

India

Underweight (no change)

Highlighted Companies

Deepak Nitrite Ltd

REDUCE, TP Rs1514, Rs2327 close

Rising base chemicals prices, mainly benzene and propylene, will hit the margins from 1QFY23F. The option value of its expansion project has taken a hit due to the recent fall in BIS-phenol-A margins.

Laxmi Organic Industries Ltd

REDUCE, TP Rs155, Rs418 close

Ethyl acetate spreads have fallen in 4Q FY22F over 3QFY22. The inherent volatility in base commodity prices doesn't justify the high P/E of more than 50x. Fluorine project is yet to contribute to the company's bottom line.

UPL Limited

REDUCE, TP Rs754, Rs823 close

Rising raw material prices will hit the company, as they have done for Rallis. UPL operates in multiple geographies and forex risk is inherent in the business. Given the inherent macro risk in business, UPL can never trade close to other chemical companies like PI Industries on a forward P/E basis.

Summary Valuation Metrics

P/E (x)	Mar22-F	Mar23-F	Mar24-F
Deepak Nitrite Ltd	30.51	31.83	30.73
Laxmi Organic Industries Ltd	52.22	54.07	44.88
UPL Limited	19.07	17.38	14.8

P/BV (x)	Mar22-F	Mar23-F	Mar24-F
Deepak Nitrite Ltd	9.72	7.59	6.18
Laxmi Organic Industries Ltd	8.78	7.55	6.46
UPL Limited	2.61	2.28	1.98

Dividend Yield	Mar22-F	Mar23-F	Mar24-F
Deepak Nitrite Ltd	0.25%	0.25%	0.25%
Laxmi Organic Industries Ltd	0.12%	0.12%	0.12%
UPL Limited	1.38%	1.51%	1.77%

Chemicals - Overall

Feeling the ethylene pinch

- 39% of global ethylene supply comes from ethane. Primary source of ethane is natural gas whose prices are surging and hence, ethylene prices are rising.
- Ethylene is leading to a rise in base chemical prices but the spreads of the latter over ethylene are falling, more so indirectly consumer-facing products.
- We see margin pressure on petrochemicals like HDPE, LDPE, MEG, etc. Even bulk chemicals (ethyl acetates, DEA, PET film, etc.) will face margin pressure.

Ethylene prices are rising across the world

Now well-known is the fact that the LNG supply problem is leading to ethylene scarcity and hence, ethylene prices are on the rise. The rise in ethylene prices is raising the cost of multiple base chemicals globally. All the following chemicals and many more will get negatively impacted vis-à-vis margins - acetic acid, ethylene dichloride (EDC), vinyl acetate monomer (VAM), solvents, acrylates, styrene, and styrene-butadiene rubber (SBR), polyvinyl chloride (PVC), vinyl chloride monomer (VAM), mono ethylene glycol (MEG), high-density polyethylene (HDPE), low-density polyethylene (LDPE), ethylene oxides, polyester (PET) films, diethanolamine (DEA), etc. What is interesting though is the fact that while B2B chemicals are witnessing a rise in prices and relatively modest margin declines, however those chemicals which are directly used in consumer applications are witnessing margin collapse (like HDPE, LDPE, PET, SBR, VAM, etc). All these are signs of slowing consumer demand, which is not good for high P/E chemical names. Buy chemical names that have an intrinsic advantage to pass on cost inflation, and one such name is Navin Fluorine. Sell all bulk chemical names like Laxmi Organics, Deepak Nitrite, etc. Even agrochemicals will be losers given the rise in input cost and falling global demand. UPL is our top Reduce-rated stock in that universe.

Don't bet on a rise in petchem margins, GRM is a different matter

Global refineries that have a well-diversified product range in terms of petrochemicals will struggle to keep up with the profitability of standalone refineries. Chemicals that directly go into consumer products are witnessing margin compression and the same will accentuate in the coming weeks. To cite an example, in the coming period it's better to be an ethylene producer rather than downstream products of ethylene. Standalone refineries which are a pure play on gross refining margin or GRM are likely to do better than refineries that have well-diversified petrochemical products.

Cost pressure will be felt by all chemical firms; retain Underweight

Laxmi Organics, Deepak Nitrite, and UPL remain our top Reduce-rated ideas in the Indian chemicals space. Chemplast Sanmar (UNRATED) can witness a significant profit decline in 4QFY22F (sequentially) and the situation can take a turn for the worse in the coming future. High benzene prices will lead to a profit decline for Aarti Industries (Reduce). Atul Limited is facing multiple headwinds such as high raw material costs and the inability to pass on the high input cost to end consumers.

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Figure 1: List of bulk chemicals which are directly derived from ethylene, their prices, and gross profit trajectory over raw material

Chemicals	Prices	Spread over Input	Chemicals	Prices	Spread over Input
Ethylene	▲	▲	LDPE	▶	▼
PVC	▼	▼	Styrene	▲	▼
EDC	▼	▼	Styrene Butadiene Rubber	▶	▼
Ethanol	▶	▼	MEG	▼	▼
Acetic Acid	▲	▼	PTA	▼	▲
Ethyl Acetate	▼	▼	PET film	▲	▼
HDPE	▶	▼	DEA	▼	▼

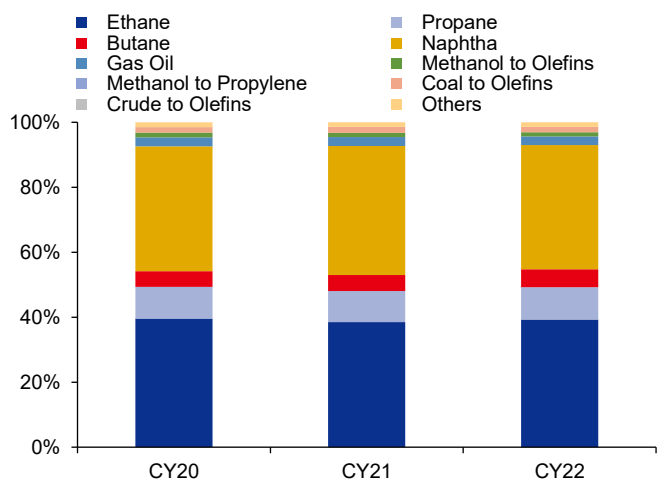
SOURCES: INCRED RESEARCH, COMPANY REPORTS

