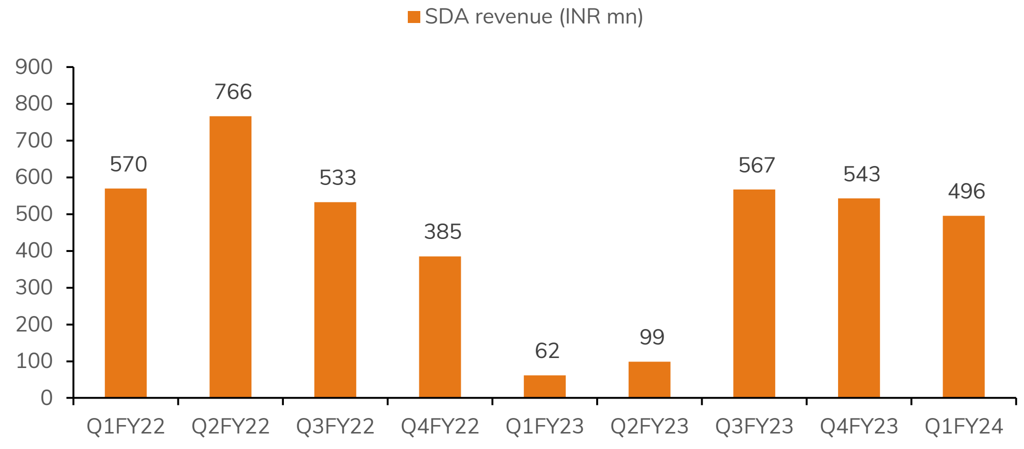
In line with deterioration in end-industry market demand and reduction in inventory, TATVA's SDA sales have plummeted in past six quarters. China commercial vehicle sales have improved from lows of FY23 with average sales at 321k in FY24-TD (Apr-Aug'23); TATVA expects SDA sales to improve particularly from Q4FY24.

Exhibit 1: China's average monthly CV sales drop to 273k in FY23 (361k in FY22); improved to 321k in FY24-TD



Source: China Association of Automobile Manufacturers

Exhibit 2: TATVA's SDA sales plummet in past six months, owing to China CV pain and reduction in inventory levels by catalyst manufacturers



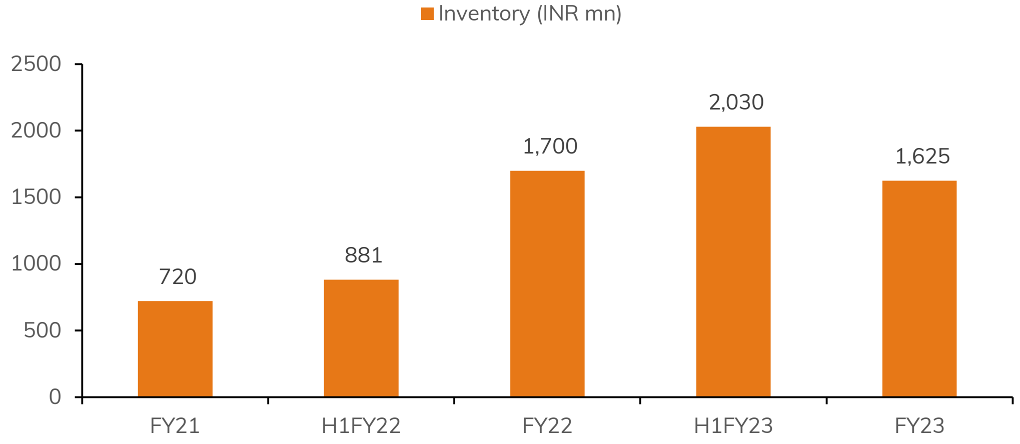
Source: I-Sec research, Company

High-cost inventories and lower fixed cost absorption aggravate profitability pain

While sales collapsed, TATVA was carrying high-cost inventory. Problems aggravated as key raw-materials (RM) prices started dropping sharply. This increased motivation to cut inventory levels within the system, below normal, thereby delaying sales recovery. TATVA was struggling to liquidate high-cost inventories; and fresh sales contract pricing implied that billing was based on prevailing low-key starting RM prices. This compressed TATVA's gross profit margin during the period.

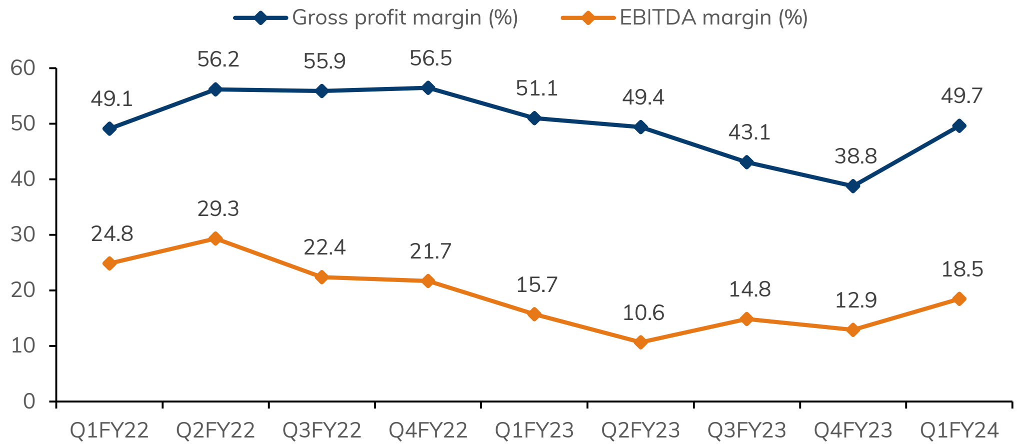
Fixed operating cost absorption dipped due to lower sales, and cost of running electrolysis process increased on infrequent operation of assemblies. Assemblies are dedicated plant for production of SDAs. This has taken a toll on EBITDA margins, which dropped from 25% in FY22 to 14.3% in FY23.

Exhibit 3: Higher inventory and declining RM prices added to pain…



Source: I-Sec research, Company

Exhibit 4: …this impacted gross profit margins. Lower absorption of fixed cost and infrequent operations of assemblies aggravated EBITDA margin pain



Source: I-Sec research, Company

Exiting customers return; potential new customer boosts outlook FY25 onwards

In Q1FY24 earning calls, TATVA mentioned that it anticipates stronger demand by end-CY23. One customer is yet to start billing, while existing largest customer has reached normal run rate in SDA purchase. TATVA is approved by a new customer in FY23, and expects gradual ramp-up here.

It is working with a large new potential customer. It has sent samples of four products for validation, and these samples have performed well during plant trials and initial feedback from the customer has been encouraging (as per management Q1FY24 earnings call). TATVA expects to receive formal approval in next few months for two products and other two products are likely to be approved by end-CY23.

TATVA anticipate first set of approvals to come by Oct'23 from new customer and commercial supplies to begin in early'24. This should help company drive significant growth in SDA during FY25.

