India

REDUCE *(Initiating coverage)*

Consensus ratings*:	Buy 5	Hold 0	Sell 0

Current price:	Rs894
Target price:	Rs714
Previous target:	NA
Up/downside:	-20.1%
EIP Research / Consensus:	-43.7%
Reuters:	
Bloomberg:	AMIORG IN
Market cap:	US$396m
	Rs32,587m
Average daily turnover:	US$0.7m
	Rs61.3m
Current shares o/s:	36.4m
Free float:	38.9%

Source: Bloomberg

Source: Bloomberg

Price performance	1M	3M	12M
Absolute (%)	(1.4)	(6.7)	(3.0)
Relative (%)	0.9	(1.0)	(2.5)

Major shareholders	% held
Promoters	61.2
SBI Funds Management Ltd	6.9
Nomura Holdings	1.8

Ami Organics Ltd

Earnings volatility to kick in - REDUCE

- Ami Organics, a company making intermediates for APIs, is diversifying into commodity chemicals like paraben, salicylic acid compounds and vinylene carbonate, which will reduce earnings predictability & induce earnings volatility.
- Its API intermediates for anti-psychotic medicines have done well in FY22 and FY23F. We like its oncology and anti-coagulant portfolio as well. However, dolutegravir intermediate has been a disappointment (steep price decline).
- We expect an EPS CAGR of 13% over FY22-25F and ROE of the business to decline to 15.3% in FY25F from the peak of 21% in FY22. We value Ami Organics at 25x FY25F EPS to arrive at our target price of Rs714.

API intermediate maker to increase commodity chemicals business

Ami Organics manufactures intermediates for active pharma ingredients (APIs) and is also a producer of key starting materials (KSMs). On 31 Mar 2021, it acquired two plants of Gujarat Organics (GOL) on a slump-sale basis. Ami Organics is using these assets to increase its presence in paraben and salicylic acid, which are commodity chemicals. Paraben and salicylic acid have volatile margins. Paraben is used in multiple consumer products and although it is still approved by all regulatory agencies, multiple consumer groups are canvassing against the use of paraben in consumer products. Vinylene carbonate (Ami Organics is putting up a capacity for 8,000t) is increasingly losing relevance as an electrolyte additive (it's needed in a lesser quantity in LiFSi compared to $LiPF_6$ and its prices as well as margins are falling). We believe consensus earnings are just too high and market P/E multiples indicate that investors have high belief in certainty of the company's earnings. Given the increased commoditized nature of business, both are at risk. We initiate coverage on the stock with a REDUCE rating and a target price of Rs714.

API business is also not volatility-proof

Dolutegravir is an anti-retroviral drug for HIV treatment. Ami Organics makes the intermediate for this API. As dolutegravir prices have collapsed, it would have impacted intermediate prices as well. In API intermediates, we like its anti-coagulant, anti-depressant and anti-psychotic products like (1-(3-chlrophenyl)-4-(3-chloropropoly) piperazine hydrochloride). These products are also not immune to volatility as dolutegravir has shown us, but they are not commodity products like paraben, salicylic acid, methyl salicylate or vinylene carbonate. We reckon the street will be surprised by the volatility in earnings as these capacities get ramped up. Also, consensus earnings estimates are just too high which need to come down.

Initiate coverage with REDUCE rating and target price of Rs714

We initiate coverage on Ami Organics, valuing it at 25x FY25F EPS to arrive at our target price of Rs714 with a REDUCE rating. Upside risk: Any liquidity-driven rally in this illiquid stock.

Financial Summary	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Revenue (Rsm)	3,406	5,201	5,761	6,787	7,988
Operating EBITDA (Rsm)	802	1,052	1,137	1,307	1,497
Net Profit (Rsm)	540	719	775	900	1,040
Core EPS (Rs)	17.1	19.7	21.3	24.7	28.5
Core EPS Growth	(34.5%)	15.2%	7.7%	16.1%	15.5%
FD Core P/E (x)	52.17	45.29	42.04	36.20	31.33
DPS (Rs)	0.0	0.0	0.0	0.0	0.0
Dividend Yield	0.00%	0.00%	0.00%	0.00%	0.00%
EV/EBITDA (x)	35.67	30.04	27.50	23.62	20.32
P/FCFE (x)	472.96	(11.34)	49.21	43.16	39.35
Net Gearing	25.1%	(19.2%)	(23.1%)	(26.7%)	(30.3%)
P/BV (x)	16.88	6.29	5.66	5.09	4.53
ROE	38.7%	21.0%	14.2%	14.8%	15.3%
% Change In Core EPS Estimates					
InCred Research/Consensus EPS (x)					

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Analyst(s)

Satish KUMAR
T (91) 22 4161 1562
E satish.kumar@incredcapital.com

Abbas PUNJANI
T (91) 22 4161 1598
E abbas.punjani@incredcapital.com

Growth to come from commodity chemicals

Ami Organics is a niche pharma API intermediate and KSM manufacturer. The company recently acquired two plants of Gujarat Organics on a slump-sale basis, giving it a foothold in specialty chemicals. Its three business segments are 1) APIs and KSMs, 2) commodity chemicals, and 3) battery chemicals.

Active pharma ingredients (APIs) & key starting materials (KSMs)

The company sells a variety of products in the API segment. It imports some of the raw materials used to make APIs and KSMs, but over the past few years backward integration has increased, leading to higher gross margin. Some key APIs and KSMs are listed in Fig. 1 below.

Figure 1: Key APIs and KSMs

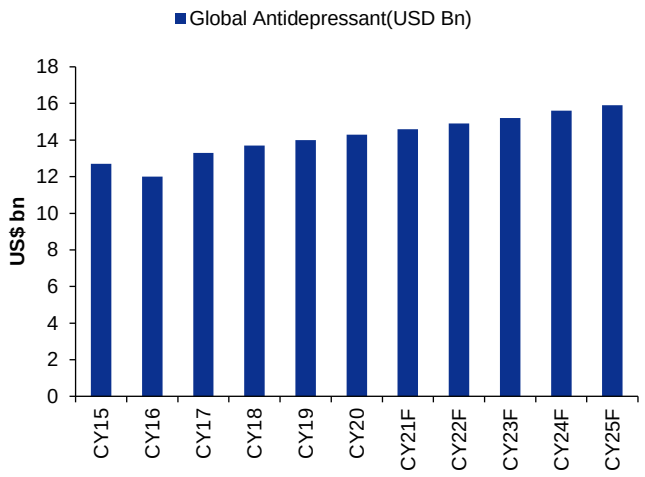
List of pharma intermediates – based on end-use API
Intermediates for trazodone (anti-depressant)
1-(3-Chloro Phenyl)4-(3-Chloro Propyl) Piperazine
2H-[1,2,4] Triazolo [4,3-A] Pyridin-3-One
1-(3-Chloro Phenyl) Piperazine
Intermediates for dolutegravir (anti-retroviral or ARV for HIV/AIDS)
Amino Acetaldehyde Dimethyl Acetal
N-N Dimethyl Formamide Dimethyl Acetal
Methyl-4-Methoxy Acetoacetate
Intermediates for ox carbamazepine (epilepsy)
1-Phenyloxindole
Intermediates for vortioxetine (anti-depressant)
1-Boc Piperazine
Intermediates for nintedanib (idiopathic pulmonary fibrosis)
Triethyl ortho benzoate
Trimethyl ortho benzoate
Intermediates for zonisamide / warfarin (epilepsy)
4-Hydroxy Coumarin
Intermediates for entacapone (Parkinson's disease)
3,4-Di Hydroxy 5-Nitro Benzaldehyde
Intermediates for darolutamide (prostate cancer)
Methyl-5-Acetal-1h-Pyrazole-3-Carboxylate
Intermediates for celecoxib (arthritis)
4-Sulfonamide-Phenylhydrazine Hydrochloride
Intermediates for diclofenac sodium
2,6 Dichloro N-Phenyl Aniline
Intermediates for quetiapine (anti-psychotic drug)
1-(2-(2-Hydroxy Ethoxy) Ethyl Piperazine
Dibenzo-(1,4)-Thazepine-11-(10h)-One
Intermediates for rivaroxaban (anti-coagulant)
(S)-(+)-Glycidyl Phthalimide
4-(4-Aminophenyl) Morpholin-3-One
Intermediates for dabigatran (anti-coagulant)
3-(3-Amino-4-(Methyl-Amino benzoyl)Pyridine-2-Yl-Am
Intermediates for pazopanib (oncology)
2,4-Dichloropyrimidine
5-Amino-2-Methyl Benzene Sulphonamide
Intermediates for apixaban
5,6-Dihydro-3-(4-Morpholinyl)-1-4(2-Oxo-1-Piperidin
Ethyl Chloro [(4-Methoxy Phenyl) Hydrazono] Acetate
3-Morpholino-1-(4-Nitrophenyl)5,6-Dihydropyridin-2
1-(4-Amino Phenyl)-5,6-Dihydro-3-(4-Monopholinyl)-2
2-Piperidone

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Intermediates for anti-depressant & anti-psychotic APIs »

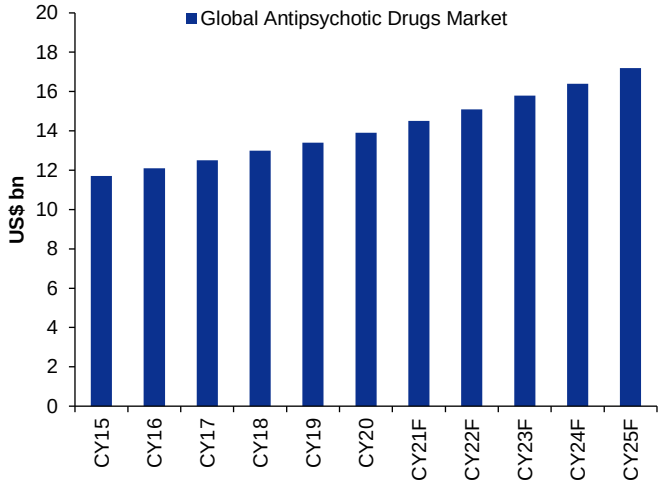
Trazodone and vortioxetine are anti-depressants and quetiapine an anti-psychotic API whose intermediates are manufactured by Ami Organics. The demand for anti-depressant and anti-psychotic APIs is increasing at a rapid pace worldwide.

Figure 2: Global anti-depressant API market is likely to achieve US$16bn in sales by CY25F



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 3: Similarly, anti-psychotic drug market will be worth US$17.2bn by CY25F



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

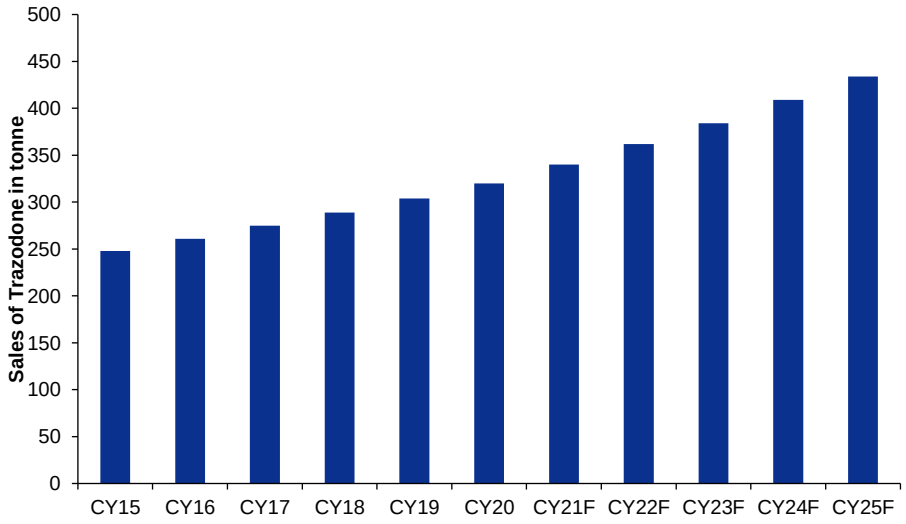
North America accounts for the largest share in the global anti-depressant drug market. This can be mainly attributed to factors like the rising prevalence of depression and government incentives to promote awareness about depression.

Global estimates suggest that over 1.25% of the global population suffers from psychosis and related disorders. This translates to a potential market of about 7.5m people as target consumers for anti-psychotic drugs. We believe market growth is likely to be robust in future years as the patient pool of psychotic conditions is rising at an alarming rate across the globe. The introduction of newer anti-psychotic compounds and the vast funds poured into research and development activities are expected to have a significant positive impact on overall development of the market in the near future.

Trazodone is an anti-depressant API whose intermediate is manufactured by Ami Organics ➤

Trazodone is an anti depressant that belongs to a group of drugs called serotonin receptor antagonists and reuptake inhibitors (SARIs). The global market for the API was estimated to be 300-320t (Source: Ami Organics' DRHP).