Feeling the ethylene pinch

LNG problem will turn into ethylene scarcity

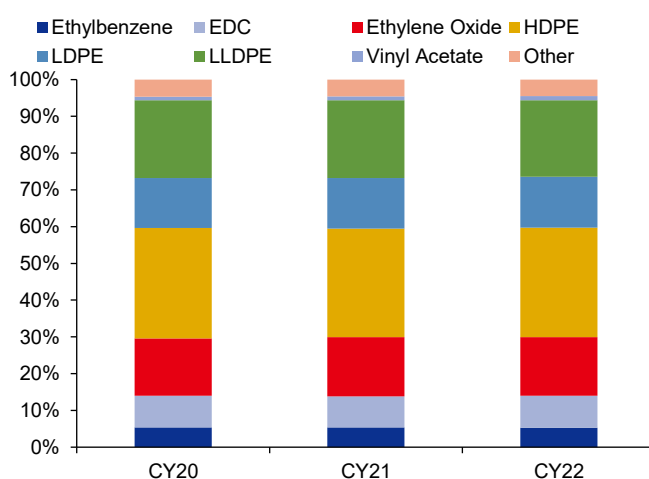
Globally, ethane contributes 11% to ethylene production ➤

Figure 2: Ethane contributes approximately 39% to the overall production of ethylene



SOURCES: INCRED RESEARCH, COMPANY REPORTS

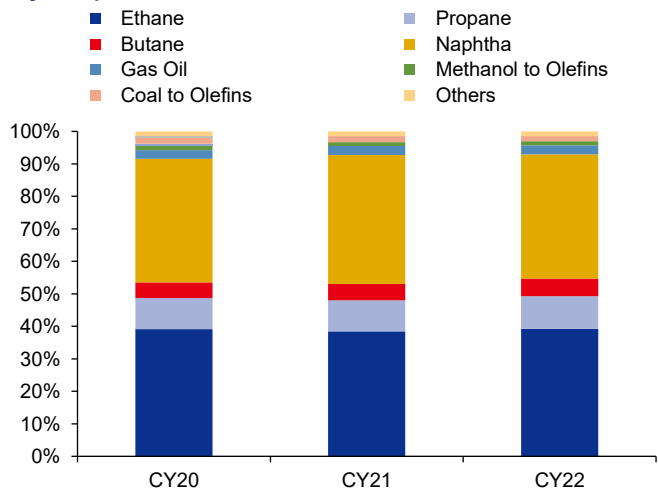
Figure 3: EDC, Ethylbenzene, HDPE, and LDPE are major user categories of ethylene



SOURCES: INCRED RESEARCH, COMPANY REPORTS

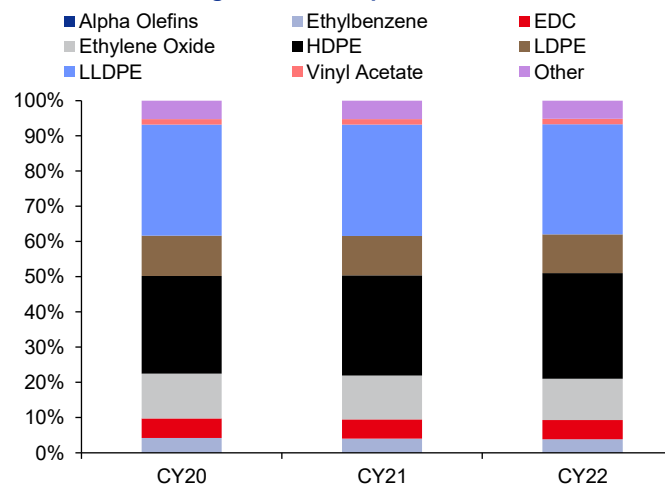
In South-East Asia, ethane contributes 22% to ethylene production ➤

Figure 4: In South-East Asia, ethane contributes 22% to ethylene production



SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 5: The usage pattern of ethylene in South-East Asia remains similar to global consumption



SOURCES: INCRED RESEARCH, COMPANY REPORTS

Ethane is sourced from natural gas as well as a petrochemical by-product ➤

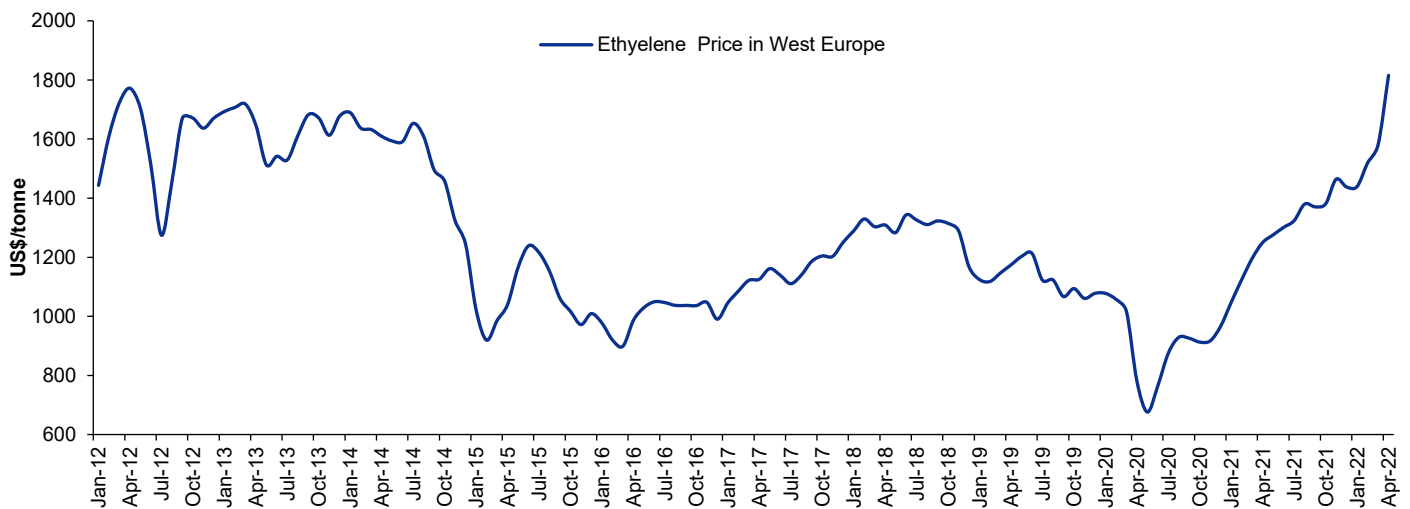
Usually, ethylene is directly manufactured by cracking naphtha in a steam cracker. Ethane production in the distillation column is less, and therefore the production of ethylene is mainly sourced from natural gas. The typical composition of ethane in raw natural gas is around 11%. Please note that while ethane can be sourced from the cracking of petrochemicals, it's rarely produced directly in a distillation column. Normally, naphtha is produced, and cracking naphtha to produce ethane is a wasteful exercise.