TATVA has been trying for SDA approval in more stable application of refining however the break-through has been limited till now. Among new products under approval, TATVA is anticipating to make initial inroads into refining industry as well. This will help company to add another application which has more stable demand.

TATVA building its SDA capabilities

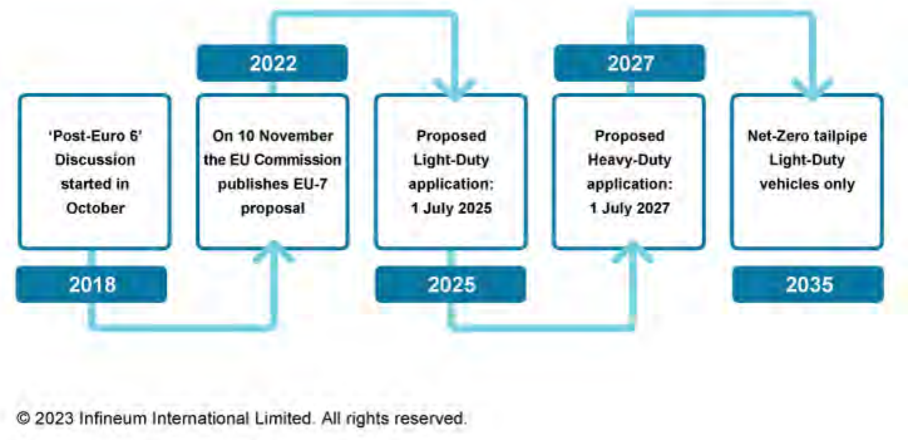
During these challenging times, TATVA has invested in making SDA business more robust. The initiatives have helped it gain on two main fronts – **1)** it has been successful in running dehydration and selective adsorption systems, which has enabled the company to recover and reuse ~80% of its high-volumes solvents; and **2)** TATVA has piloted production of key starting RM, where the Chinese were only producers.

These initiatives provide two benefits to TATVA's SDA customers – **1)** pass on certain cost saving to buyers thereby establishing TATVA as cost effective partner; and **2)** delinking from China. TATVA's reduction in China dependency will score better among SDA buyers; and the company will likely benefit from better control on RM and its pricing. During supply chain disruption in FY22-23, TATVA has to pay higher for RM, and has to keep higher inventories which has impacted its performance in past few quarters.

Euro-7 implementation is potential trigger in medium term

In Nov'22, the European Commission published the Euro-7 proposal, and it will be adopted post ordinary legislative procedure. Few observations (for full details please refer to link)

Exhibit 5: Proposed date for implementation of Euro-7 for heavy-duty application is from July'27



Source: Infineum International

Under Euro-7 proposal for heavy duty vehicles, limits of pollutants already regulated under Euro-VI have been tightened, and additional pollutants nitrous oxide (N_2O), non-methane organic gases, Formaldehyde and PN covering particles ≥10 nm have been included. This increases prospects for SDA application in Euro-7.

Exhibit 6: Euro-7 appears to have proposed stringent regulations for heavy duty vehicles

Emission limits heavy-duty (mg/kWh)	Euro VI petrol	Euro VI diesel	
	Euro VI Transient testing	Euro VI Transient testing	Euro VI Transient testing
NOx	460	460	400
PM	10	10	10
PN_{23} nm (#/kWh)	$6,0 \times 10^{11}$	$6,0 \times 10^{11}$	$8,0 \times 10^{11}$
CO	4000	4000	1500
THC	–	160	130
NMHC	160	–	–
NH_3 (ppm)	10	10	10
CH_4	500	–	–

Evaluated limits HDV (mg/kWh)	Euro 7 proposal	
	Cold emissions	Hot emissions
NOx	350	90
PM	12	8
PN_{10} nm (#/kWh)	5×10^{11}	2×10^{11}
CO	3500	200
NMOG	200	50
NH_3	65	65
Methane (CH_4)	500	350
N_2O	160	100
HCHO	30	30

Source: Infineum International

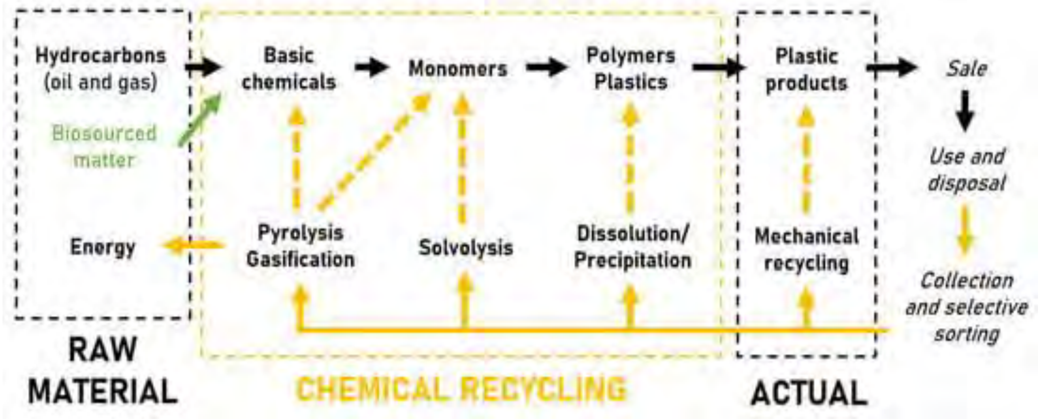
As per article (link), '*new heavy-duty vehicle regulations are more stringent than those for light-duty vehicles. In addition, since heavy-duty vehicles are more challenging to electrify than smaller modes of transport, the ICE is expected to be the powertrain of choice for many years to come. As a result, it is likely that Euro-7 will drive substantial changes and bring new technologies to the market.*'

We understand that implementation of Euro-7 norms will drive significant demand for SDAs as the requirement of SDAs will rise significantly to meet stringent regulations. We understand the SDA requirement per vehicle is likely to jump by ~40-50% in heavy duty vehicle if proposed regulations are adopted.

Circular economy powered by catalyst produced from SDAs and ultra-high purity chemicals for semi-conductor application --- high option value!

As per the article (link), Pyrolysis (heating of an organic material in the absence of oxygen) can be thermal or catalytic. Thermal pyrolysis requires higher temperatures (350-900°C), which can lead to a low molecular weight and low quality products. The addition of catalysts overcomes the limitations of thermal pyrolysis, by reducing either the reaction temperature or the time. The addition of catalysts improves conversion, reduces activation energy of pyrolysis, and enhances the fuel quality. Zeolite-based catalysts are the best option for the pyrolysis of plastic waste, and for co-pyrolysis of combined plastic waste/biomass.

Exhibit 7: Existing methods for plastic waste recycling. Pyrolysis removes sorting, and allows to produce energy (fuel), basic chemicals and monomers.