Figure 4: Historical growth of trazodone sales was at a 5.3% CAGR over CY15-20; going ahead, sales are likely to post a 6.3% CAGR over CY21F-25F

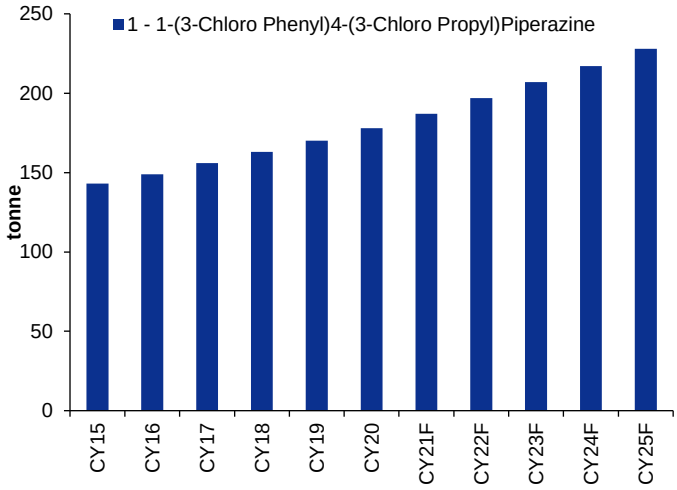


SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

1-(3-chloro phenyl)4-(3-chloro propyl)piperazine is a trazodone intermediate

Ami Organics' global market share in 1-(3-chloro phenyl)4-(3-chloro propyl) piperazine is ~85-90%, with sales at nearly 160t in FY21. The company's sales of 1-(3-chloro phenyl)4-(3-chloro propyl) piperazine grew consistently over the last few years.

Figure 5: API sales grew at a 4.5% CAGR (in tonnes) over CY15-20; sales are likely to grow at a 5.1% CAGR over CY21-25F



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 6: Ami Organics is one the manufacturers of 1-(3-chloro phenyl)4-(3-chloro propyl) piperazine, with an 85-90% global market share

Company	Location
Ami Organics	India
Adarsh Dye Chem	India
Darshan Industries	India
Kalki Chemical Industries	India
Kaival Chemicals	India

SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Ami Organics has been able to ramp up 1-(3-chloro phenyl)4-(3-chloro propyl)piperazine HCL quite significantly

Ami Organics has been able to ramp up sales of the molecule quite comprehensively in the past few quarters. We estimate that sales of the molecule should be ~Rs600m in FY23F. Sales in FY24F can also be higher as there is much more awareness about mental diseases and their prevention.

Quetiapine is an anti pyschotic drug

Quetiapine is an anti-psychotic drug used to treat schizophrenia in adults and children who are at least 13 years old. The drug is also used to treat bipolar disorder (manic depression) in adults and children who are at least 10 years old. Quetiapine is used with anti-depressant medication to treat major depressive disorders in adults.

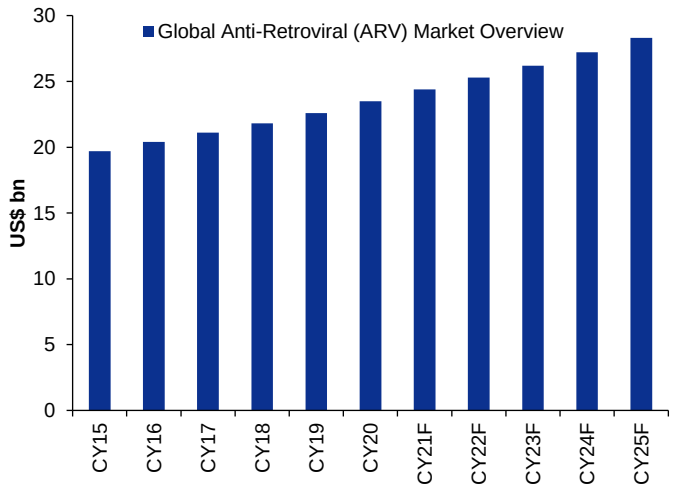
Ami Organics makes two intermediates for quetiapine

1-(2-(2-hydroxy ethoxy)ethyl piperazine and dibenzo-(1,4)-thazepine-11-(10h)-one are the main intermediates of quetiapine.

Intermediates for anti-retroviral (ARV) drug APIs

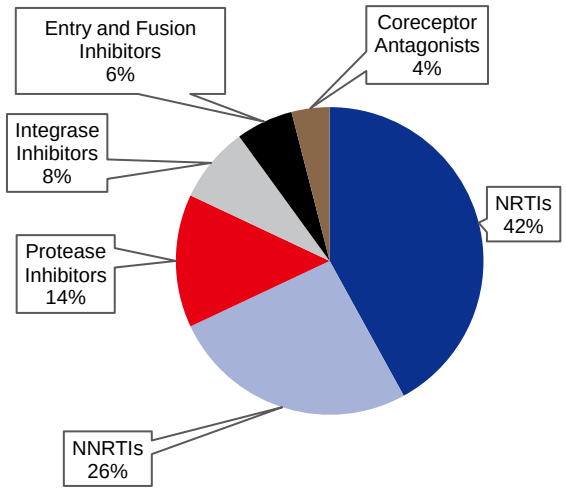
Anti-retroviral (ARV) APIs mainly constitute the APIs for drugs used to treat HIV/AIDS.

Figure 7: Global ARV sales to grow at a 4% CAGR over CY20-25F



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 8: NTRI and NNTRIs are major contributors to ARV sales



NNRTI= NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS, NRTI= NUCLEOSIDE AND NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITORS

SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

HIV medicines are grouped into seven drug classes based on how they fight HIV ➤

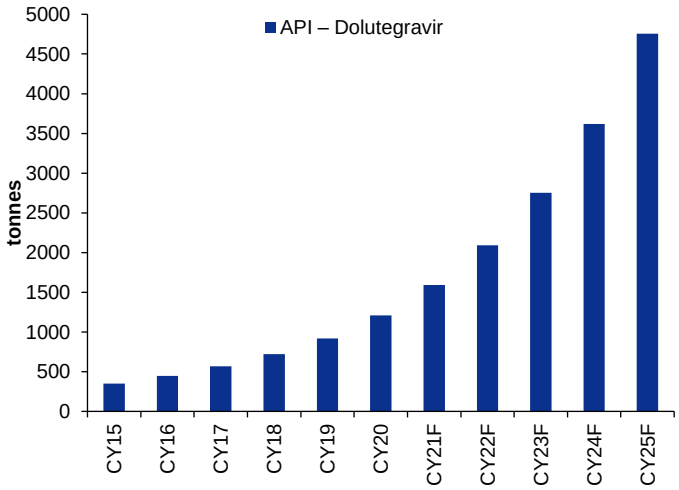
- Nucleoside and nucleotide reverse transcriptase inhibitors (NRTIs) include drugs such as zidovudine, didanosine, zalcitabine, stavudine, lamivudine, abacavir, emtricitabine and tenofovir.
- Non-nucleoside reverse transcriptase inhibitors (NNRTIs) include drugs such as nevirapine, delavirdine, efavirenz and etravirine.
- Protease inhibitors (PI) include drugs such as saquinavir mesylate, fortovase, ritonavir, indinavir, nelfinavir, amprenavir, fosamprenavir, atazanavir, tipranavir and darunavir.
- Fusion inhibitors include enfuvirtide (fuzeon) which is a US Food and Drug Administration or USFDA-approved fusion inhibitor.
- CCR5 antagonists include drugs such as aplaviroc, vicriviroc and maraviroc.
- Post-attachment inhibitors comprise ibalizumab (trogarzo), which was the first medication approved for this class in Mar 2018.
- Integrase strand transfer inhibitors (INSTI) include raltegravir (isentress), dolutegravir (tivicay), elvitegravir (available in combination with other drugs; no longer available alone) and bictegravir (available in combination with other drugs; not available alone).

Ami Organics is a major manufacturer of key intermediates for dolutegravir API ➤

Dolutegravir (DTG) is an API for anti-retroviral drugs and is used with other medications to treat HIV/AIDS. It may also be used as a part of post-exposure prophylaxis to prevent HIV infections following potential exposure. It is an oral medication priced at ~US$600-800/kg. Its price has remained stable since the past two-to-three years.

Dolutegravir sales are growing rapidly »

Figure 9: CY15-20 dolutegravir sales volume (tonnes) grew at a 28.2% CAGR; sales to grow at a 31.5% CAGR over CY21-25F



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Figure 10: There are many Indian manufacturers of dolutegravir API

Company	Location
GSK	India
Aurobindo Pharma	India
Emcure Pharmaceuticals	India
Hetero Labs	India
Laurus Labs	India
Adcock Ingram	South Africa
Macleods Pharmaceuticals	India
Micro Labs	India
Msn Life Sciences	India
Mylan Laboratories	India
Shanghai Desano Chemical Pharmaceutical Company	China
Sun Pharmaceuticals	China
Cipla	India
Cadila Healthcare	India
Divis Laboratories	India
Styrax Pharma	India
Intas Pharmaceuticals	India

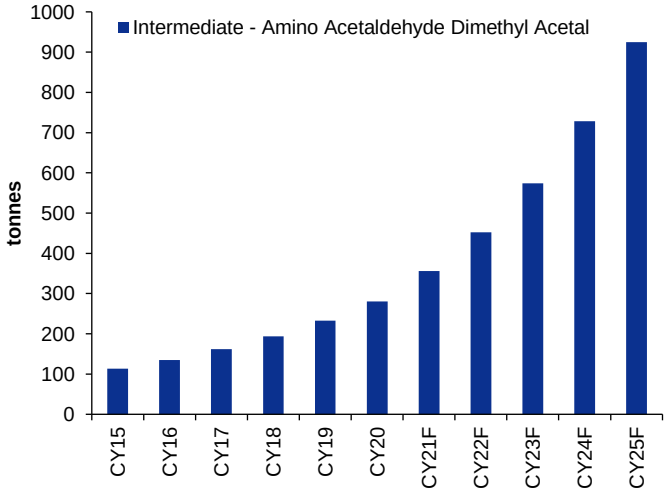
SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Amino acetaldehyde dimethyl acetal is an intermediate for dolutegravir »

The global trade in amino acetaldehyde dimethyl acetyl is more than 200t, with India and China being the biggest exporters, accounting for about ~90% of exports. India imports 60-70t of the intermediate, mainly from China. Major importers in India are Eytan Labs, Styrax Pharma, Sai Adventium Pharma, and Hetero Labs. Ami Organics exports to pharma companies in Europe and China. The average price per kg is US$45-48, making a market of ~US$12m-15m given the current annual demand of ~270-280t (Source: Ami Organics' DRHP). India has a few big manufacturers that produce the intermediate and import low quantities of the product, despite the country being the hub of dolutegravir production.

Amino acetaldehyde dimethyl acetal, another API, is witnessing a high sales growth rate »

Figure 11: Ami Organics expects its sales to grow at a 27% CAGR over CY21-25F; sales volume grew at a19.9% CAGR over CY15-20



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 12: Ami Organics is currently a key amino dimethyl acetal manufacturer

Company	Location
Ami Organics	India
Pure Chemistry Scientific	US
TCI Chemicals (catalogue company)	India, Japan
HBC Chem (catalogue company)	US
Alfa Chemistry (catalogue company)	US
Tongchuang Pharma	China
Valiant Fine Chemicals	China
Beijing Xinsavi Chemicals	China
Oceanic Pharmachem (trader)	India
Dragon Chemicals	China

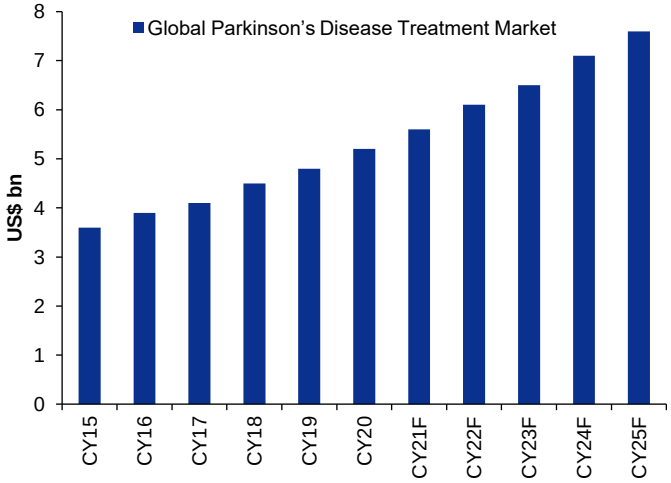
SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Ami Organics is a key manufacturer of amino acetaldehyde dimethyl acetal

Ami Organics had 70-75% of the global market share in API intermediates in FY21 (Source: Ami Organics' DRHP). Ami Organics consistently witnessed sales growth of amino acetaldehyde dimethyl acetal over the last few years. The largest consumers of the intermediate are GSK, Aurobindo Pharma, Laurus Labs, Mylan Laboratories, Shanghai Desano Chemical Pharmaceuticals, and Macleods Pharmaceuticals among others. Ami Organics supplies intermediates to most of the bigger players in the global market and to major dolutegravir producers in India like Sun Pharmaceutical Industries, Emcure Pharmaceuticals, MSN Life Sciences, Micro Labs, and Hetero Labs. It caters to 85-90% of India's demand for amino acetaldehyde dimethyl acetal. We expect the demand for dolutegravir to grow by 30-32% in the coming years, with the demand for intermediates witnessing considerable growth.