With Russia becoming a pariah, natural gas is witnessing scarcity ➤

As we have highlighted in our previous report on Petronet LNG ([IN: Petronet LNG - We cut EPS estimates; retain Hold \(HOLD - Maintained\)](#)) LNG is in short supply. Another means of transporting gas is through a pipeline but unfortunately, we still don't have a transatlantic gas pipeline that links Europe to the USA. So, it's inevitable that ethane availability will reduce, at least in Europe

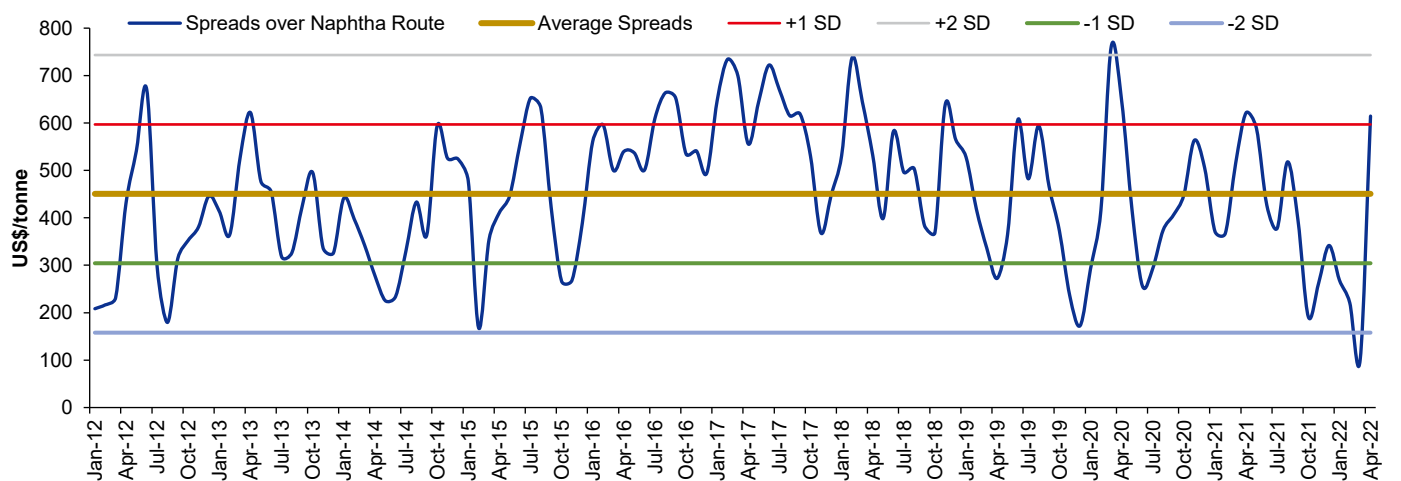
Hence, ethylene prices will go up as well as its spread over naphtha ➤

Figure 6: Ethylene prices are already on the boil in west Europe, and they are much higher than where they were in 2012 when crude oil prices were much higher



SOURCES: INCRED RESEARCH, COMPANY REPORTS

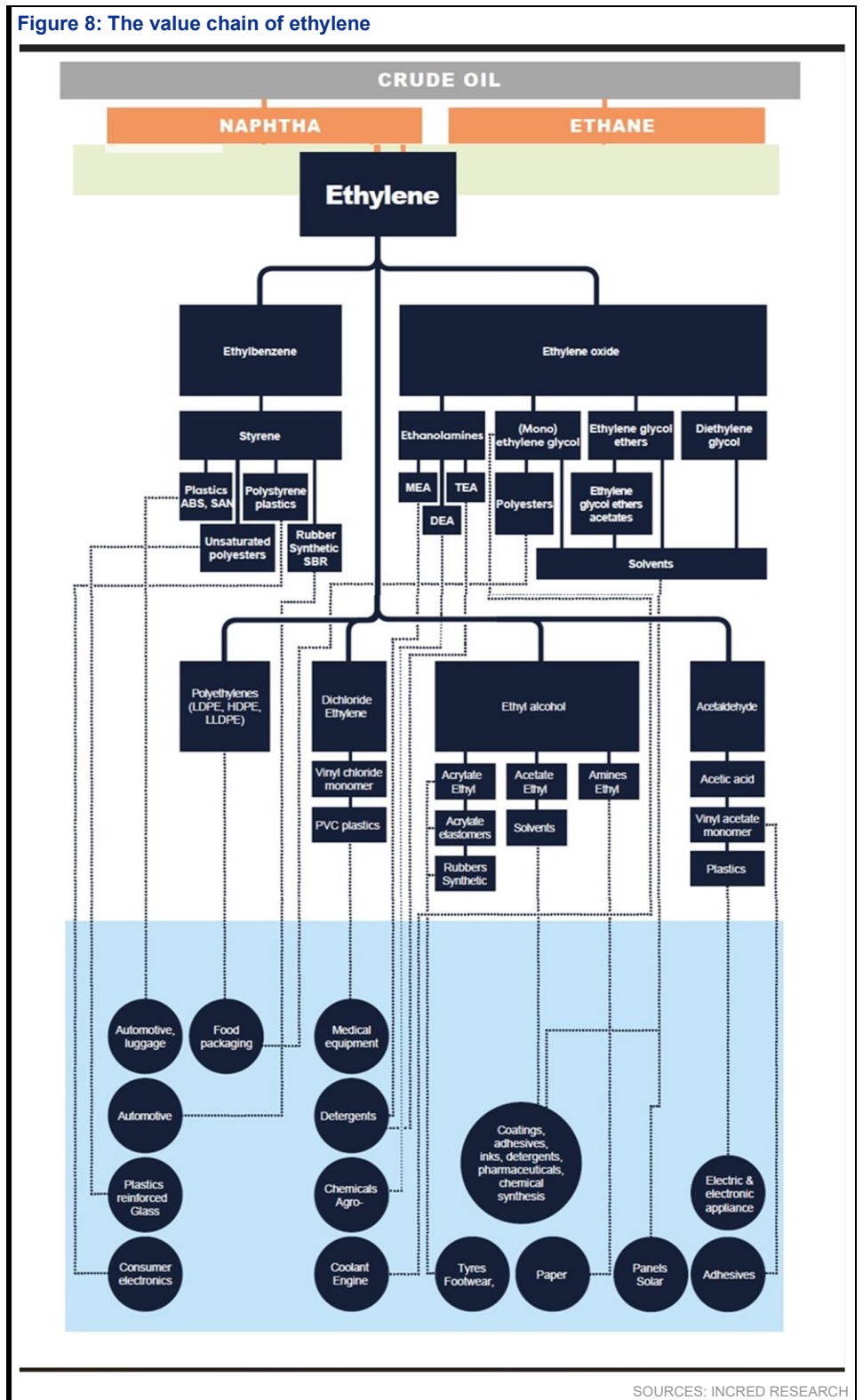
Figure 7: In a slowing economy, ethylene spreads over naphtha are on the rise, indicating a short supply