Source: Link

As per the article (link), '*catalytic pyrolysis of plastic waste has become a process of interest: its optimization as well as the understanding of its mechanisms and influencing parameters are actual research challenges. While thermal pyrolysis only relies on temperature for polymer cracking, the use of catalyst involves reactivity with an active surface that influences both polymer degradation and reforming reactions. Catalytic pyrolysis, especially with zeolite materials, offers a better selectivity and yields more high-value products than thermal pyrolysis, which contain impurities and residues.*'

TATVA has been working on certain SDA which is getting tested by a customer in plastic recycle. Any major break-through by customer using TATVA's SDA could potentially open a very large opportunity.

TATVA in Q1FY24 earnings call mentioned that it is also working on developing certain ultra-high purity chemical which find application in semiconductor manufacturing. These solvents are used in etchants (components required for wet etching processes), chemicals to silanize the surface of silicon wafer and solvents with extremely low levels of metals are used extensively for cleaning equipment, drying wafers as well as substrate deposition or removal (Honeywell product library, link).

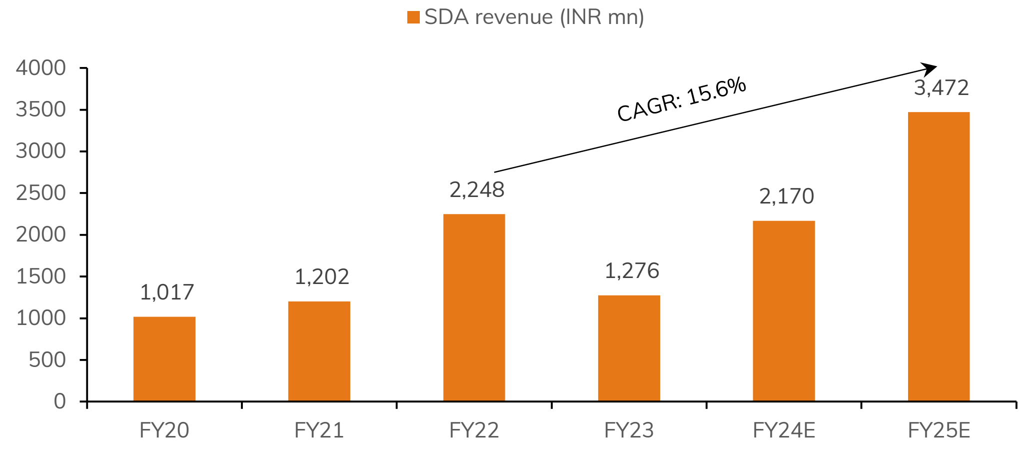
TATVA has mentioned that it is very difficult to produce these ultra-purity chemicals, but it is putting efforts to develop these chemicals in-house. Any major break-through in these chemicals will open door in very specialised product category; and establish its place in precision/ high purity chemistries.

TATVA's SDA revenue to grow at CAGR of 15.6% to INR3.5bn over FY22-25E, notwithstanding FY23 disruption

TATVA's SDA revenues are expected to recover in FY24 vs FY23, but it is still below FY22 levels. We expect SDA revenue to grow sharply in FY25 driven by **1)** a potential large new customer addition where company is in validation stage; and ramp-up in revenue for customer added in FY23; **2)** normalisation of purchase from existing customers; and **3)** likely supplies to refining application.

A strong growth likely to come from FY26 if Euro-7 is adopted as proposed by European Commission. This will have two benefits for TATVA - **1)** higher quantities of SDAs will be required per vehicle which will drive volumes in existing markets; and **2)** TATVA can look to expand its market share in auto OEMs from western geographies.

Exhibit 8: SDA revenues to grow at CAGR of 15.6% over FY22-25E despite disruption in FY23



Source: I-Sec research, Company

Case study-1: BASF

BASF's catalyst business is part of its Surface Technologies segment. The products in catalysts sub-segments includes automotive catalysts, process catalysts and technologies, battery materials, precious and base metal services.

Comments from CY22 annual report

- *'We are also establishing a new entity, BASF Environmental Catalyst and Metal Solutions, within the Catalysts division for mobile emissions catalysts, automotive catalysts recycling and associated precious metal services. The carve-out process started in January 2022. The new organizational structure prepares the business for the upcoming changes in the internal combustion engine market and allows for future strategic options'.*

- *'The segment's sales decrease was mainly attributable to significantly lower volumes in the Catalysts division's precious metal trading business. Volume growth in the chemical and refinery catalysts businesses was unable to compensate for this'.*

- *'…sales in precious metal trading and precious metal sales in the automotive catalysts business were considerably below the prior-year figure due to lower volumes and prices'.*

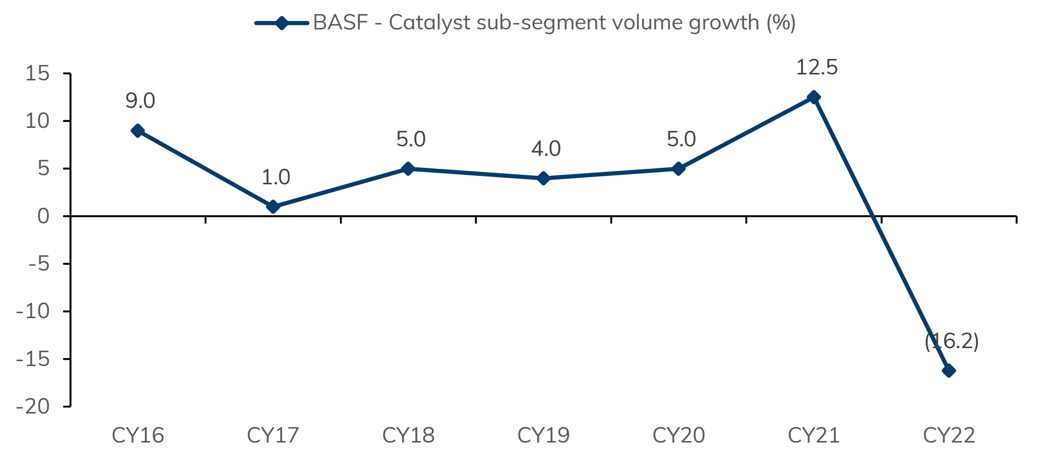
- **CY23 outlook for Surface Technologies segment** – *'we are forecasting a slight sales decrease compared with 2022. This will primarily be driven by a significant decline in precious metal prices expected in the Catalysts division. Sales will be boosted by higher prices in the Coatings division and* ***forecast volume growth in both divisions****'.*

Comments from QE-Jun'23 earnings

- *'…sales in precious metal trading and precious metal sales in the mobile emissions catalysts business were below the prior-year quarter'.*

- *'…the order income from automotive, I would say, is rather stable. When I said weakness or getting maybe a little bit weaker, that has also to do a lot with the base effect in China. So I actually see automotive as rather stable. Particularly the emission catalyst business is also stable'.*