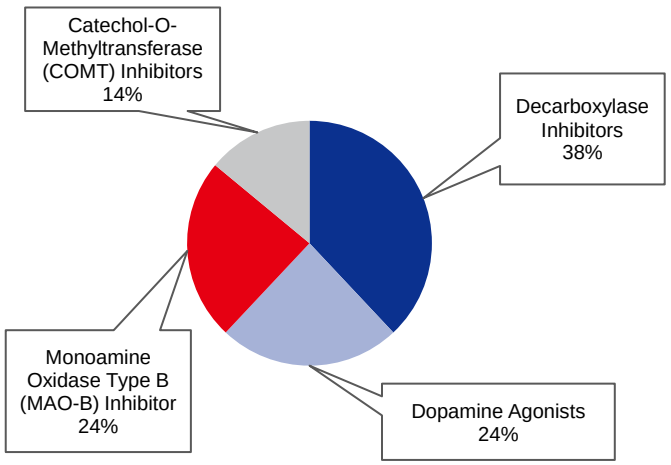
Intermediates for Parkinson's disease drug API

Figure 13: Globally, Parkinson's disease treatment market grew at a 7.6% CAGR over CY15-20; we believe it will grow at a 7.9% CAGR over CY20-25F



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Figure 14: By mode of action, Parkinson's disease drugs are divided into four broad categories



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Ami Organics makes intermediates for catechol o-methyltransferase (COMT) inhibitors

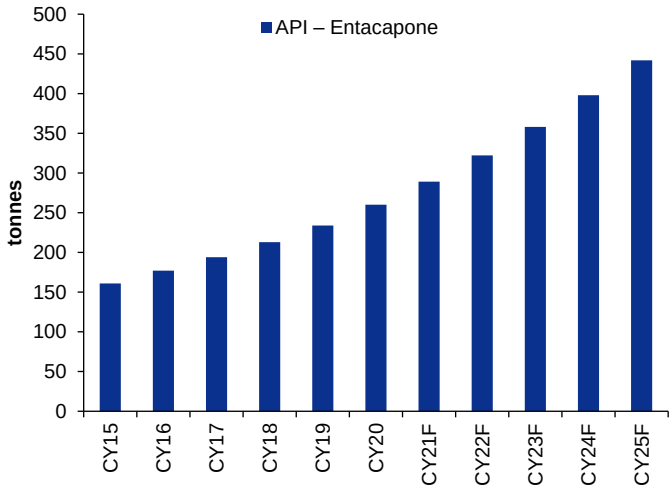
Entacapone (comtan) and opicapone (ongentys) are primary medications from this class. This medication mildly prolongs the effect of levodopa therapy by blocking an enzyme that breaks down dopamine. Tolcapone (Tasmar) is another COMT inhibitor rarely prescribed due to a risk of serious liver damage and liver failure. Carbidopa/levodopa entacapone (Stalevo) is also prescribed which is a DOPA decarboxylase inhibitor/DA precursor/COMT inhibitor; same as carbidopa/levodopa and entacaopone. Ami Organics is the major manufacturer of the key intermediates for entacaopone API.

Entacapone is one of the main APIs used in the drug for treatment of Parkinson's disease

Entacapone is used as an API in the drug for the treatment of Parkinson's disease. Entacapone has been priced at ~US$250-350/kg. Prices increased slightly from an average price range of ~US$200-300/kg in the last three years. The total API volume was estimated at ~US$155-160t in 2020. On a global level, growth has been stable, whereas in India the market for the same is growing at 6-8%. Europe accounts for the largest share of demand in volume terms with a 32-33% share in CY20 (Source: Ami Organics' DRHP). India's share was about 5% of the total volume.

Entacapone market grew in double digits over the last five years ➤

Figure 15: Entacapone market (sales volume) grew at a 10.1% CAGR over CY15-20; will likely grow at a 11% CAGR over CY21-25F



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 16: There are over 30 API manufacturers globally, with 20 having US DMF. The key ones are listed below

Company	Location
Fermion Oy	Finland
ACIC Pharmaceuticals	Canada
Suven Life Sciences	India
Apollo Pharmaceuticals	USA
Sun Pharmaceutical Industries	India
Neuland Laboratories	India
Sudarshan Solvent Industries	India
RXN Chemicals	India
RA Chem Pharma	India
Precise Chemipharma	India
Aurobindo Pharma	India
Jubilant Pharma	India
Macleods Pharmaceuticals	India
HEC Pharm Co Ltd	China

DMF = DRUG MASTER FILE

SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

3,4-dihydroxy 5 nitrobenzaldehyde is the key intermediate for entacapone ➤

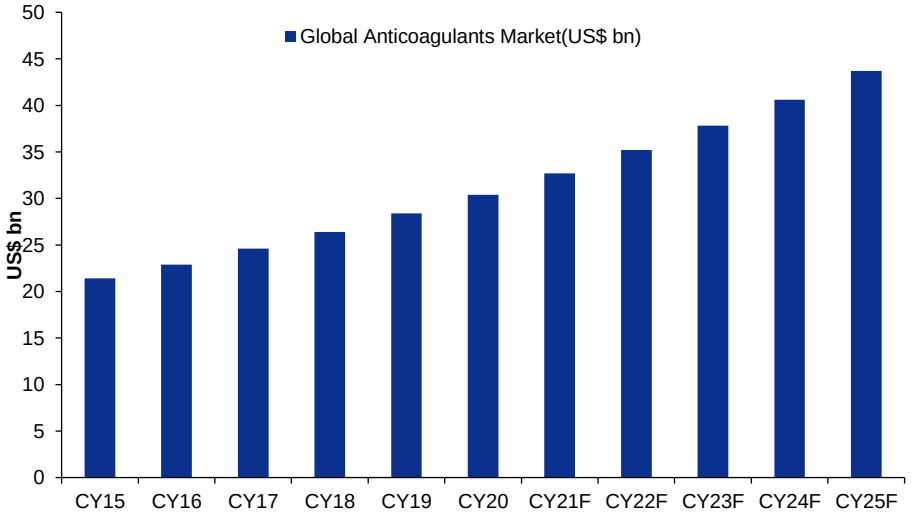
In the most common method of production, the API is manufactured by Knoevenagel condensation of 3,4-dihydroxy-5-nitrobenzaldehyde with 2-cyano-N,N-diethylacetamide to produce entacapone with a yield of 73%.

Anti-coagulant API intermediates ➤

Anti coagulants are medicinal substances that reduce the coagulation of blood and delay clotting time. They are given to people at a high risk of getting clots, to reduce their chances of developing serious conditions like strokes and heart attacks. Examples of anti-coagulants include aspirin, heparin and warfarin, among others. The global anti-coagulant market was valued at US$30.4bn in 2020 and is expected to grow at 7.5% over the forecast period till 2025F (Source: Ami Organics' DRHP).

Global anti-coagulant market likely to touch US$44bn by CY25F ➤

Figure 17: Anti-coagulant market grew at a 7.3% CAGR (CY15-20); we estimate it to grow at a 7.5% CAGR over CY20-25F

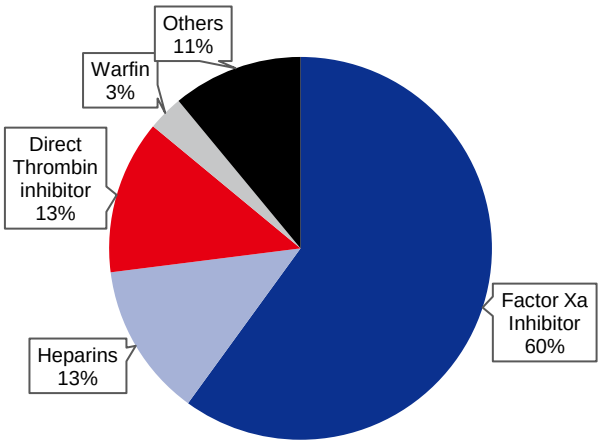


SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Americas is the key market globally for anti-coagulants and Factor Xa inhibitor is the main class of anti-coagulants ➤

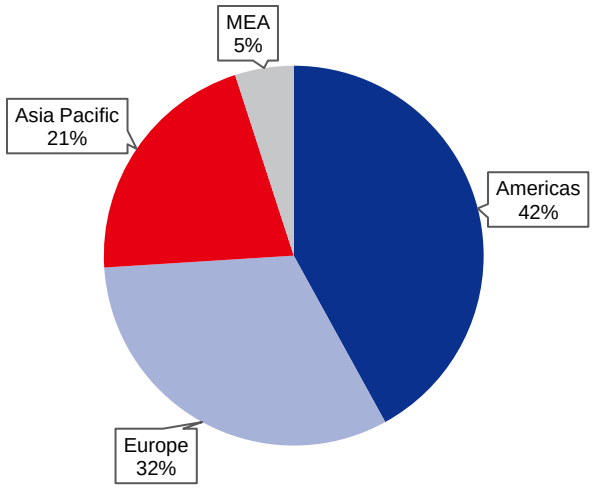
Based on the product class, the anti-coagulant market is classified into Factor Xa inhibitors, heparins, direct thrombin inhibitor, warfin , and others. Direct Factor Xa inhibitors are anti-coagulants used to treat and prevent blood clots in veins, and prevent strokes and embolisms in people with atrial fibrillation. The Factor Xa inhibitor segment in the anti-coagulant market accounted for US$9.8bn in 2020.

Figure 18: Factor Xa inhibitor segment in anti-coagulant market accounted for US$19.8bn in 2020



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

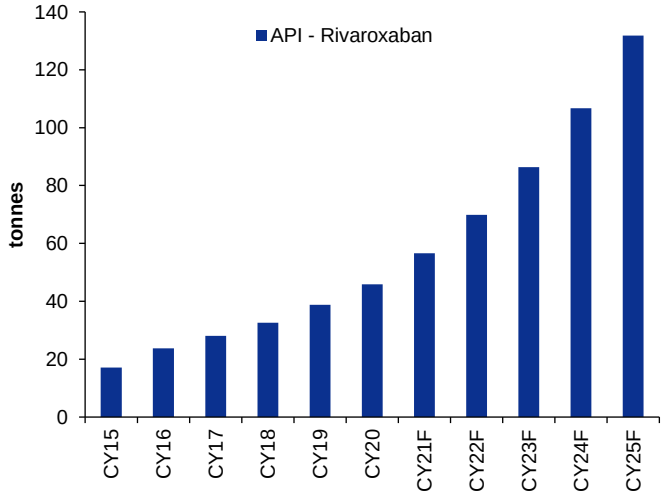
Figure 19: Americas is the main market globally for anti-coagulants with a 42% share (as at FY21-end)



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

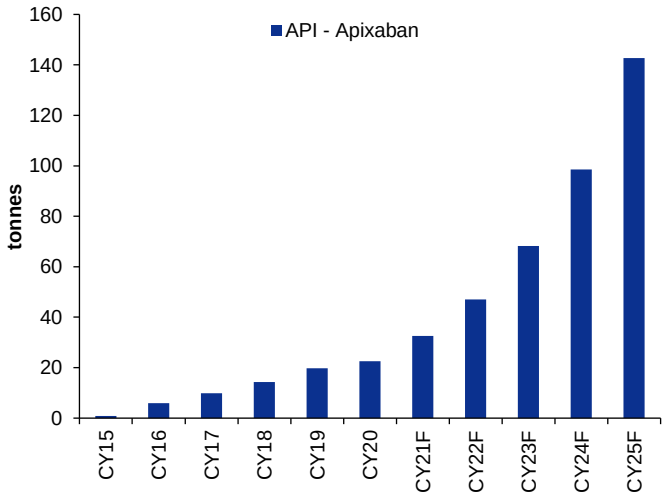
Ami Organics sells intermediates for all Xa inhibitors – apixaban, betrixaban, edoxaban & rivaroxaban ➤

Figure 20: Rivaroxaban's sales volume grew at a 22% CAGR over CY15-20, and is likely to grow at a 23.5% CAGR over CY20-25F



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 21: Apixaban, a new API, grew at a 95% CAGR over CY15-20



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

1-(4-amino phenyl)-5,6-dihydro-3-(4-monopholinyl)-2 & ethyl chloro [(4-methoxyphenyl) hydrazono] acetate are apixaban intermediates ➤

1. **1-(4-amino phenyl)-5,6-dihydro-3-(4-monopholinyl)-2 –** Ami Organics produces around 53kg of the intermediate, whose sales volume has grown seven-fold since FY18. The average price/kg is around US$850-950. Ami Organics manufactures about 100-150kg, translating to about US$0.10m-0.12m in value terms. Ami Organics is one of the larger players in the market, accounting for ~50% of the total market in FY21, with other smaller players making up for the remaining market. Ami Organics holds the process patent for

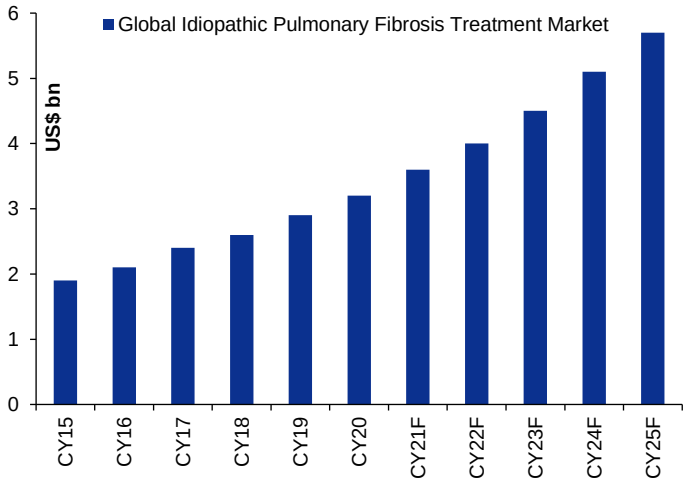
this intermediate in India.