SOURCES: INCRED RESEARCH, COMPANY REPORTS

Ethylene is the base chemical for multiple chemicals and hence, margins will compress for all those products

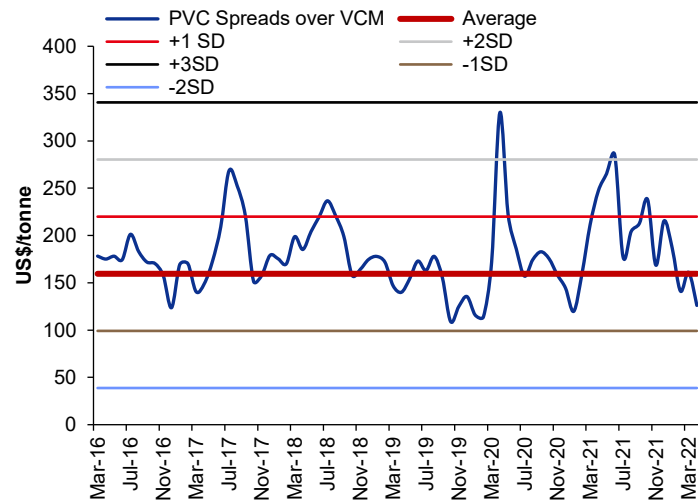
Figure 8: The value chain of ethylene



Ethylene is used to make EDC; expect cost push-led margin compression in EDC as well as VCM ➤

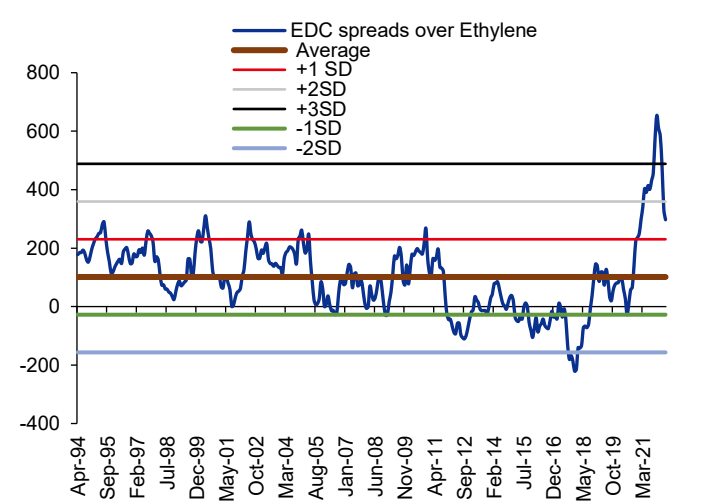
Ethylene is used to make EDC (ethylene dichloride) and EDC is in turn used to make VCM (vinyl chloride monomer). Please note that VCM is polymerized to make PVC (polyvinyl chloride). A slowing world doesn't bode well for end-PVC demand. Indian PVC prices are on the decline, and 4QFY22 Earnings for PVC-makers will be bad.

Figure 9: PVC spreads over VCM are below the long-term mean and as they have gone to +3SD, they can go to -3SD as well



SOURCES: INCRED RESEARCH, COMPANY REPORTS, BLOOMBERG

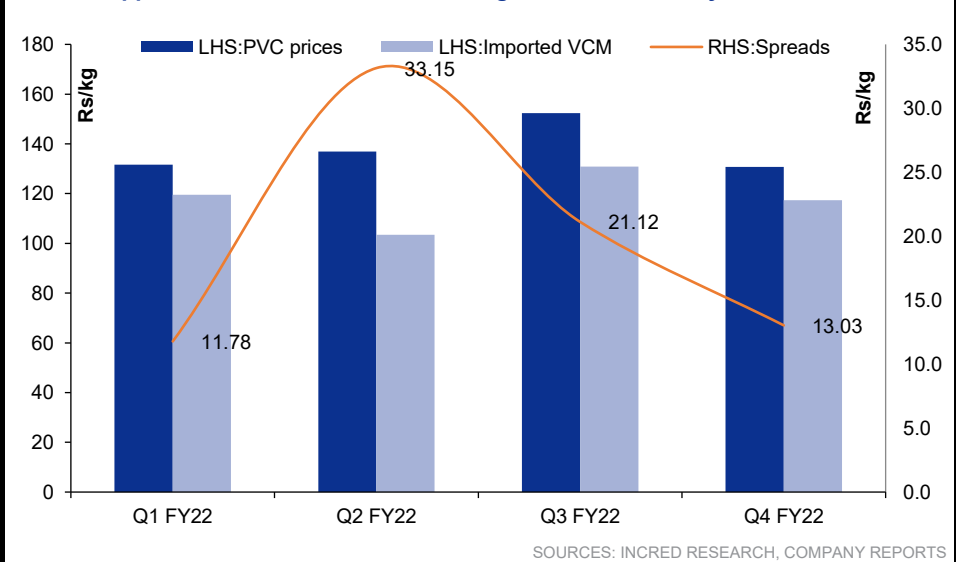
Figure 10: Similarly, rising ethylene prices are leading to a fall in EDC margin



SOURCES: INCRED RESEARCH, COMPANY REPORTS, BLOOMBERG

Indian PVC manufacturer Chemplast Sanmar (NOT RATED) will have an extremely tough quarter and in 4QFY22 its PVC spreads over VCM have fallen to as low as Rs13/kg.