Exhibit 9: BASF volumes for Catalyst sub-segment collapse in CY22

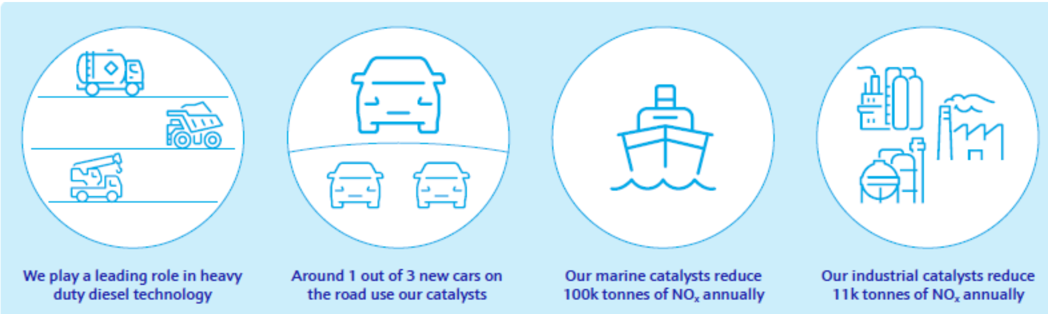


Source: I-Sec research, Company

Case study-2: Johnson Matthey

Johnson Matthey is British multinational specialty company, and has history of over 200years. Its largest business segment is 'Clean Air', where it designs and manufactures emission control catalysts to reduce harmful pollutants e.g. NOx, from vehicle exhausts and a range of stationary sources.

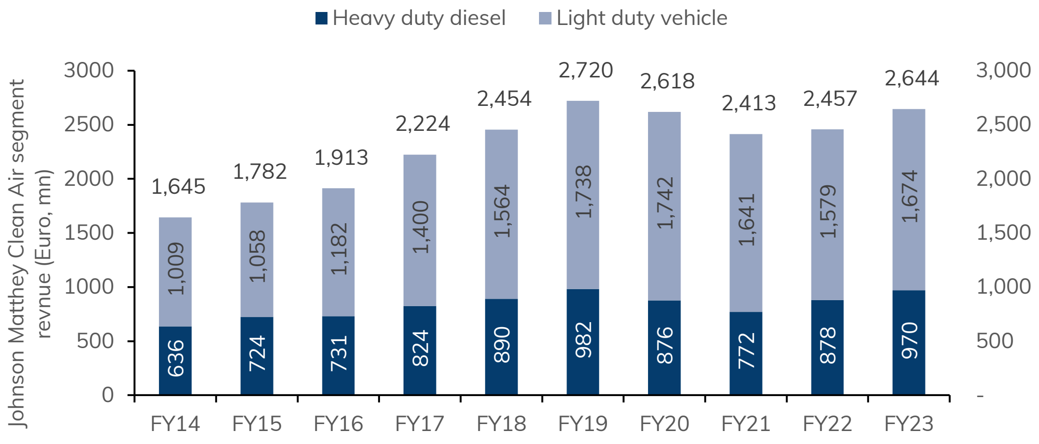
Exhibit 10: Johnson Matthey presence in NOx reduction solutions



Source: Company

Johnson Matthey Clear Air segment revenue shows that light duty vehicle catalyst revenue has fallen from peak revenue of FY19, and hasn't fully recovered; however, heavy duty diesel vehicle catalyst revenue has reached close to peak of FY19. Light duty segment is impacted by electrification. The use of SDA is largely concentrated for heavy duty diesel vehicles.

Exhibit 11: Johnson Matthey Clean Air (auto catalyst) segment revenue

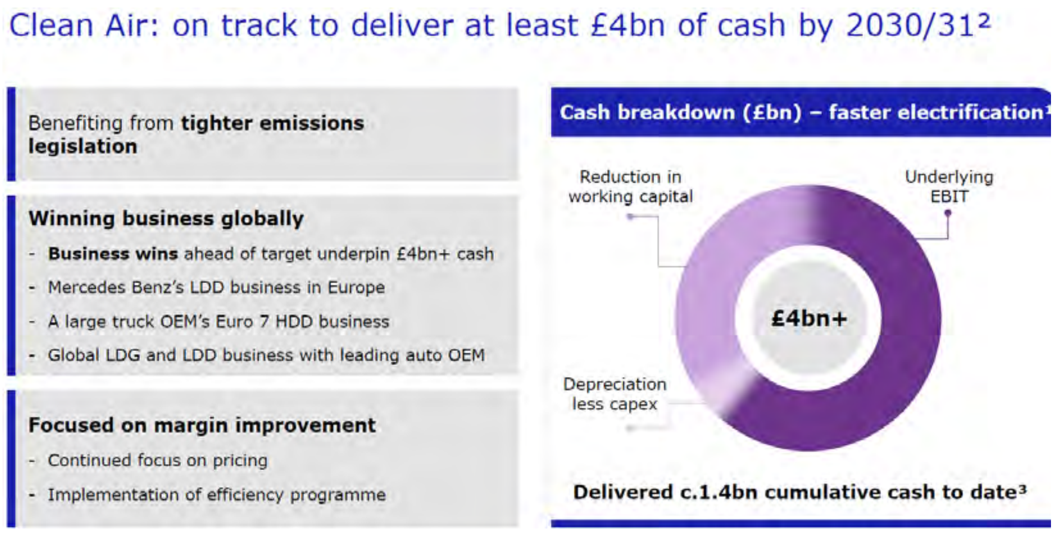


Source: I-Sec research, Company

Key points from its FY23 earnings

JM anticipate to benefit from tighter emission, and also focusing on reducing working capital. For TATVA's SDA business heavy duty matters; while light duty has minimal impact on SDA sales which are expected to be hurt from electrification.

Exhibit 12: Clean Air segment focus to drive FCF generation which is helped by reduction in working capital (inventories)



Source: Company

- *'Clean Air continues to benefit from tightening emissions control legislation globally, including the Euro 7 proposal submitted to the European Parliament in November 2022. This tightening will result in more complex emission control systems and increase our value per vehicle'.*
- *'Clean Air (FY23) grew supported by higher pricing as we benefited from increased inflation recovery…Clean Air was impacted by lower volumes and mix'*
- *'Heavy-duty diesel was up 3%, significantly outperforming the market. In Europe, we delivered sales growth ahead of the market due to higher revenue per vehicle and good performance in off-road platforms. In the Americas our heavy-duty sales mix benefited from the Class 8 truck cycle and improved mix. And in Asia,* ***sales decreased as lockdowns in China significantly impacted vehicle production****'.*

Case study-3: Umicore

Umicore N.V. is a multinational materials technology company headquartered in Brussels, Belgium. Its largest segment by revenue is Catalysis, which is composed of two subdivisions, Automotive Catalysts and Precious Metals Chemistry. In Automotive Catalysis, the company ranks third in global market share behind BASF Catalysts and Johnson Matthey.

