▌India

Underweight *(no change)*

Highlighted Companies

Reliance Industries

ADD, TP Rs3369, Rs2573 close

Uptick in the global refining cycle to hasten deleveraging and drive a 35% EPS CAGR over FY22-24F. We build in US$20/bbl GRM. Our analysis indicates that RIL's new energy initiatives are value-accretive and can add ~Rs170bn to EV. R-JIO and retail business remain strong.

Deepak Nitrite Ltd

REDUCE, TP Rs1514, Rs2079 close

Retain our high conviction REDUCE rating on Deepak Nitrite. Consensus earnings estimates, in our view, are in for a big negative surprise. We also cut our target price to Rs1,514 from Rs1,745 earlier. Upside risk: Higher-than-expected spreads.

Bharat Forge

ADD, TP Rs881, Rs880 close

With new aerospace order, sustained car sales ramp-up and a turnaround plan for its US forging plant, we limit our EPS cut to 7% for FY23F & 3-4% for FY24F-25F and with P/E and P/BV valuations comfortable near the 10-year mean level, we retain ADD rating on the stock.

Summary Valuation Metrics

P/E (x)	Mar22-A	Mar23-F	Mar24-F
Reliance Industries	25.53	15.86	14.4
Deepak Nitrite Ltd	26.59	28.45	27.46
Bharat Forge	29.84	43.42	34.92

P/BV (x)	Mar22-A	Mar23-F	Mar24-F
Reliance Industries	2.11	1.89	1.7
Deepak Nitrite Ltd	8.5	6.67	5.45
Bharat Forge	6.24	4.78	4.19

Dividend Yield	Mar22-A	Mar23-F	Mar24-F
Reliance Industries	0.3%	0.31%	0.33%
Deepak Nitrite Ltd	0.4%	0.28%	0.28%
Bharat Forge	0.62%	0.91%	1.14%

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Oil & Gas - Overall

2nd round of energy inflation on the horizon

- World braces for the 2nd round of energy inflation. Mild winter in Europe, filled storage and SPR release by USA leads to a temporary respite in gas/oil prices.
- China's reopening eventually & a halt to SPR release to result in scarce natural gas and crude oil supply, leading to price rise in energy-intensive commodities.
- Indian chemical firms are bound to suffer, barring one or two names. Rising ethanol will benefit sugar companies. Sell all natural gas users. OMCs to be uninvestable, barring RIL. Sell CGD stocks but buy companies who can supply oil and gas drilling consumables, as well stocks of bio-ethanol makers.

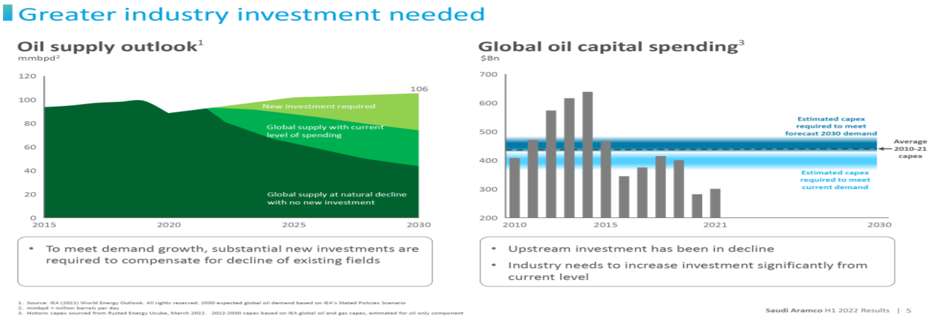
LNG prices to breach 2022 highs in 2023F; crude prices to move up