2. **Ethyl chloro [(4-methoxyphenyl) hydrazono] acetate –** The average price range per kilogram is around US$120-150. The global market is currently around US$0.2m-0.25m with net demand at 1.6t to 1.7t (Source: Ami Organics' DRHP). We expect its prices to rise in the coming years, given the growth in demand for the intermediate.

   India produces over 75% of the intermediate. The global trade in the intermediate is less than 1t, with India and China being the key exporters. India imports close to 0.3t, and Ami Organics is a leading producer of the intermediate in India. The company has a process patent that caters to most customers globally.

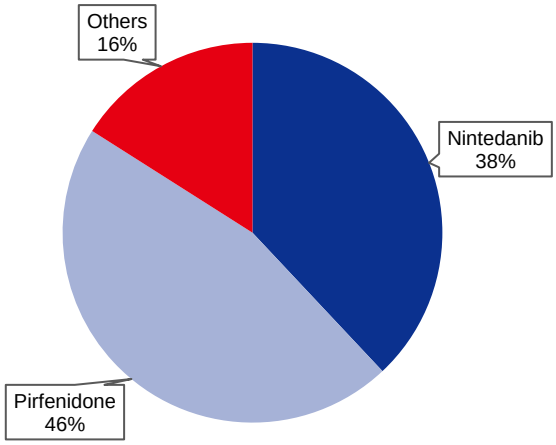
Intermediates for idiopathic pulmonary fibrosis, epilepsy and prostate cancer drugs' API ➢

Figure 22: Global idiopathic pulmonary fibrosis treatment market is likely to grow at a 12.2% CAGR over CY20-25F



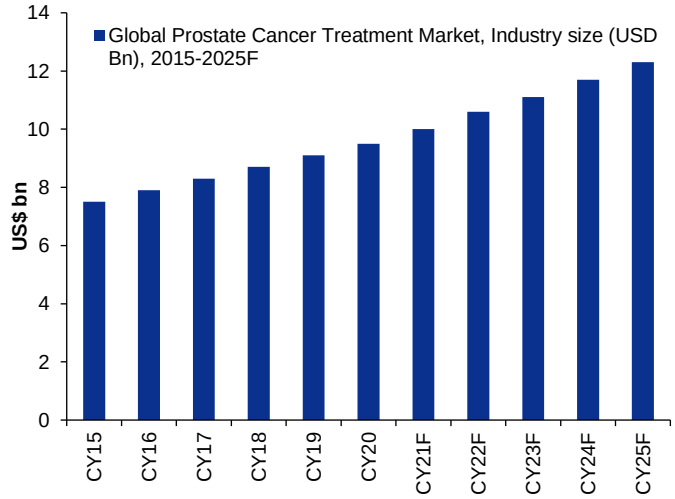
SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 23: Global idiopathic pulmonary fibrosis treatment market by drug class in 2020



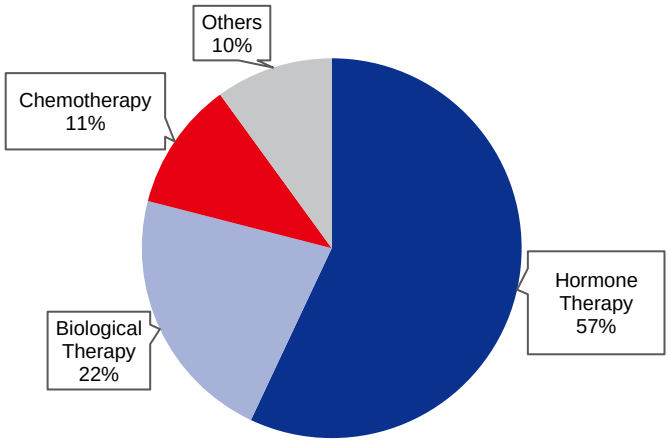
SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 24: Global prostate cancer treatment market is likely to grow at a 5.3% CAGR over CY20-25F, in our view (please remove F from CY21 and 22)



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Figure 25: Global prostate cancer treatment market by drug class in 2020



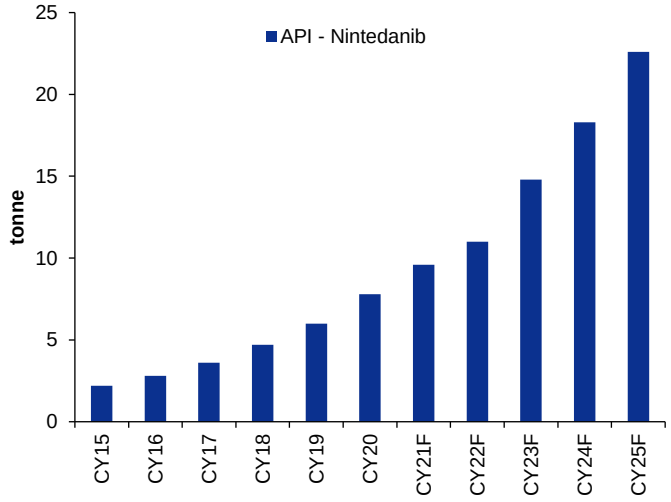
SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Nintedanib is one of the main APIs used in the drug for treatment of idiopathic pulmonary fibrosis ➢

Nintedanib is in a class of medications called kinase inhibitors. It blocks the action of enzymes involved in causing fibrosis. An oral medication is used to treat idiopathic pulmonary fibrosis (IPF). Ami Organics provides intermediates to Boehringer, the originator of the API. The average price of Nintedanib was

US$15,000-16,000/t in CY20. The average price was around US$40,000/t in 2016, which has fallen sharply in the last couple of years. The market size in value terms was around US$125m in 2020 (Source: AMI Organics' DRHP).

Figure 26: Ami Organics expects Nintedanib market to grow sharply



SOURCES: AMI ORGANICS' DRHP, INCRED RESEARCH

Figure 27: Many Indian companies make Nintedanib API

Company	Location
Boehringer Ingelheim	Germany
Cipla	India
Biocon	India
Sun Pharma	India
BDR Lifesciences	India
Leonid Chemicals	India
MSN Life Sciences	India
Teva	India
Midas Pharma	India
Glenmark Pharma	India
JINLAN Pharm-Drugs Technology Co.	China
Suzhou Bichal Biological Technology	China
Shandong Octagon Chemicals	China
Olon S.p.A.	Italy
Formosa Labs	Taiwan

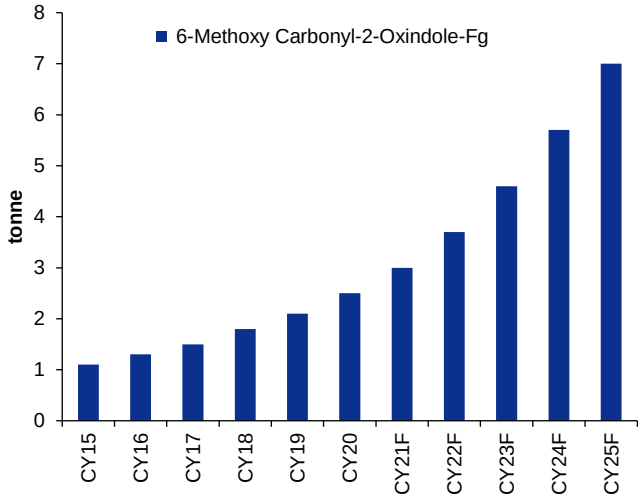
SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Nintedanib has two intermediates and Ami Organics is present in both »

6-methoxy carbonyl-2-oxindole-Fg and trimethyl ortho benzoate are two important intermediates for Nintedanib.

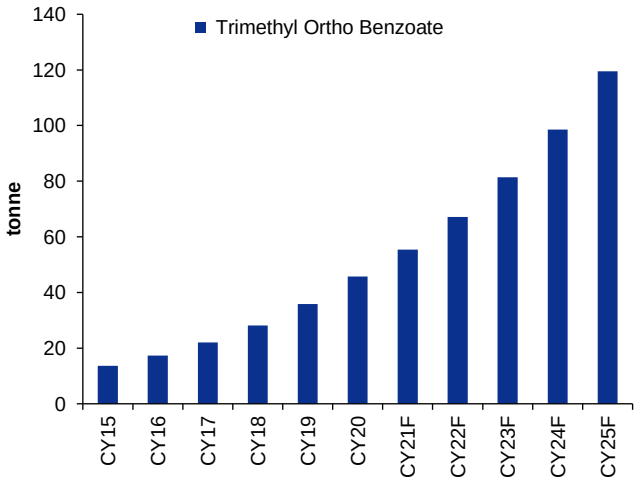
- Ami Organics has a market share of ~40% in the global market in 6-methoxy carbonyl-2-oxindole-Fg, with sales at more than 0.97t in FY21.
- Ami Organics has a global market share of 30-35% in trimethyl ortho benzoate, with sales at more than 16.1t in FY21.

Figure 28: Global sales of 6-methoxy carbonyl-2-oxindole-Fg likely to grow at a 22.9% CAGR over CY20-25F



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Figure 29: Trimethyl ortho benzoate sales likely to grow at a 21.2% CAGR over CY20-25F



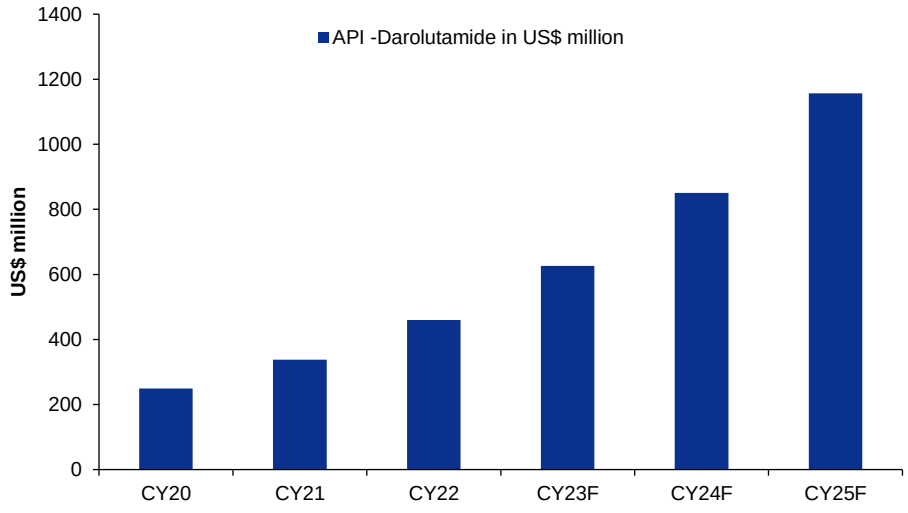
SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Darolutamide is one of the main APIs for the treatment of prostate cancer; Ami Organics supplies intermediates for darolutamide »

Darolutamide is a new anti-cancer new chemical entity (NCE) in the final development stage. The compound was first synthesized and developed by Orion, which partnered Bayer for Phase-III clinical development. Bayer holds global marketing rights, while Orion and its subsidiary Fermion handle all the CMC

and manufacturing activities, from early clinical development to commercial production. Orion manufactures drug products, while Fermion manufactures the API darolutamide. Orion holds co-promotion rights for Europe. Ami Organics is Bayer/Orion's supplier. The drug is very new and is priced at ~US$6,500-7,500/kg.