Comment from CY22 annual report

- *'The Chinese heavy-duty diesel market, accounting for 49% of Umicore's global heavy-duty diesel volumes, contracted substantially in 2022 (-33%) reflecting continued supply chain disruptions which were further exacerbated by COVID-19 related production suspensions in the second quarter and compared to a year 2021 that was boosted by strong demand for China V technologies ahead of the nationwide implementation of China VI. Umicore's heavy-duty diesel volumes and revenues were down in this overall bearish market'.*

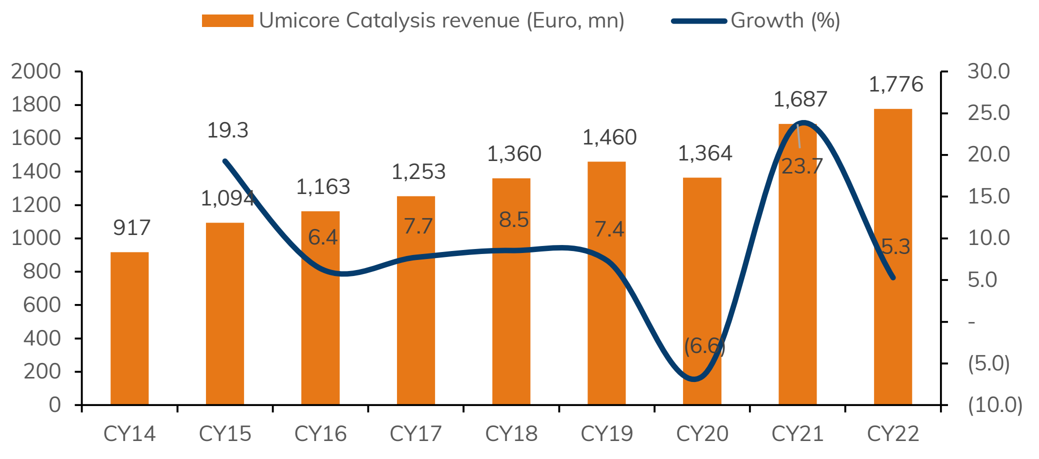
Points from H1CY23 earnings

- *'The Chinese HDD market, which accounted for 41% of Umicore's global heavy-duty diesel volumes, showed signs of a recovery in the first half of 2023. Heavy-duty diesel production, which contracted substantially in China in 2022 as a result of supply chain disruptions and COVID-19 related production suspensions, increased with 64% in the country compared to the first half of 2022. Umicore's heavy duty diesel volumes and revenues reflected the improvement in truck production.*

- *'In Europe, Umicore's volumes (+11%) outperformed the HDD market, which increased 5.7% compared to the first half of 2022, as a result of a favorable customer and platform mix'.*

- *'In Catalysis, this is where we have been able to reduce substantially the inventory in the pipeline. So looking at buffer inventory, but also scraps and so on. So that has substantially increased the cash conversion cycle in Catalysis'.*

Exhibit 13: Umicore Catalysis business (includes automotive catalyst) had weak performance in CY22



Source: I-Sec research, Company

PASC: New products pipeline strong

Pharmaceuticals and agrochemicals Intermediates and other specialty chemicals (PASC) is a category where the company's focus is to manufacture various pharmaceutical and agrochemical products as intermediates, disinfectants and catalysts, and solvents. Monoglyme (solvent used in pharmaceuticals) is largest product in the category. Company has significant R&D focus in this category, and has the largest products pipeline. This segment could be a major growth driver for TATVA in the next few years, and offers huge opportunities.

TATVA has focused on developing cleaner processes (such as continuous flow process, electrochemistry etc.) of producing chemicals for innovators/MNCs. This could be long-term sustainable advantage, and over a period, we believe if TATVA establishes itself as a reliable supplier of cleaner chemicals, it can get preference in long-term contracts. We would keep a close watch on the evolution of this segment.

Monoglyme – shifting from conventional to cleaner process

TATVA is shifting its manufacturing process of monoglyme from convectional route to continuous flow. This could unlock multiple benefits: **1)** continuous flow will reduce cost of RM as yield is higher, and company will use commodity methanol instead of relatively high cost intermediate. The process will not require caustic lye for neutralising, and process will generate only water as effluent; **2)** product purity will be higher; and **3)** user can claim green process.

In Q1FY24 earnings call, TATVA mentioned that it has produced catalyst in-house, and the pilot plant using this catalyst is performing as per expectation. If the company has a satisfactory pilot run, then commercial capacity will be enabled for monoglyme – using continuous flow process in the next 12–18months. High-purity and low-moisture monoglyme will also find application in lithium-ion batteries as a solvent in electrolyte.

Commercial supplies to start for chemical used in earth metal extraction

TATVA has been working with an innovator MNC for the supply of chemical used for earth metal extraction. We understand that this is a long-chain amine product, and the MNC is looking to outsource manufacturing. It was in the validation process for the past few years, and has finally been approved. It expects to start commercial supplies from Q2FY24. This is a new product addition to the PASC segment.

Agrochemical intermediates are undergoing plant scale sample qualification

TATVA is working on three agrochemical intermediates, which are undergoing plant scale sample qualification. These are early stage intermediates wherein the company is applying new production chemistries, thereby being able to unlock multiple benefits to MNC/innovators. The key focus is to reduce impurity, and aid in improving manufacturing process. The company expects to get feedback before end-CY23; and commercial supplies are anticipated to commence from Q4FY24. The opportunity size for agrochemical intermediate is significantly large, which provides visibility for sustained growth. The product is used in multiple agrochemicals by various MNCs.

For future product pipeline, the company is working on two downstream intermediates from agrochemical under qualification. This will improve TATVA's positioning with agrochemical MNCs; and up-move into advance intermediates.

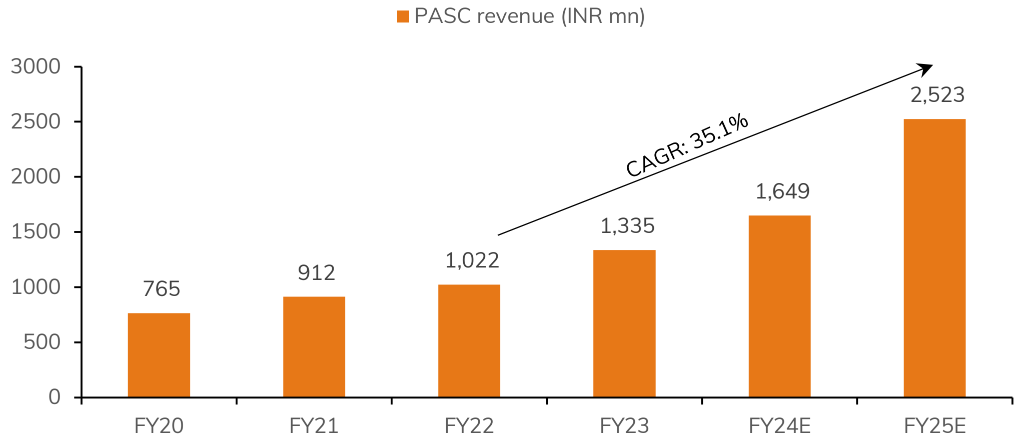
Pharmaceutical intermediate likely to go commercial in CY25

TATVA is also working with pharmaceutical MNCs for supplying early-stage intermediates. The products market size is relatively smaller compared to agrochemical, but innovator's feedback is positive. It is supplying two plant scale sample for pharmaceutical intermediate in Q2FY24. The company wishes to move up in value-chain and capture higher value from this category. The commercial sales expected only in CY25 as innovators will require to execute the TATVA name addition in suppliers list in regulatory filing.