Figure 11: Chemplast Sanmar's PVC spreads over VCM have fallen to the 1QFY22 level; disappointment with consensus earnings estimates is likely

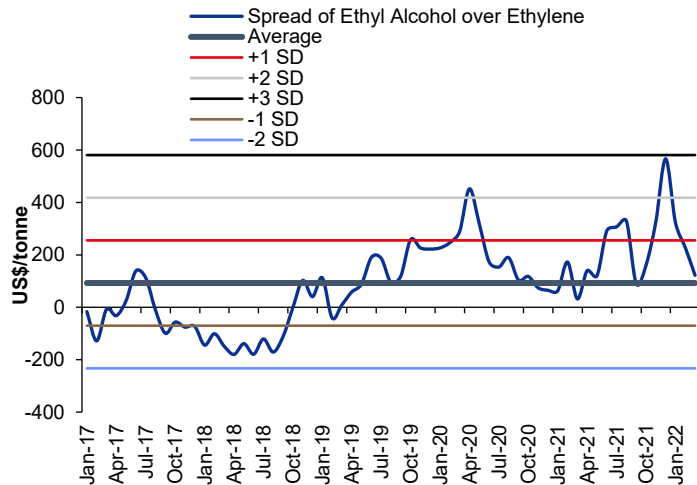


SOURCES: INCRED RESEARCH, COMPANY REPORTS

Ethylene price rise is compressing the margins of ethyl alcohol, acetic acid as well as ethyl acetate ➤

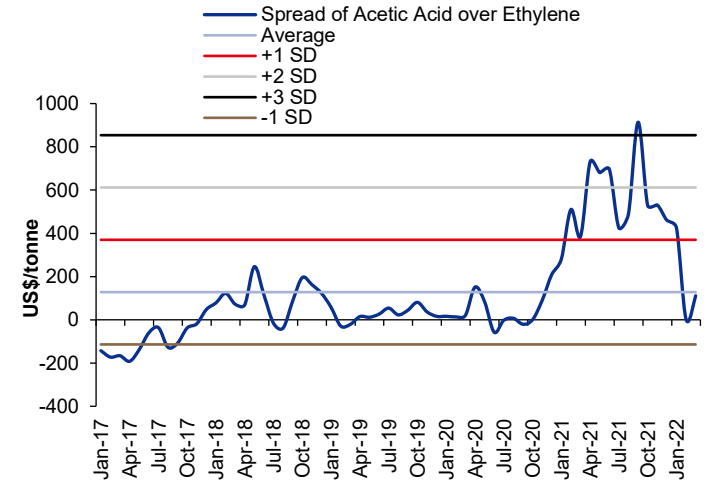
Rising ethylene prices are increasing the prices of ethyl alcohol and acetic acid but the spreads of ethyl alcohol and acetic acid are correcting sharply. Ethyl acetate spreads are also falling and that's bad news for several Indian companies like Laxmi Organics and Jubilant Ingrevia.

Figure 12: After rising to +3SD, ethanol spreads over ethylene are on the decline



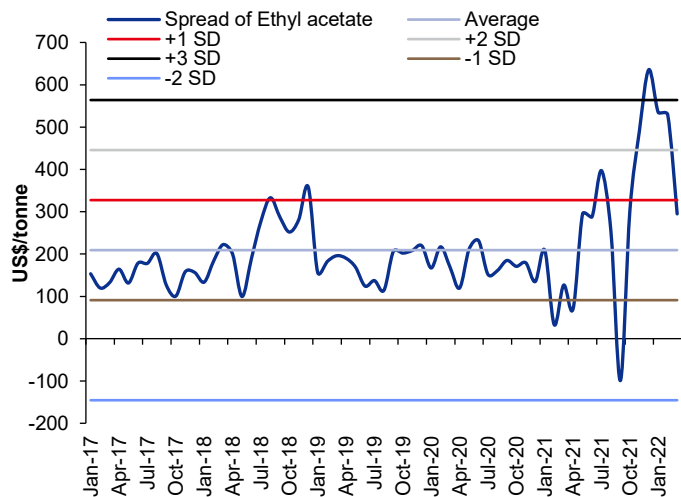
SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 13: Like ethanol, even acetic acid's spreads have fallen well below the last five years' average



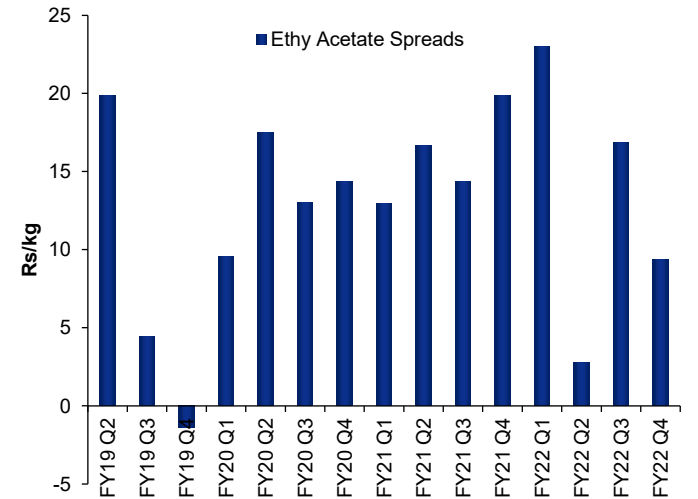
SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 14: Best days of ethyl acetate spreads are also over