Figure 30: Ami Organics expects a 36% sales CAGR (in US$m terms) over CY20-25F for darolutamide API



SOURCE: AMI ORGANICS DRHP, INCRED RESEARCH

Gujarat Organics' plants give Ami Organics a better foothold in commodity chemicals

Ami Organics acquired two plants of Gujarat Organics (GOL) on a slump-sale basis.

- **First plant:** Ami Organics and GOL executed a business transfer agreement dated 13 Mar 2021, pursuant to which Ami Organics acquired the business, as a going concern, on a slump-sale basis. The business pertains to the manufacture and supply of specialty chemicals and preservatives used in personal care, pharmaceuticals and agrochemical industries operated by GOL in the Jhagadia facility.
- **Second plant:** Ami Organics and GOL executed a business transfer agreement dated 8 Mar 2021, following which Ami Organics acquired the business, as a going concern, on a slump-sale basis. The plant manufactures and supplies specialty chemicals and preservatives used in personal care, pharmaceutical and agrochemical industries operated by GOL in the Ankleshwar facility.

Ankaleshwar and Jhagadia plants give Ami Organics a foothold in salicylic acid and paraben markets ➤

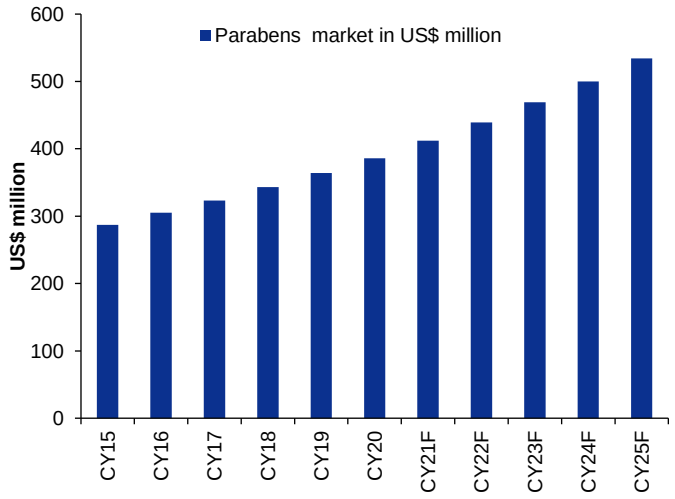
With the acquisition of GOL's facilities, Ami Organics has got a potential revenue source of US$4m-5m per annum. Salicylic acid and paraben are relatively small markets but provide Ami Organics incremental growth opportunities.

Paraben was a ~US$400m market in CY20 ➤

Parabens are esters of p-hydroxybenzoic acid. Parabens refer to a group of preservative ingredients utilized in segments such as pharmaceuticals, food products, personal hygiene products, and cosmetics. These products are very effective in preventing the growth of yeast, bacteria, and fungi, which results in wastage of products. They directly enhance the quality of products through the extension of shelf life, making them hygienic and keeping them safe for consumption. The future of paraben market looks positive with opportunities in personal care products, cosmetics, healthcare, and others.

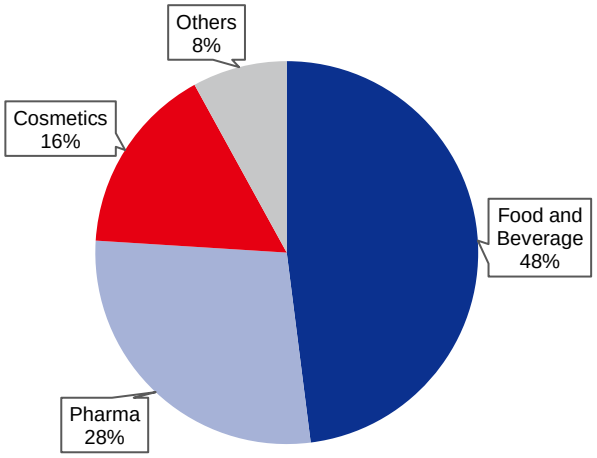
The global paraben market is highly fragmented, characterized by a small number of manufacturers with varied pricing patterns decided by end-use applications. Gujarat Organics (now acquired by Ami Organics) specializes in the production of methylparaben and propylparaben.

Figure 31: Globally, paraben sales grew at a 6% CAGR over CY15-20; we expect sales to grow at a 6.7% CAGR over CY20-25F



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Figure 32: Food and beverage consumed 48% of paraben in FY21



SOURCE: AMI ORGANICS' DRHP, INCRED RESEARCH

Ami Organics can make methyl, ethyl propyl and butyl paraben ➤

After the acquisition of Gujarat Organics' plants, Ami Organics has the capability to make methyl, ethyl, butyl, and propyl paraben.

There are many companies in the world who manufacture paraben ➤

Parabens are a class of synthetic preservatives that are commonly used in cosmetics, personal care products, and some food and pharmaceutical products. Some of the key manufacturers of paraben include:

1. **Ashland Global Holdings**: It is a leading global specialty chemicals company that produces a wide range of products including preservatives for personal care and pharmaceutical products.
2. **BASF SE:** It is a German multinational chemical company that produces a variety of products, including paraben, for use in cosmetics and personal care products.
3. **Clariant International**: It is a Swiss specialty chemicals company that produces a range of preservatives, including paraben, for use in cosmetics and personal care products.
4. **Dow Chemical Company:** It is an American multinational chemical company that produces a variety of chemical products, including paraben, for use in personal care and pharmaceutical products.
5. **Eastman Chemical Company**: It is an American specialty chemical company that produces a range of paraben-based preservatives for use in cosmetics, personal care, and pharmaceutical products.

Increasingly, paraben is considered as a health risk ➤

1. Paraben is the subject of considerable debate and there have been controversies in recent years due to concerns about potential health risks. Some studies have suggested that paraben may be endocrine disruptor, which means it can interfere with the body's hormonal balance and lead to negative health effects. Specifically, paraben has been shown to mimic the effects of estrogen in the body, which can disrupt the normal functioning of the endocrine system.
2. Other studies have suggested that paraben may be linked to increased risk of breast cancer. While the evidence is not conclusive, some studies have found traces of paraben in breast tumours, which has raised concerns about their potential role in the development of breast cancer.
3. **Despite these concerns, the use of paraben in cosmetics and personal care products is still considered safe by many regulatory agencies around the world, including the US Food and Drug Administration (USFDA) and the European Union's Scientific Committee on Consumer Safety (SCCS)**.
4. However, due to consumer demand for safer and more natural products, many manufacturers are beginning to move away from using paraben and are exploring alternative preservatives to ensure the safety of their products.

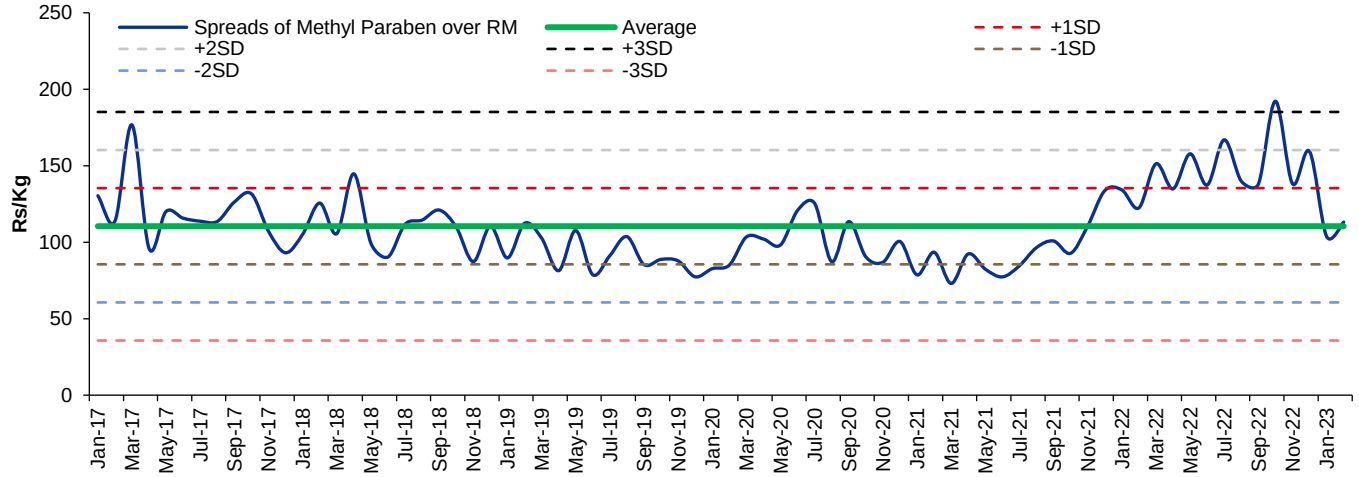
Till date, no regulator has declared paraben as health risk but consumer demand can lead to demand decline ➤

Neither the US nor the EU regulator has declared paraben as health risk, but consumer lobbies are against its usage in cosmetics and other products.

Paraben is a commodity product which is shown by the volatile nature of its spread over raw material ➤

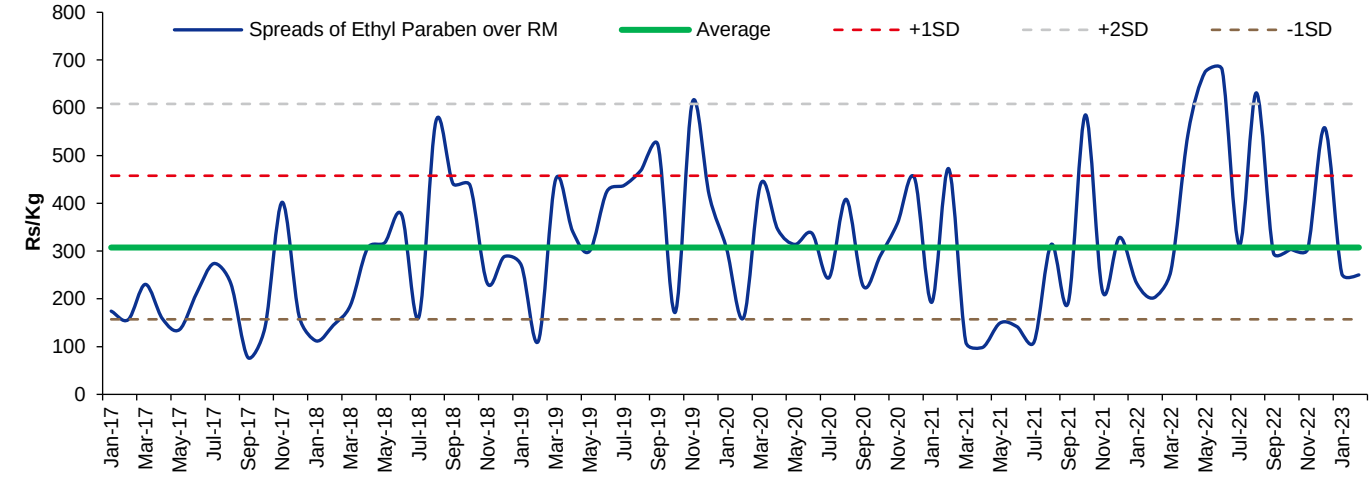
Methyl, ethyl, propyl and butyl paraben are formed by the reaction of para hydroxy benzoic acid with methanol, ethanol, propanol and butanol, respectively. The spreads are easy to calculate, and the volatility indicates the commodity nature of the products.