Expect revenue CAGR of 35% to INR 2.5bn over FY22-25E

We forecast PASC segment revenue to grow at CAGR of 35% driven by new product launches, and new customers' addition. We believe we are conservative on estimates as the multiple product under plant scale qualification. The opportunity size for these products are huge which ensure continued high growth over next few years, and low base. If TATVA establishes itself as reliable supplier of clean chemistry, then a very large market will open for it, particularly in long-term contracts. This will also help the company diversify its dependence from automotive.

Exhibit 14: PASC revenues anticipated to grow at CAGR of 35% over FY22-25E



Source: I-Sec research, Company

Electrolyte salts: Ramp-up as customers commercialise

The segment largely produces salts required in super capacitor batteries, which are used in automobile, electronics and energy storage devices. Salts used in lithium-ion batteries are inorganic while organic salt is used in super-capacitors. Therefore, these salts are more affordable and less hazardous.

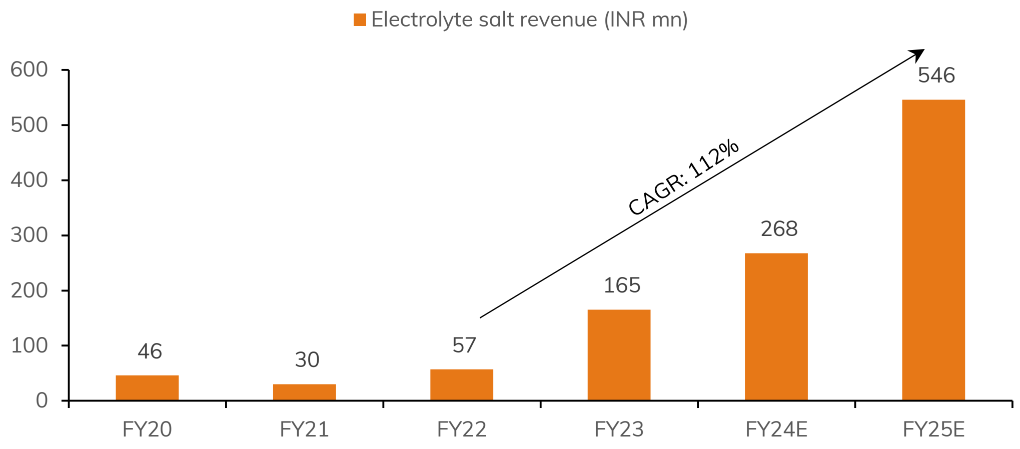
TATVA has also developed salt for zinc and sodium batteries. These batteries are more popular for energy storage solutions, which will be required in large quantities on pick-up in renewal energy, and as green hydrogen becomes alternative energy. Electricity generated through renewal route cannot be passed directly onto the grid, thus first need to be stored in batteries.

The company is working closely with four customers for electrolyte salts, and is under 'qualification' with a new far-east customer. It has also supplied samples to one customer in India.

TATVA expects ramp-up in revenue, as it has resumed supply for one customer in Q2FY24. It has supplied commercial scale materials to another customer which is going commercial soon. The company believes electrolyte salts revenue will grow exponentially from CY25.

The company has also achieved lab-scale approval for its electrolytes solution; and now is working towards implementing the pilot. Despite supplying low moisture electrolyte solution being quite challenging, it is confident to achieve the desired quality levels soon.

Exhibit 15: Electrolyte salt revenue to see exponential growth as customers go commercial



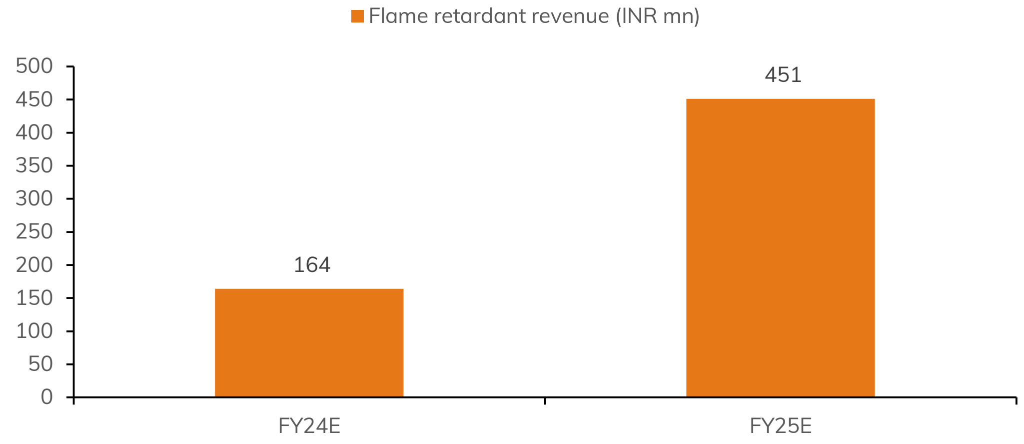
Source: I-Sec research, Company

Flame retardant: Time ripening for launch

TATVA's plan to commercialise flame retardant was hindered by a sharp drop in bromine prices globally, and large inventories of TBBA (flame retardant) in China has crush demand. The bromine prices have started recovering, and the company has received go-ahead from few customers. It has created 1,200tpa capacity for flame retardant in Dahej-2 plant.

The company is focusing on specialty application in chips and circuit board, and does not wish to have products in commodity grade. It has already received approvals from three export customers for its TBBA. It expects to start production Q3FY24 onwards, and anticipates ramp-up in FY25.

Exhibit 16: Flame retardant revenue booking to start from H2FY24

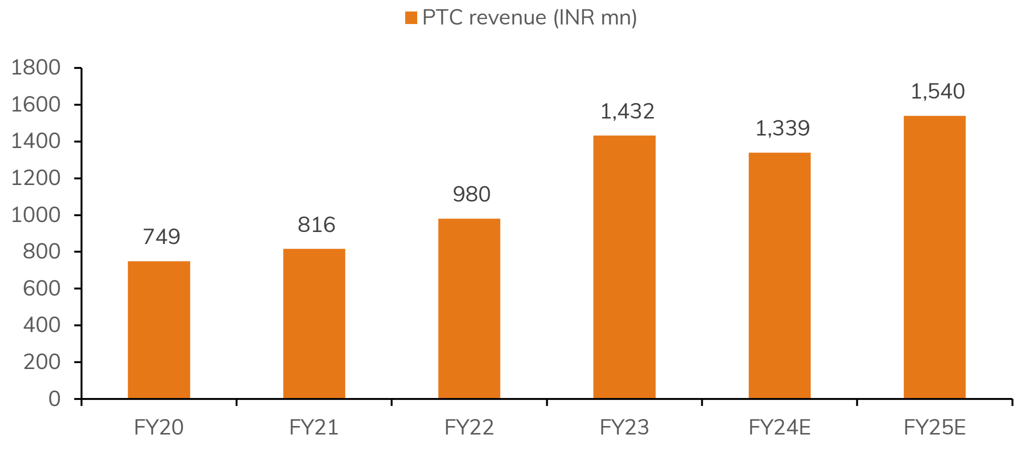


Source: I-Sec research, Company

PTC: Near-term headwinds; volume growth to normalise in FY25

PTC has steady demand, and benefit from rise in agrochemicals and pharmaceuticals (including intermediates) production in India. However, PTC revenues could be hurt from a near-term slump in agrochemicals during FY24.