SOURCES: INCRED RESEARCH, COMPANY REPORTS

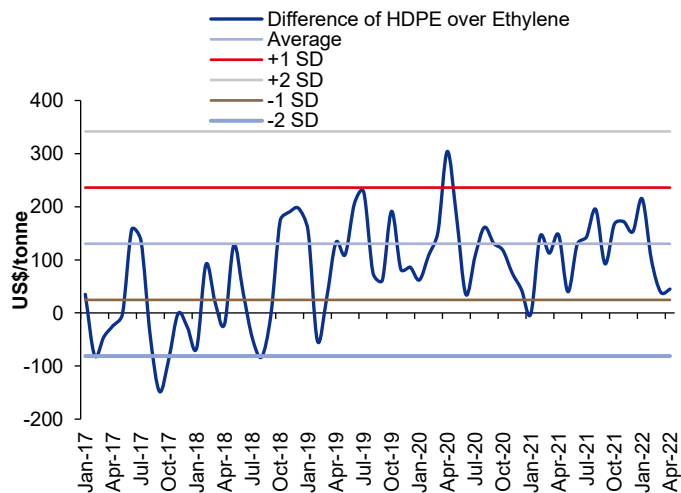
Figure 15: Laxmi Organic's 4QFY22 ethyl acetate spreads to be well below the 3QFY22 level



SOURCES: INCRED RESEARCH, COMPANY REPORTS

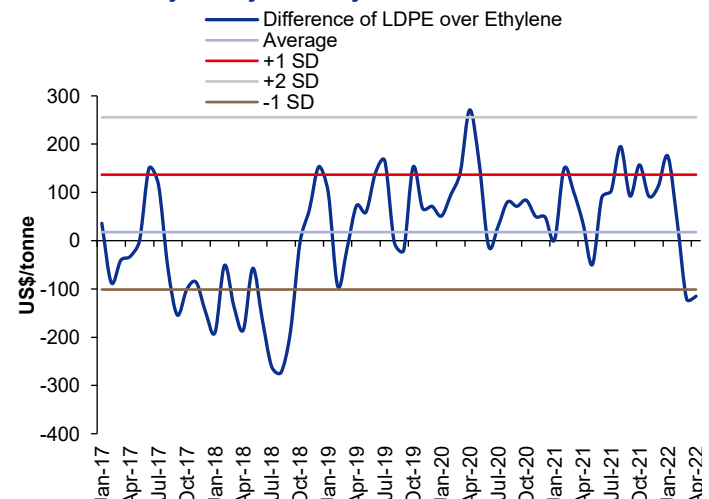
HDPE and LDPE margins are also falling, which is bad for Indian petchem manufacturers ➤

Figure 16: Signs of demand destruction or inability to pass on cost inflation to consumers is evident in HDPE



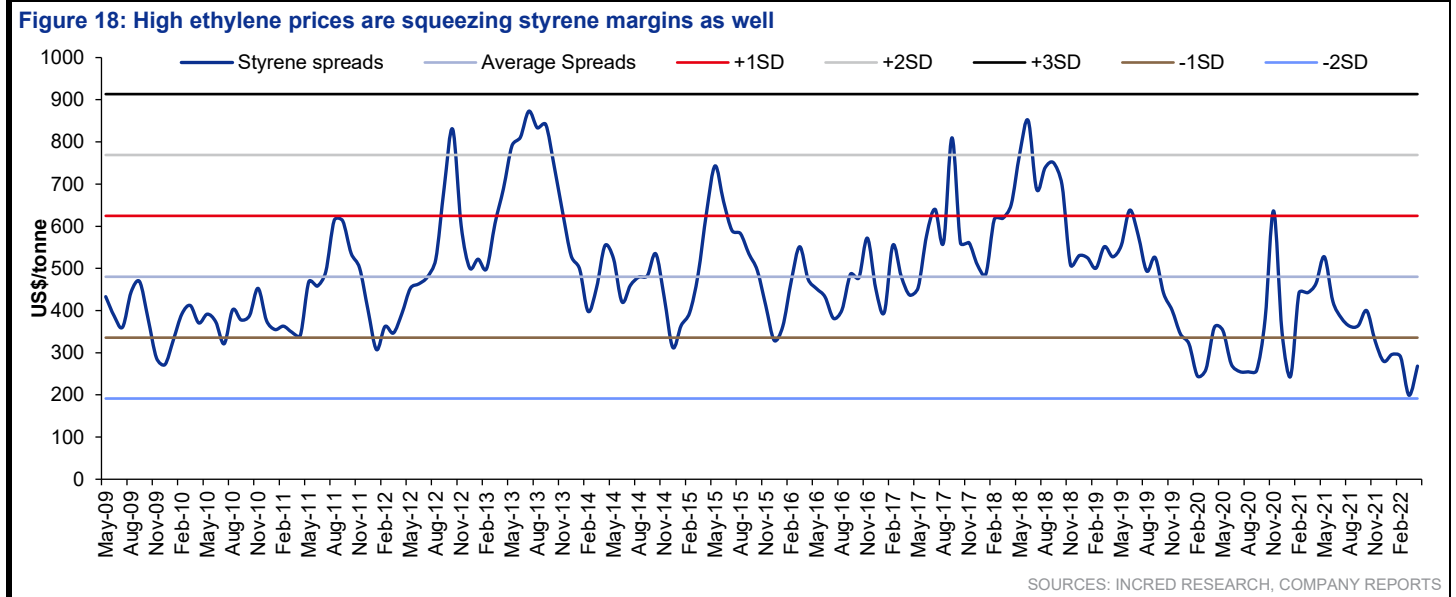
SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 17: LDPE is suffering even more as pure LDPE makers won't make any money currently