Figure 33: Methyl paraben has corrected from the peak spread of last seven years, but still near the long-term average



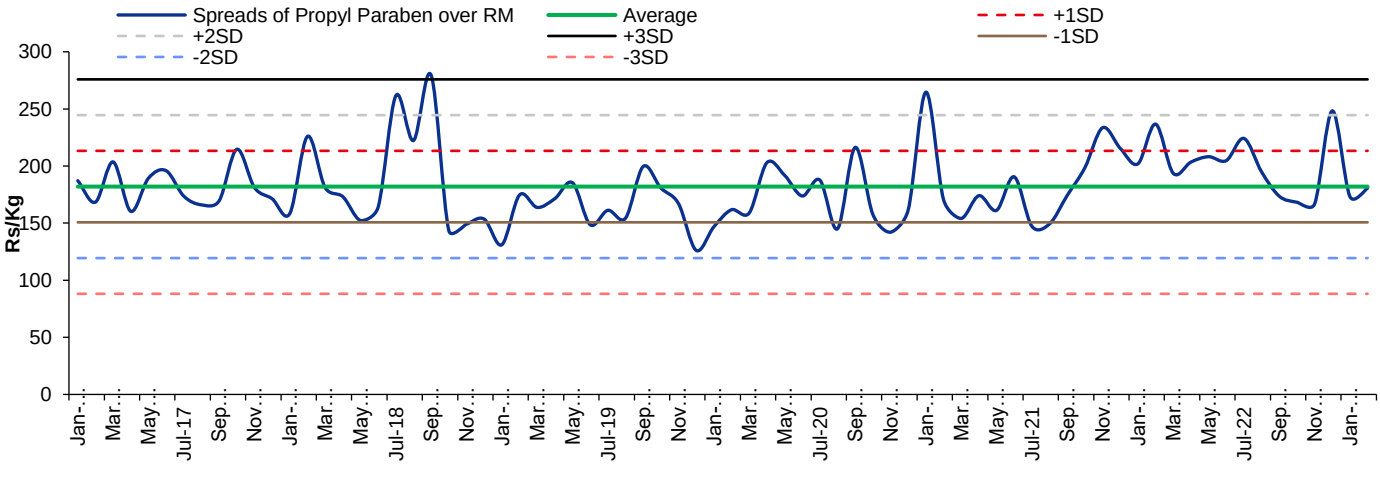
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 34: Ethyl paraben is a highly volatile commodity chemical



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 35: Propyl paraben is relatively less volatile (compared to ethyl paraben), but the cyclical behaviour is apparent

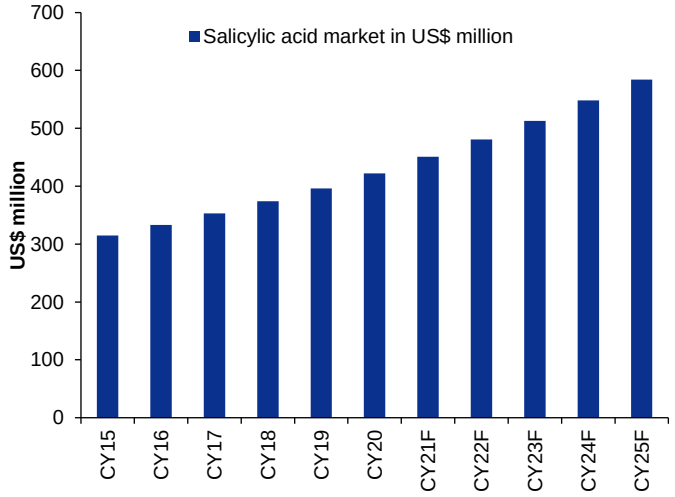


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Salicylic acid is a small and fragmented market ➤

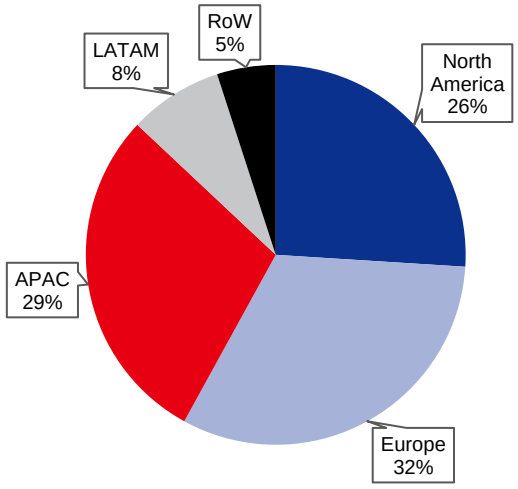
Salicylic acid is used in multiple end-user industries including pharmaceuticals, food & preservatives and cosmetics. The market was dominated by pharmaceutical applications owing to the rising use of salicylic acid-based drugs for the treatment of various skin-related disorders and cardiovascular diseases and Hughes syndrome. Salicylic acid is extensively used in manufacturing aspirin. Increasing the consumption of aspirin tablets owing to a superior pain-relieving action coupled with easy availability of the drug is expected to boost demand.

Figure 36: Global salicylic acid market is likely to grow at a 6.7% CAGR over CY20-25F



SOURCE: INCRED RESEARCH ESTIMATES, COMPANY REPORTS

Figure 37: Europe is the key market for salicylic acid and its derivatives (as at FY21-end)



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Salicylic acid and methyl salicylate are volatile commodity chemicals ➤

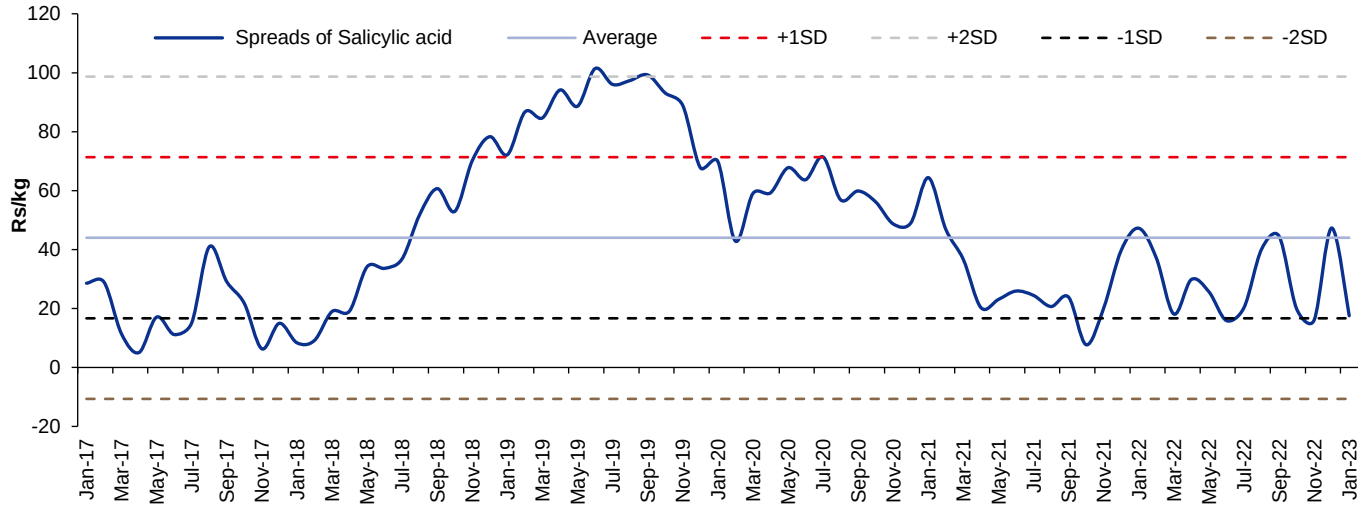
The global salicylic acid market is highly fragmented, characterized by a small number of manufacturers with varied pricing patterns determined by end-use applications. Gujarat Organics specializes in methyl salicylate and 5-chloro salicylic acid. The company also manufactures small portions of 4-amino salicylic acid.

Salicylic acid is a type of beta-hydroxy acid that is commonly used in skincare products to treat acne, exfoliate the skin, and reduce the appearance of fine lines and wrinkles. It works by breaking down the bonds between skin cells, which helps to unclog pores and promote the growth of new skin cells.

In addition to its use in skincare, salicylic acid is also used in the production of aspirin and other pain relievers. It is also used as a food preservative and as an ingredient in some dandruff shampoos.

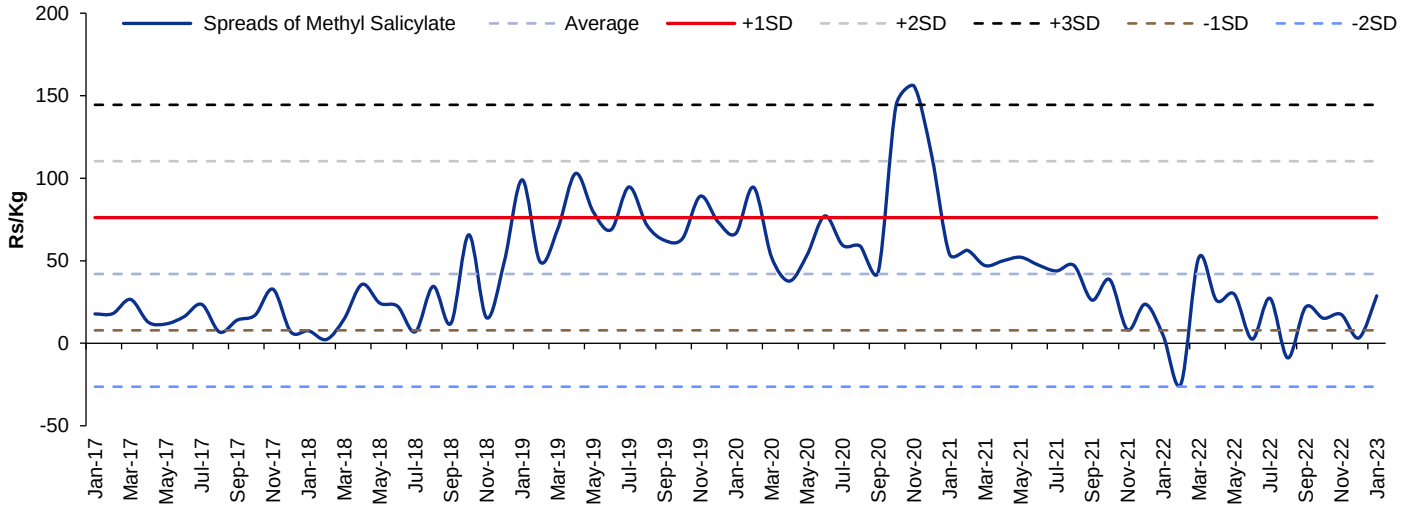
Methyl salicylate, on the other hand, is a type of ester that is used as a topical pain reliever. It is commonly found in over-the-counter products such as Bengay and Icy Hot, where it provides a cooling sensation that helps to alleviate muscle and joint pain. It is also used as a flavouring agent in some foods and beverages, such as wintergreen-flavoured gum and soda.

Figure 38: As of now, salicylic acid spreads are way below historical average



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 39: Methyl salicylate spreads are also quite volatile



SOURCE: COMPANY REPORTS, INCRED RESEARCH

Li-ilon battery electrolyte additive- nothing great but is another commodity chemical

Ami Organics is starting its plant to manufacture vinylene carbonate, which is used as an additive in LiPF6 electrolyte.

$LiPF_6$ is the most widely used electrolyte; multiple new electrolytes are coming to the market place ➤

There are several alternative liquid electrolytes being used in lithium-ion batteries, including:

Lithium bis(fluorosulfonyl)imide (LiFSi): LiFSi electrolyte has a higher salt concentration than LiPF6 electrolyte, which can improve the safety and performance of the battery. LiFSi electrolyte has been shown to be effective in reducing the formation of dendrites on the anode, which can cause short circuits and reduce the lifespan of the battery.

Lithium bis(oxalato)borate (LiBOB): LiBOB electrolyte has a higher thermal stability and lower reactivity with water than LiPF6 electrolyte, which can improve the safety and lifespan of the battery. LiBOB electrolyte also has good compatibility with a wide range of electrode materials.

Lithium bis(trifluoromethanesulfonyl)imide (LiTFSI): LiTFSI electrolyte has a higher salt concentration than $LiPF_6$ electrolyte, which can improve the conductivity and performance of the battery. LiTFSI electrolyte also has good thermal stability and low reactivity with water.

Lithium difluoro(oxalato)borate (LiDFOB): LiDFOB electrolyte has a higher thermal stability than LiPF6 electrolyte, which can improve the safety and lifespan of the battery. LiDFOB electrolyte also has good compatibility with a wide range of electrode materials.

These alternative liquid electrolytes are still in the research and development stage and are not yet widely used in commercial lithium-ion batteries. However, they have shown promising results in laboratory studies and could be used in future battery technologies.

Slowly, $LiPF_6$ is getting replaced by LiFSi ➤

LiFSi has multiple advantages over LiPF6. Some of them are:

1. LiFSi has a higher decomposition temperature, and studies have shown that LiFSi contains F-P bond anions, which can reduce the corrosion of the electrolyte on the current collector.
2. Conductivity of LiFSi is higher than $LiPF_6$.
3. It's very stable at higher temperature compared to $LiPF_6$.
4. The cycle life is much higher than that of $LiPF_6$.

Figure 40: On most parameters, LiFSi is much better compared to $LiPF_6$

Performance	LiFSi	$LiPF_6$
Decomposing temperature	>200℃	>80℃
Oxidation voltage	≤4.5V	>5V
Solubility	Easily soluble	Easily soluble
Conductivity	Highest	Higher
Chemical stability	Relatively stable	Poor
Thermal stability	Better	Poor
Low temperature performance	Good	Common
Cycle life	High	Common
High temperature performance	Good	Poor
Synthetic process	Complex	Simple
Cost	High	Low

SOURCE: INCRED RESEARCH, COMPANY REPORTS

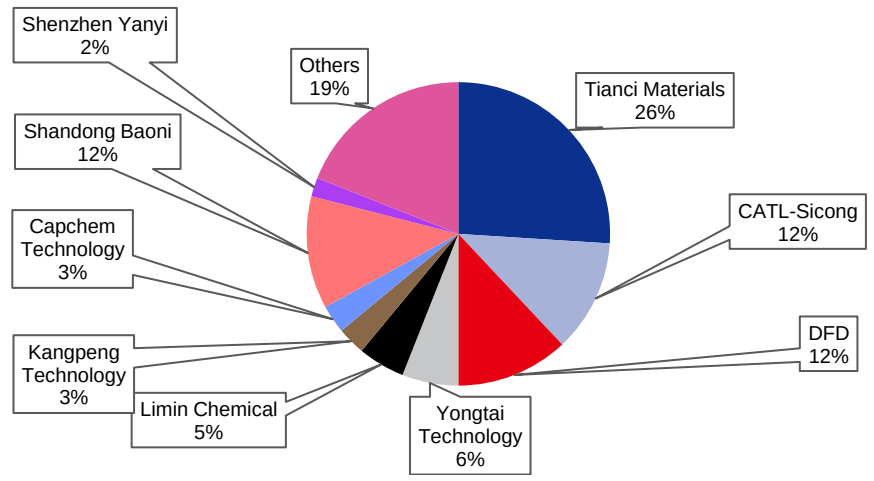
China has even started constructing new LiFSi plants ➤

- Lithium bis(fluorosulfonyl)imide, or LiFSi in short, is a high-profile lithium salt and has been perceived as a potential alternative to LiPF6.
- In respect of LiFSi development, Dr. Michel Armand was the first to suggest that the lithium salt can be used in the electrolyte for new lithium-ion batteries in 1995, but LiFSi was not widely used because of its corrosive effect on

equipment during the production process until 2012 when Nippon Shokubai was the first to establish the LiFSi production process before its industrialization was realized in 2013.