Exhibit 17: Lower RM prices and weak demand for agrochemicals to impact FY24E PTC sales



Source: I-Sec research, Company

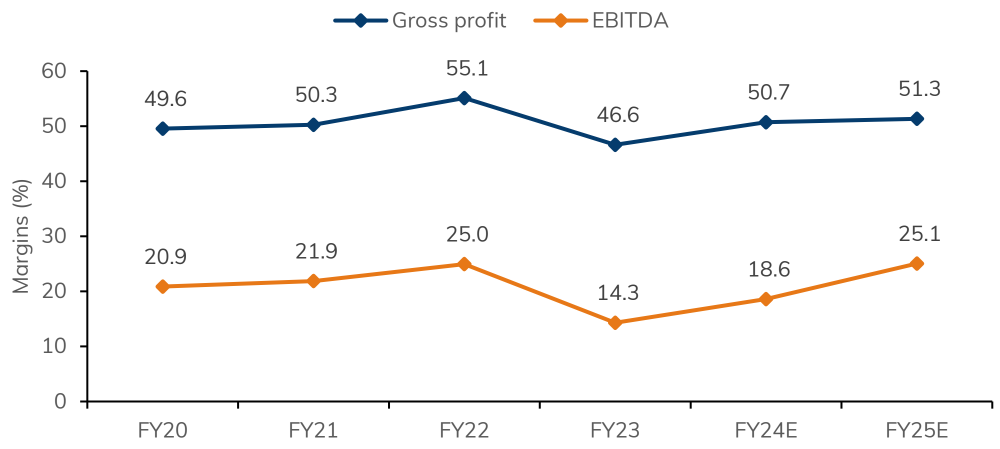
Margin journey to 25% has begun

TATVA's EPS collapsed 49% to INR 22.1 in FY23 from lower revenue, and also shrink in gross profit margin, and sticky fixed operating cost. We anticipate gross margin to recover in FY24E to 50.7%, up 400bps, and EBITDA margin to also improve by 440bps. EBITDA will be impacted by higher operating cost from commissioning of Dahej-2 plant in FY24E.

We anticipate gross profit margin to be restricted at ~51% versus 55% in FY22 due to: **1)** SDA, which is its highest margin business, contribution will be at ~40% in FY24E and FY25E vs 52% in FY22; and **2)** revenue from flame retardant business, which has lower gross profit and EBITDA margins. TATVA's gross profit margin improved to 49.2% in Q1FY24, and EBITDA margin was at 18.7%.

EBITDA to see full recovery in FY25E with improvement in utilisation of Dahej-2 plant, and commissioning of PASC products using cleaner process.

Exhibit 18: Gross profit margin recovery anticipated in FY24E; EBITDA margin in FY25E



Source: I-Sec research, Company

TATVA's balance sheet remains strong with INR 2bn fresh fund infusion via QIP, and release of working capital with improvement in sales. Company is also working to commence another round of expansion in Dahej-3 (non-SEZ) site with a spend of INR 2.5bn in phase-1. It has completed final presentation for environmental clearance, and planned expansion is expected to start from Jan'24. The plant expansion is likely to take 18–24months. This increases visibility for sustained earnings growth beyond FY25, in our view.

Exhibit 19: TATVA's revenue to grow at CAGR of 25.6% over FY22-25%

INR mn	FY20	FY21	FY22	FY23	FY24E	FY25E	CAGR (%)
Segment revenue							
PTC	749	816	980	1,432	1,339	1,540	16.2
SDA	1,017	1,202	2,248	1,276	2,170	3,472	15.6
Electrolyte salts	46	30	57	165	268	546	112.4
PASC	765	912	1,022	1,335	1,649	2,523	35.1
Flame retardants	-	-	-	-	164	451	
Total	**2,577**	**2,961**	**4,308**	**4,209**	**5,590**	**8,532**	**25.6**
Segment revenue mix (%)							
PTC	29.1	27.6	22.8	34.0	24.0	18.0	
SDA	39.4	40.6	52.2	30.3	38.8	40.7	
Electrolyte salts	1.8	1.0	1.3	3.9	4.8	6.4	
PASC	29.7	30.8	23.7	31.7	29.5	29.6	
Flame retardants	-	-	-	-	2.9	5.3	

Source: I-Sec research, Company

Exhibit 20: EBITDA/EPS to grow at CAGR of 25.6%/15.6% over FY22-25E

INR mn	FY20	FY21	FY22	FY23	FY24E	FY25E	CAGR (%)
Revenue	2,632	3,004	4,336	4,236	5,624	8,567	25.5
Gross profit	1,305	1,510	2,390	1,975	2,852	4,399	22.5
GPM (%)	*49.6*	*50.3*	*55.1*	*46.6*	*50.7*	*51.3*	
Expenses	755	853	1,308	1,369	1,806	2,252	19.9
EBITDA	**550**	**657**	**1,082**	**606**	**1,046**	**2,146**	**25.6**
EBITDA (%)	*20.9*	*21.9*	*25.0*	*14.3*	*18.6*	*25.1*	
Depreciation	48	67	82	96	247	272	49.3
EBIT	502	590	1,001	510	799	1,874	23.3
Other income	14	59	89	57	75	93	1.6
Finance cost	39	42	48	84	106	62	8.5
PBT	**476**	**607**	**1,041**	**484**	**768**	**1,906**	**22.3**
Tax	98	84	82	(7)	138	343	
ETR (%)	*20.6*	*13.9*	*7.9*	*(1.5)*	*18.0*	*18.0*	
Exceptional item	-	-	-	36	-	-	
PAT	378	523	959	455	630	1,563	17.7
EPS (INR)	**18.8**	**26.0**	**43.3**	**22.1**	**26.9**	**66.8**	**15.6**
Growth (%)	*90.9*	*38.3*	*66.3*	*(48.8)*	*21.6*	*148.1*	

Source: I-Sec research, Company

Exhibit 21: Earnings revision

	Revised		Earlier		Change (%)	
INR mn	**FY24E**	**FY25E**	**FY24E**	**FY25E**	**FY24E**	**FY25E**
Revenue	5,624	8,567	5,690	8,698	(1.2)	(1.5)
Gross profit	2,852	4,399	2,911	4,392	(2.0)	0.1
GPM (%)	*50.7*	*51.3*	*51.2*	*50.5*		
EBITDA	**1,046**	**2,146**	**1,130**	**2,078**	**(7.5)**	**3.3**
EBITDA (%)	*18.6*	*25.1*	*19.9*	*23.9*		
PAT	630	1,563	768	1,561	(17.9)	0.1
EPS (INR)	**26.9**	**66.8**	**34.6**	**70.4**	**(22.2)**	**(5.2)**