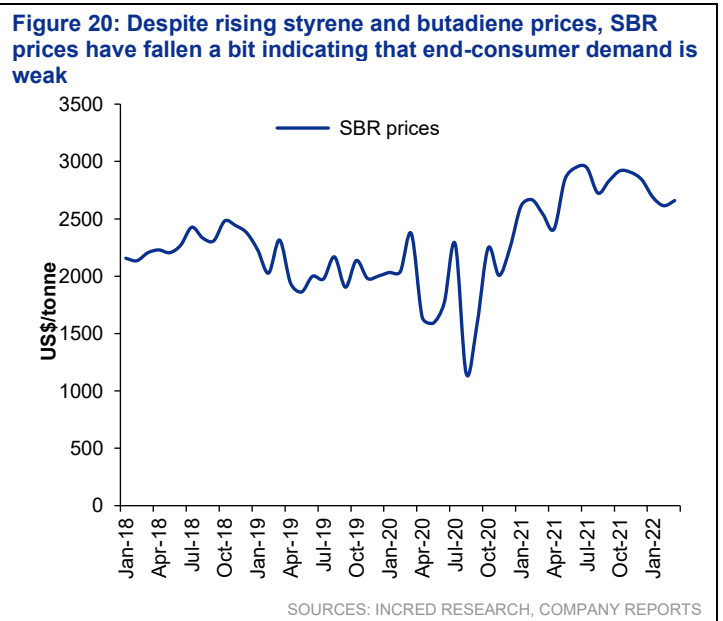
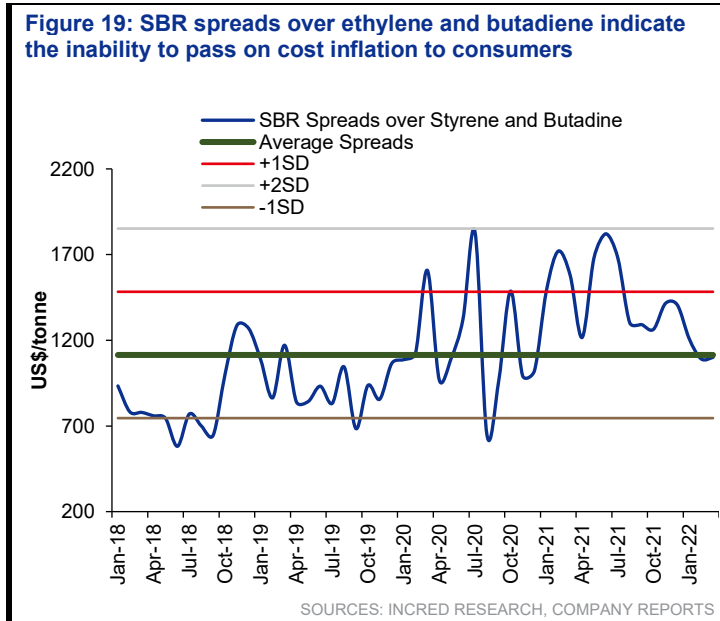
SOURCES: INCRED RESEARCH, COMPANY REPORTS

Styrene margins are also squeezed by high ethylene prices ➤



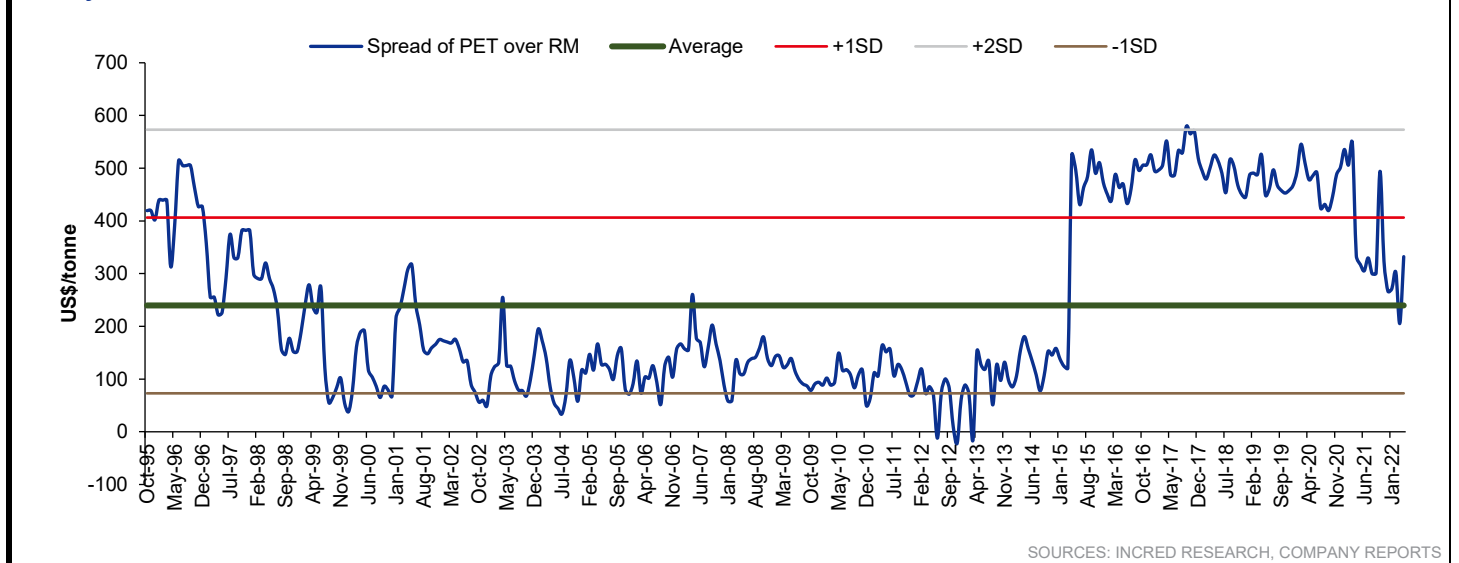
Even SBR (styrene-butadiene rubber) spreads are getting negatively impacted by ethylene prices ➤

Please note that SBR is mainly used by tyre-makers and hence, while SBR manufacturers are feeling the inflation pinch because of rising SBR prices, tyre-makers are also not spared.



Rising ethylene prices will also lead to higher MEG prices and ultimately lead to a decline in PET film margin ➤

Figure 21: To some extent, the impact is visible on PET film margin which is falling after sustaining its historical high for nearly five-to-six years



On the other hand, MEG and PTA are also struggling. MEG's struggles have started recently but PTA's spreads have been sub-par.