- Around 2015, Chinese enterprises began to devote themselves to the research on the industrialization of LiFSi in China.
- Representative enterprises that have already put the capacity into production include Tianci Materials, Shenzhen Capchem Technology, DFD, Yongtai Technology, Kangpeng Technology, Suzhou Fluolyte, CATL-Sicong, etc.
- It is estimated that the total planned LiFSi capacity (solid) will reach 400,000mt by 2025F, with liquid capacity regarded as three times that of the solid one.

Figure 41: Chinese manufacturers are coming up with 40,000t LiFSi capacity in the coming years



SOURCE: INCRED RESEARCH, OVERVIEW OF LIFSI CAPACITY IN CHINA_SMM | SHANGHAI NON FERROUS METALS

Ami Organics is planning to manufacture vinyelne carbonate, which is used as an additive in LiPF6 ➤

1. Vinylene carbonate (VC) is commonly used as an electrolyte additive to enhance the performance and stability of lithium-ion batteries. When added to the electrolyte, VC forms a protective layer on the surface of the graphite anode, which prevents the decomposition of the electrolyte and the formation of a solid-electrolyte interphase (SEI) layer.
2. The SEI layer can limit the performance of lithium-ion batteries by reducing their capacity, limiting their charge and discharge rates, and causing safety issues such as overheating and fire. VC helps to improve the stability of the SEI layer and prevent its degradation, thereby improving the performance and safety of lithium-ion batteries.
3. VC also has a high dielectric constant, which means it can help to increase the ionic conductivity of the electrolyte. This can lead to faster charging and discharging rates, as well as improved overall battery performance.
4. Overall, the use of vinylene carbonate in electrolytes can improve the stability, performance, and safety of lithium-ion batteries, making them more reliable for use in a wide range of applications.

However, VC has some obvious disadvantages ➤

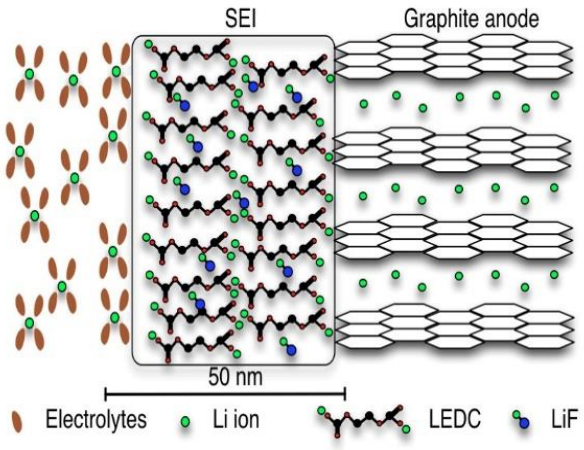
1. Vinylene carbonate($C_3H_2O_3$) is a necessary nuisance in the $LiPF_6$ based Li-ion batteries and as this electrolyte gets replaced by better LiFSi, the demand and pricing ofvinylene carbonate will fall even more.
2. It's a nuisance because it impedes the charging processbut its necessary as it forms a protective layer or solid electrolyte interface on the anode, The quality of the SEI plays a critical role in the cyclability, rate capacity, irreversible capacity loss and safety of lithium-ion batteries (LIB).

Figure 42: Vinylene carbonate is facing competition from Chinese suppliers

Naresh Patel: It's a very nice question. And I was expecting this. Let me tell you one thing, Vinylene Carbonate, the price is going up based on the raw material prices as well as the demand. And the raw material are very, very, I can say, the cheap in terms of value and technology is very important in this product. So AMI Organics developed a flow chemistry in that, and we are successfully running the continuous reaction of that, and we achieved to reduce our production time, our cost sizably, and now we are ready to compete the China price, and that is the reason why we are expecting first order in this month, maybe.

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 43: VC forms a solid electrolyte interface (SEI), which is a passivation layer formed on the surface of lithium-ion battery anode



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 44: VC can be good or bad for cells depending on operational conditions

Vinylene Carbonate (VC) is an effective electrolyte additive to produce a stable solid electrolyte interphase (SEI) on graphite anodes, increasing the capacity retention of lithium-ion cells. However, in combination with $LiNi_{0.5}Mn_{1.5}O_4$ (LNMO) cathodes, VC drastically decreases cell performance. In this study we use on-line electrochemical mass spectrometry (OEMS) and electrochemical impedance spectroscopy (EIS) with a micro-reference electrode to understand the oxidative (in-)stability of VC and its effect on the interfacial resistances of both anode and cathode. We herein compare different VC concentrations corresponding to VC to graphite surface area ratios typically used in commercial-scale cells. At low VC concentrations (0.09 wt%, corresponding to 1 wt% in commercial-scale cells), an impedance increase exclusively on the anode and an improved capacity retention is observed, whereas higher VC concentrations (0.17 wt – 2 wt%, corresponding to 2 wt - 23 wt% in commercial-scale cells) show an increase in both cathode and anode impedance as well as worse cycling performance and overcharge capacity during the first cycle. By considering the onset potentials for VC reduction and oxidation in graphite/LNMO cells, we demonstrate that low amounts of VC can be reduced before VC oxidation occurs, which is sufficient to effectively passivate the graphite anode.

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Can VC be used in LiFSi as well? Yes, but the essential requirement will be less ➤

1. The reasons behind which VC is added in $LiPF_6$ are inherently not present in LiFSi and hence, naturally the requirement of VC will be less. Compared with LiPF6, lithium difluorosulfonimide (LiFSi) has the advantages of high conductivity, strong hydrolysis resistance and good thermal stability, and is more suitable for high-nickel batteries.
2. LiFSi has some inherent advantages over LiPF6 which renders the requirement of VC to be less in LiFSi, as LiFSi has the following advantages over $LiPF_6$ such as:

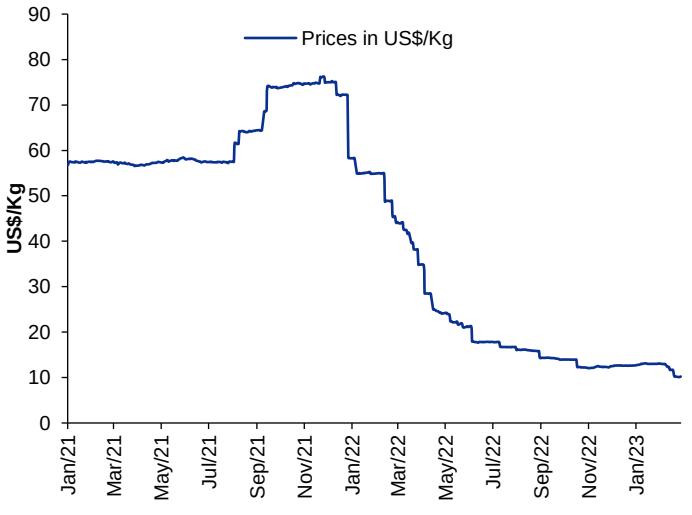
   High conductivity: The fluorine atom in LiFSi molecule has strong electron-absorbing ability, which can delocalize the anode charge on N. The ion association pairing effect is weak, which makes Li-ion more easily dissociate, and so LiFSi has high conductivity.

   Strong hydrolysis resistance: The results of hydrolysis tests on LiPF6 and LiFSi showed that the water content and HF concentration in the LiFSi solution remained almost unchanged during the test period, while the water in the LiPF6 solution was exhausted on the ninth day, and HF concentration increased significantly, indicating that FSI- anion had better hydrolysis resistance.

Good thermal stability: The results show that LiPF6 electrolyte and LiFSi electrolyte have the same battery cycle performance at 25℃, but at 60℃, LiPF6 battery capacity is only half of LiFSi battery, indicating that LiFSi has better thermal stability. LiFSi-added batteries perform better at high temperatures.

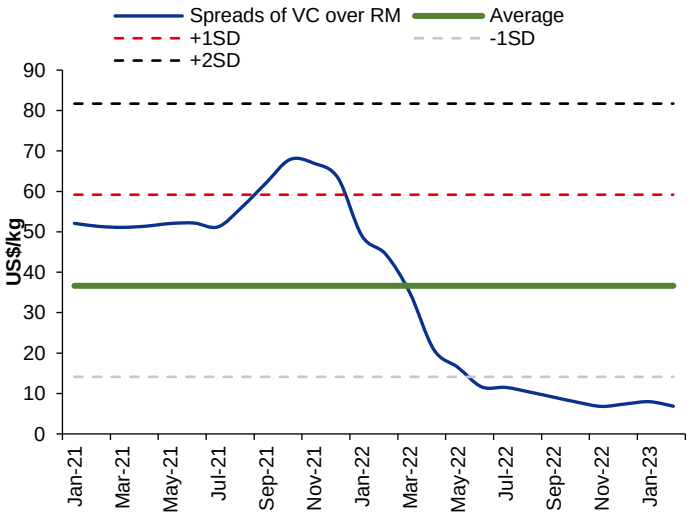
Prices of VC are falling and so does its spreads over raw material ➤

Figure 45: VC prices are collapsing…



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 46: …and so, does its spreads over raw material



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Earnings and valuation

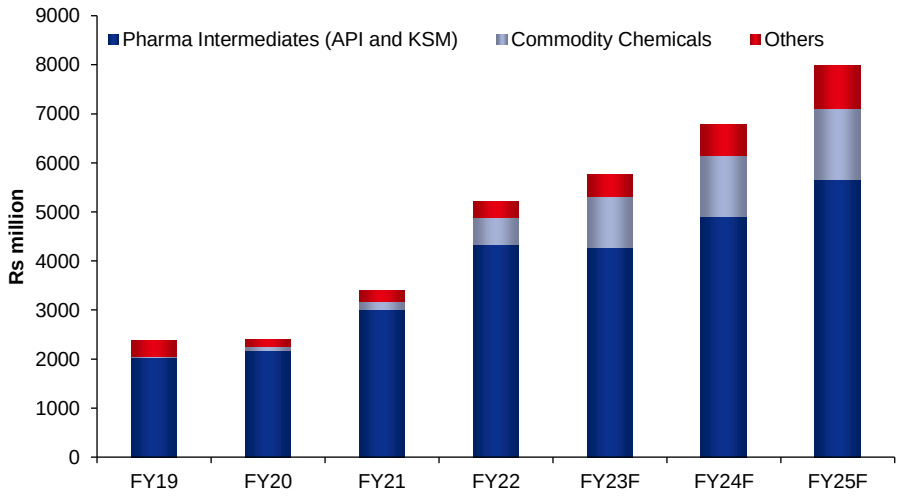
We forecast a revenue CAGR of 17% over FY21-24F. We expect gross margin to decline in FY22F before gradually improving to 47% in FY24F. However, due to operational leverage, we expect EBITDA margin to expand from 23.5% in FY21 to 28.2% in FY24F. PAT is likely to grow at a 27% CAGR at Rs1.1bn in FY24F.

We forecast revenue growth of 15% and EBITDA CAGR at 12% over FY22-25F ➤

We list our product-wise growth assumptions.