Source: I-Sec research, Company data

Exhibit 22: Shareholding pattern

%	Dec'22	Mar'23	Jun'23
Promoters	79.2	79.2	75.0
Institutional investors	15.2	15.2	18.0
MFs and others	11.1	11.0	13.6
FIs/Banks	0.0	0.0	0.0
Insurance	0.2	0.5	0.1
FIIs	3.9	3.7	4.3
Others	5.6	5.6	7.0

Source: Bloomberg

Exhibit 23: Price chart

Source: Bloomberg

Financial Summary

Exhibit 24: Profit & Loss

(INR mn, year ending March)

	FY22A	FY23A	FY24E	FY25E
Net Sales	4,336	4,236	5,624	8,567
Operating Expenses	**3,254**	**3,630**	**4,578**	**6,420**
EBITDA	1,082	606	1,046	2,146
EBITDA Margin (%)	**25.0**	**14.3**	**18.6**	**25.1**
Depreciation & Amortization	82	96	247	272
EBIT	1,001	510	799	1,874
Interest expenditure	48	84	106	62
Other Non-operating Income	89	57	75	93
Recurring PBT	1,041	484	768	1,906
Profit / (Loss) from Associates	**-**	**-**	**-**	**-**
Less: Taxes	**82**	**(7)**	**138**	**343**
PAT	959	455	630	1,563
Less: Minority Interest	-	-	-	-
Extraordinaries (Net)	-	-	-	-
Net Income (Reported)	959	455	630	1,563
Net Income (Adjusted)	**959**	**491**	**630**	**1,563**

Source Company data, I-Sec research

Exhibit 25: Balance sheet

(INR mn, year ending March)

	FY22A	FY23A	FY24E	FY25E
Total Current Assets	4,359	3,136	4,761	5,316
of which cash & cash eqv.	1,770	448	1,802	780
Total Current Liabilities & Provisions	646	701	1,010	1,544
Net Current Assets	**3,713**	**2,434**	**3,752**	**3,773**
Investments	-	-	-	-
Net Fixed Assets	2,111	4,270	4,524	5,843
ROU Assets	314	309	309	309
Capital Work-in-Progress	515	2,307	108	1,200
Total Intangible Assets	-	-	-	-
Other assets	26	34	37	41
Deferred Tax assests	87	124	124	124
Total Assets	**6,583**	**7,563**	**9,446**	**11,324**
Liabilities				
Borrowings	**1,199**	**1,703**	**703**	**703**
Deferred Tax Liability	**-**	**-**	**-**	**-**
Provisions	7	11	13	14
Other Liabilities	0	-	-	-
Equity Share Capital	222	222	234	234
Reserves & Surplus	4,509	4,926	7,487	8,830
Total Net Worth	**4,731**	**5,148**	**7,721**	**9,064**
Minority Interest	-	-	-	-
Total Liabilities	**6,583**	**7,563**	**9,446**	**11,324**

Source Company data, I-Sec research

Exhibit 26: Quarterly trend

(INR mn, year ending March)

	Sep-22	Dec-22	Mar-23	Jun-23
Net Sales	901	1,206	1,245	1,144
% growth (YOY)	(27.1)	15.2	26.4	29.4
EBITDA	112	179	163	213
Margin %	12.4	14.9	13.1	18.7
Other Income	15	15	8	10
Extraordinaries	-	-	36	-
Adjusted Net Profit	71	116	170	95

Source Company data, I-Sec research

Exhibit 27: Cashflow statement

(INR mn, year ending March)

	FY22A	FY23A	FY24E	FY25E
Operating Cashflow	**957**	**562**	**908**	**1,803**
Working Capital Changes	(753)	(284)	35	(1,045)
Capital Commitments	(892)	(2,031)	(500)	(1,592)
Free Cashflow	**(687)**	**(1,753)**	**442**	**(834)**
Other investing cashflow	**(1,077)**	**1,019**	**75**	**93**
Cashflow from Investing Activities	(1,077)	1,019	75	93
Issue of Share Capital	2,111	-	2,000	-
Interest Cost	(42)	(84)	(106)	(62)
Inc (Dec) in Borrowings	297	506	(1,000)	-
Dividend paid	-	(44)	(57)	(219)
Others	(16)	0	-	-
Cash flow from Financing Activities	2,350	378	837	(281)
Chg. in Cash & Bank balance	**585**	**(356)**	**1,354**	**(1,022)**
Closing cash & balance	630	273	1,802	780

Source Company data, I-Sec research

Exhibit 28: Key ratios

(Year ending March)

	FY22A	FY23A	FY24E	FY25E
Per Share Data (INR)				
Reported EPS	43.3	20.5	26.9	66.8
Adjusted EPS (Diluted)	43.3	22.1	26.9	66.8
Cash EPS	46.9	24.8	37.5	78.4
Dividend per share (DPS)	2.0	2.0	2.4	9.4
Book Value per share (BV)	213.4	232.3	330.1	387.5
Dividend Payout (%)	4.6	9.7	9.0	14.0
Growth (%)				
Net Sales	44.4	(2.3)	32.8	52.3
EBITDA	64.7	(44.0)	72.7	105.2
EPS (INR)	66.3	(52.6)	31.2	148.1
Valuation Ratios (x)				
P/E	36.6	77.2	58.8	23.7
P/CEPS	33.7	63.8	42.2	20.2
P/BV	7.4	6.8	4.8	4.1
EV / EBITDA	31.9	60.0	34.4	17.2
EV/SALES	8.0	8.6	6.4	4.3
Dividend Yield (%)	0.1	0.1	0.2	0.6
Operating Ratios				
Gross Profit Margins (%)	55.1	46.6	50.7	51.3
EBITDA Margins (%)	25.0	14.3	18.6	25.1
Effective Tax Rate (%)	7.9	(1.6)	18.0	18.0
Net Profit Margins (%)	22.1	11.6	11.2	18.2
NWC / Total Assets (%)	29.5	26.3	20.6	26.4
Net Debt / Equity (x)	(0.1)	0.2	(0.1)	0.0
Net Debt / EBITDA (x)	(0.5)	2.1	(1.1)	0.0
Profitability Ratios				
RoCE (%)	21.7	8.1	8.6	16.9
RoE (%)	30.0	9.2	9.8	18.6
RoIC (%)	27.6	9.8	10.1	19.7
Fixed Asset Turnover (x)	4.2	(13.4)	1.2	2.1
Inventory Turnover Days	143.1	140.0	90.0	90.5
Receivables Days	47.6	72.7	82.7	82.7
Payables Days	37.5	27.7	40.0	40.0

Source Company data, I-Sec research

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