Figure 22: PTA spreads over paraxylene have been volatile, to say the least; near-term surges can die down

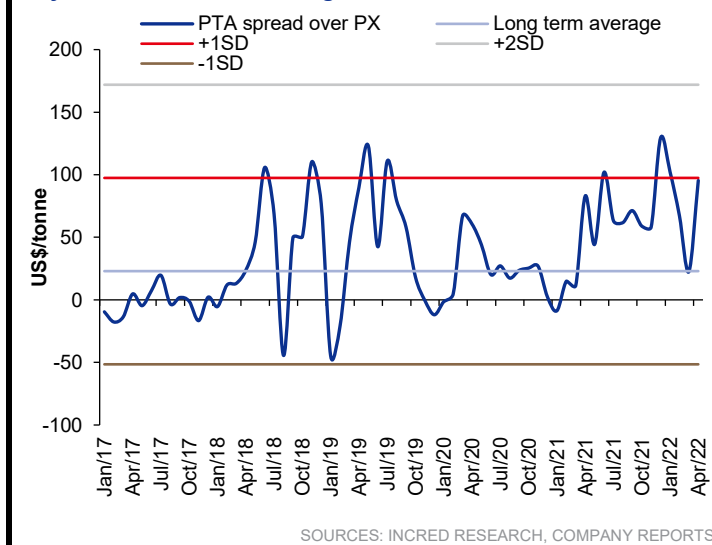
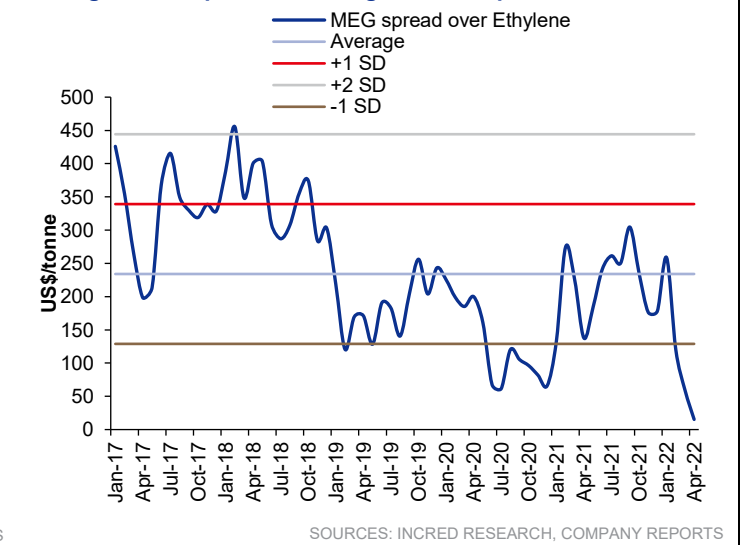


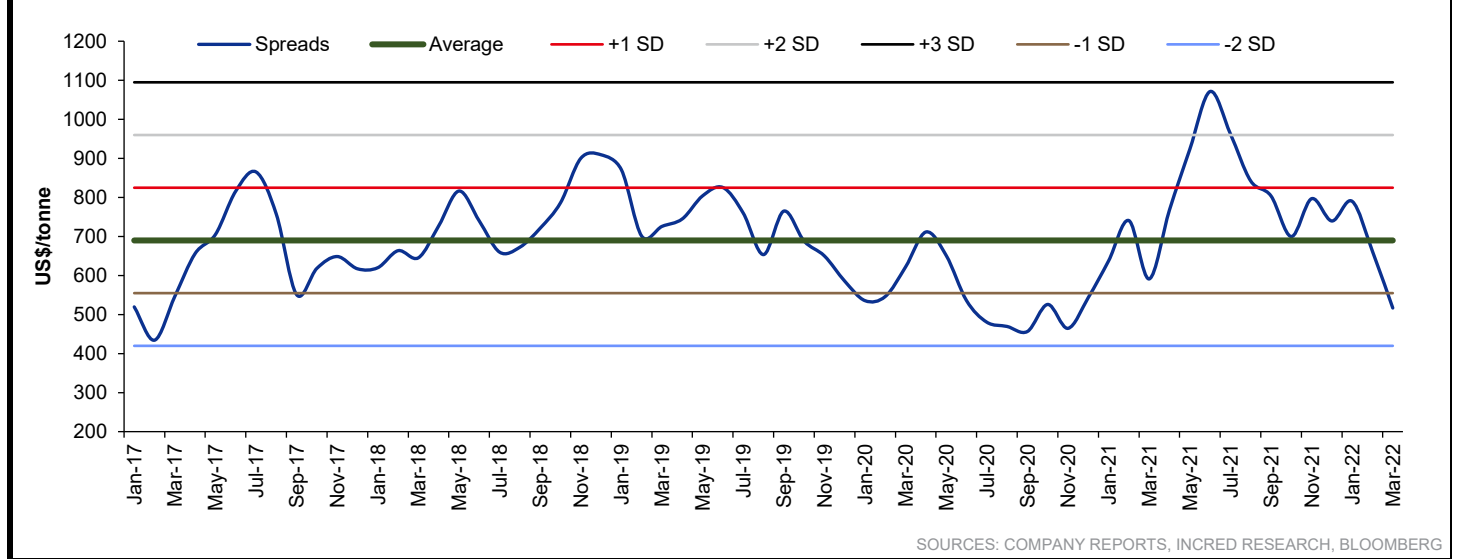
Figure 23: On the other hand, MEG spreads over ethylene are falling like nine pins - indicating a demand problem



Rising ethylene prices have already crushed mono, di, and tri ethanol amine spreads ➤

DEA (diethanolamine) and DEA compounds are used **to make cosmetics**. DEA also acts as a pH adjuster, counteracting the acidity of other ingredients. DEA is mainly found in moisturizers and sunscreens, while cocamide and lauramide DEA are found in soaps, cleansers, and shampoos. The usage of DEA underscores the problems in the world now that high input prices are leading to margin erosion in products whenever those products are directly used in consumer products.

Figure 24: DEA spreads are on the decline as well, courtesy of high ethylene prices



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Description:	Excellent	Very Good	Good	N/A	N/A

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Definition:

Add	The stock's total return is expected to exceed 10% over the next 12 months.
Hold	The stock's total return is expected to be between 0% and positive 10% over the next 12 months.
Reduce	The stock's total return is expected to fall below 0% or more over the next 12 months.

The total expected return of a stock is defined as the sum of the: (i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

Sector Ratings

Definition:

Overweight	An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.
Neutral	A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
Underweight	An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings

Definition:

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Neutral	A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
Underweight	An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.