1. We expect overall revenue to grow at a 15% CAGR over FY22-25F.

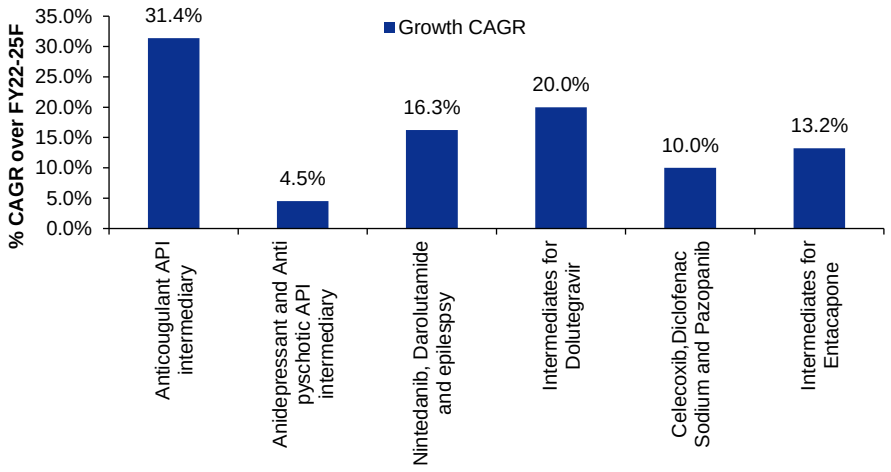
Figure 47: Sales will be driven primarily by volume growth at a 8.3% CAGR



SOURCE: INCRED RESEARCH ESTIMATES, COMPANY REPORTS

2. We are bullish on anti-coagulant molecule API intermediateswhich are likely to grow at a 31.4% CAGR. Our other assumptions are in the graph below.

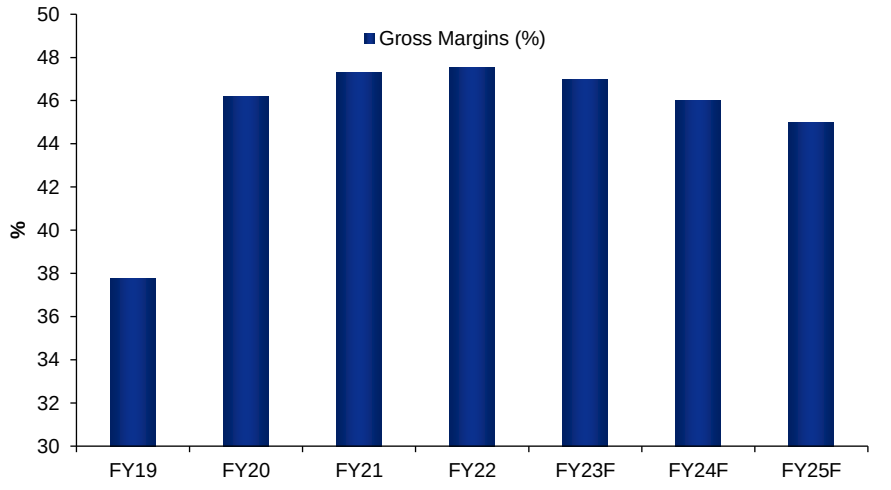
Figure 48: Anti-coagulant API intermediates are likely to grow the fastest among API intermediates and KSMs



SOURCE: INCRED RESEARCH ESTIMATES, COMPANY REPORTS

3. While integrating Gujarat Organics' business, Ami Organics' gross margin declined, and as commodity business ramps up, gross margin will remain depressed.

Figure 49: Gross margin to decline to 45% in FY25F



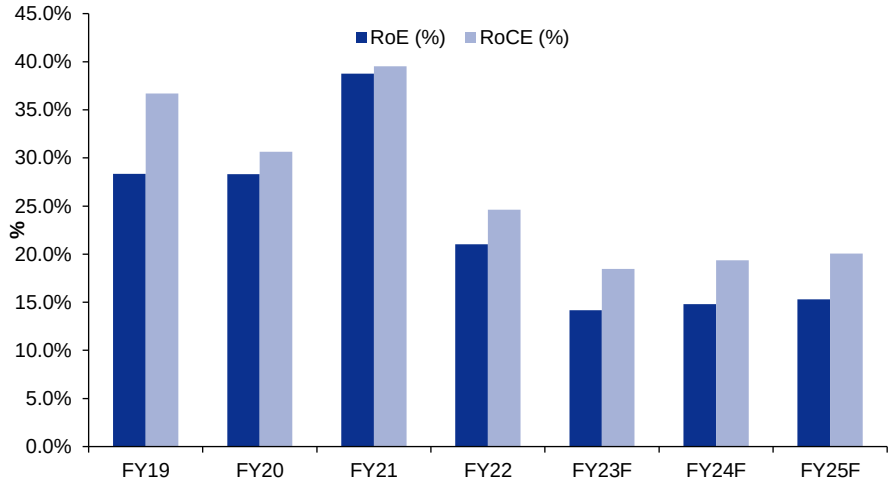
SOURCE: INCRED RESEARCH ESTIMATES, COMPANY REPORTS

4. Rise in paraben and salicylic acid volume will add to the volatility in earnings. At the same time, volume ramp-up of vinylene carbonate will also add to margin dilution.

5. We are bearish on the prospects of vinylene carbonate as a) we believe it will take a long time for the volume ramp-up, and b) collapsed VC prices are unlikely to rise.

RoE and RoCE to remain steady

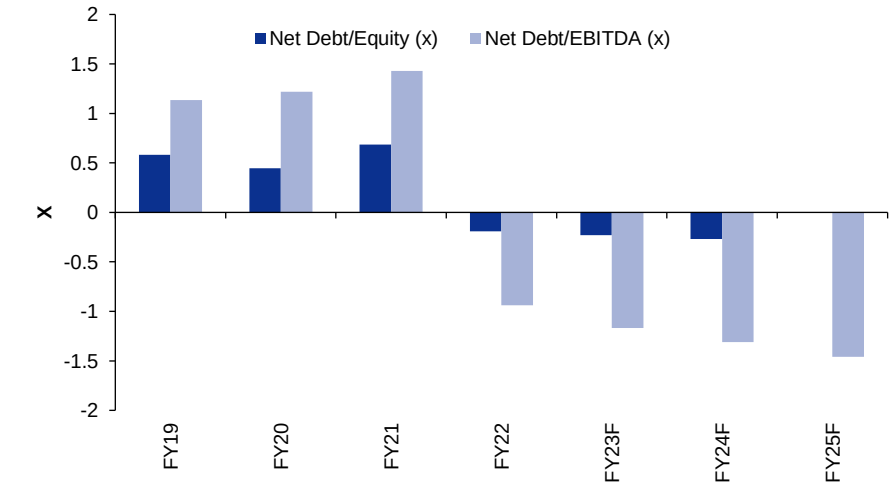
Figure 50: Ami Organics' RoE and ROCE to fall from FY21 peak levels



SOURCE: INCRED RESEARCH ESTIMATES, COMPANY REPORTS

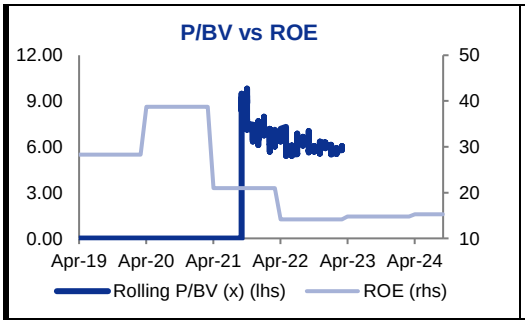
Company to deleverage its balance sheet

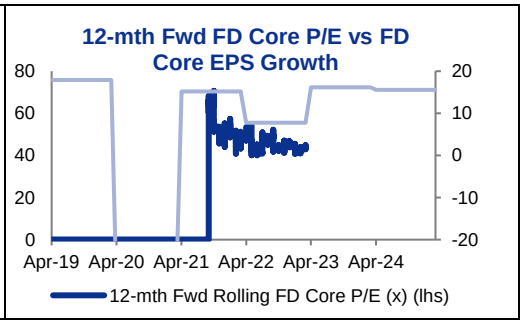
Figure 51: Ami Organics deleveraging its balance sheet



SOURCE: INCRED RESEARCH ESTIMATES, COMPANY REPORTS

BY THE NUMBERS





Profit & Loss

(Rs mn)	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Total Net Revenues	**3,406**	**5,201**	**5,761**	**6,787**	**7,988**
Gross Profit	**1,611**	**2,473**	**2,708**	**3,122**	**3,594**
Operating EBITDA	**802**	**1,052**	**1,137**	**1,307**	**1,497**
Depreciation And Amortisation	(42)	(101)	(114)	(117)	(120)
Operating EBIT	**760**	**951**	**1,022**	**1,190**	**1,377**
Financial Income/(Expense)	(42)	(36)	14	14	14
Pretax Income/(Loss) from Assoc.					
Non-Operating Income/(Expense)					
Profit Before Tax (pre-EI)	**717**	**915**	**1,036**	**1,204**	**1,391**
Exceptional Items					
Pre-tax Profit	**717**	**915**	**1,036**	**1,204**	**1,391**
Taxation	(177)	(195)	(261)	(303)	(350)
Exceptional Income - post-tax					
Profit After Tax	**540**	**719**	**775**	**900**	**1,040**
Minority Interests					
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Net Profit	**540**	**719**	**775**	**900**	**1,040**
Recurring Net Profit	540	719	775	900	1,040
Fully Diluted Recurring Net Profit	**540**	**719**	**775**	**900**	**1,040**

Cash Flow

(Rs mn)	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
EBITDA	802	1,052	1,137	1,307	1,497
Cash Flow from Invt. & Assoc.					
Change In Working Capital	(384)	(915)	(297)	(333)	(390)
(Incr)/Decr in Total Provisions					
Other Non-Cash (Income)/Expense					
Other Operating Cashflow	(88)	(144)	(119)	(169)	(229)
Net Interest (Paid)/Received	(58)	(90)			
Tax Paid					
Cashflow From Operations	**271**	**(97)**	**721**	**805**	**878**
Capex	(1,066)	(328)	(50)	(50)	(50)
Disposals Of FAs/subsidiaries					
Acq. Of Subsidiaries/investments					
Other Investing Cashflow	62	(897)			
Cash Flow From Investing	**(1,004)**	**(1,225)**	**(50)**	**(50)**	**(50)**
Debt Raised/(repaid)	772	(1,358)	(8)		
Proceeds From Issue Of Shares		(185)			
Shares Repurchased		3,000			
Dividends Paid					
Preferred Dividends					
Other Financing Cashflow	(51)	(54)	(200)	(250)	(250)
Cash Flow From Financing	**721**	**1,403**	**(208)**	**(250)**	**(250)**
Total Cash Generated	(11)	81	462	505	578
Free Cashflow To Equity	**40**	**(2,680)**	**662**	**755**	**828**
Free Cashflow To Firm	**(676)**	**(1,258)**	**671**	**755**	**828**

SOURCES: INCRED RESEARCH, COMPANY REPORTS

BY THE NUMBERS…cont'd

Balance Sheet

(Rs mn)	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Total Cash And Equivalents	27	996	1,329	1,713	2,183
Total Debtors	1,207	1,637	1,813	2,136	2,514
Inventories	604	1,122	1,242	1,464	1,723
Total Other Current Assets	325	761	761	761	761
Total Current Assets	**2,162**	**4,515**	**5,146**	**6,074**	**7,181**
Fixed Assets	1,863	1,779	1,715	1,647	1,578
Total Investments					
Intangible Assets					
Total Other Non-Current Assets	107	252	252	252	252
Total Non-current Assets	**1,970**	**2,031**	**1,967**	**1,899**	**1,830**
Short-term Debt	445	3			
Current Portion of Long-Term Debt					
Total Creditors	844	1,184	1,184	1,395	1,641
Other Current Liabilities	361	46	46	46	46
Total Current Liabilities	**1,651**	**1,233**	**1,230**	**1,441**	**1,688**
Total Long-term Debt					
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities	726	6			
Total Non-current Liabilities	**726**	**6**			
Total Provisions	86	127	127	127	127
Total Liabilities	**2,463**	**1,366**	**1,357**	**1,568**	**1,815**
Shareholders Equity	1,669	5,180	5,755	6,405	7,196
Minority Interests					
Total Equity	**1,669**	**5,180**	**5,755**	**6,405**	**7,196**

Key Ratios

	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Revenue Growth	42.1%	52.7%	10.8%	17.8%	17.7%
Operating EBITDA Growth	95.4%	31.2%	8.1%	15.0%	14.5%
Operating EBITDA Margin	23.5%	20.2%	19.7%	19.3%	18.7%
Net Cash Per Share (Rs)	(13.28)	27.25	36.48	47.02	59.92
BVPS (Rs)	52.99	142.16	157.95	175.80	197.48
Gross Interest Cover	13.52	14.84			
Effective Tax Rate	24.7%	21.3%	25.2%	25.2%	25.2%
Net Dividend Payout Ratio					
Accounts Receivables Days	94.89	99.79	109.29	106.19	106.25
Inventory Days	114.59	115.41	141.30	134.75	132.37
Accounts Payables Days	138.16	135.69	141.53	128.39	126.12
ROIC (%)	19.6%	16.5%	16.8%	18.5%	20.0%
ROCE (%)	41.8%	25.7%	18.5%	19.4%	20.1%
Return On Average Assets	17.7%	14.0%	11.2%	11.8%	12.1%

SOURCES: INCRED RESEARCH, COMPANY REPORTS

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