Global LNG supply is likely to witness a severe shortage in 2023F as European LNG demand will be ~220 bcm, up from this year's demand of 160 bcm. In CY22, for at least half of the year, Russian supply was flowing, which will vanish in CY23F. Russia will not have the market for its 100 bcm (*20 bcm can still flow to Europe and an incremental 30 bcm to China from its new Serbian gas pipeline*) gas, but we feel higher prices for 150 bcm gas (Russia's *total exports stood at 250 bcm in CY21* and *currently export prices are 3x compared to CY21*) will more than compensate for it. Accounting for new capacity, Chinese LNG demand will play a big role in CY23F while we expect it to remain 3%-4% below CY21 level (in *CY22F, it is likely to fall by 14%*), but any big recovery will further stress the already fragile supply chain of LNG. On the other hand, USA took it upon itself to balance the global crude oil market by supplying nearly 0.7 mbd oil from its strategic petroleum reserves or SPR. Ultimately, it must come to an end sometime (at the current rate, by mid-2024F SPR will be empty). Product inventory across the world is critical and this is even after Russian supply to the world has not come down materially. Underinvestment in upstream assets is a well-known fact and we feel it will come to haunt us next year.

What to buy and what to sell?

1) We expect the prices of base chemicals like ethylene, methanol, and benzene to go up and hence, will have a negative impact on the earnings of chemical companies like Aarti Industries, Deepak Nitrite, Clean Science, SRF, and others. 2) Rising gas prices are negative for all gas users, be it tile-makers or city gas distribution or CGD companies. Propane or LPG prices are also set to rise, which will negatively impact industrial consumers who shift from gas to propane. 3) CGD companies are still a no-no for us and so are oil marketing companies or OMCs (we don't believe the Indian government will foot the notional marketing losses bill). 4) Reliance Industries or RIL will benefit from higher diesel cracks in the export market as rising ethylene, methanol and benzene prices will benefit the company. 6) Indian engineering companies having a presence in the European supply chain stand to benefit and so we like Bharat Forge. 7) Rig counts are increasing, which is good news for API pipe-makers. 8) Rising lead distance in case of oil crude transport will help Suezmax and Aframax rates. We don't cover GE Shipping, but it looks good on this theme. 9) Indian ethanol makers will have tailwinds

Figure 1: Saudi Aramco's presentation, which indicates US$300bn+ underinvestment in crude oil assets, should be an eye opener for all policymakers in the world



SOURCE: INCRED RESEARCH, COMPANY REPORTS

2nd round of energy inflation on the horizon

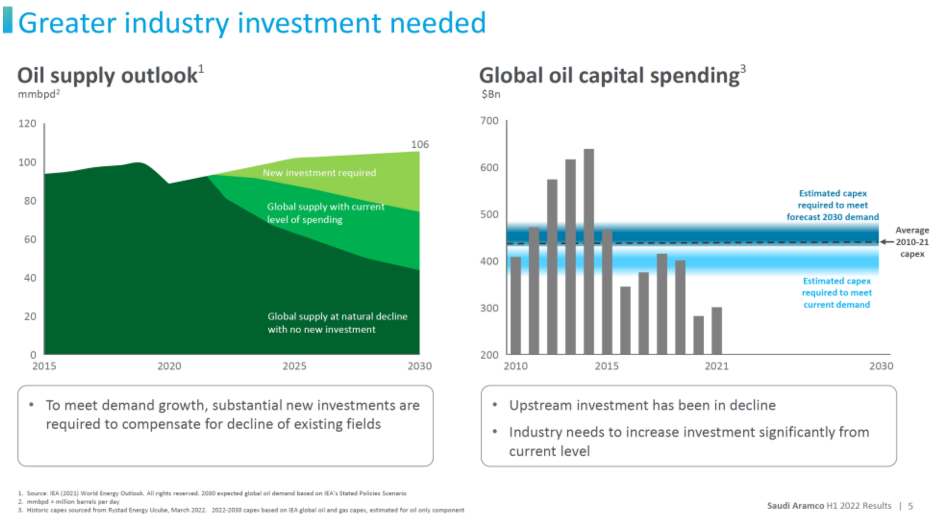
Reopening of China's economy post Covid-19 pandemic will make the release of strategic petroleum reserve or SPR and other childish measures by USA to control crude oil prices useless. Price cap on Russian origin oil will be another tailwind for crude oil. Russian petrol price cap and gas prices topping their previous peaks, as Chinese consumption increases, will stress the already highly stressed LNG market. On the petroleum products side, we are especially positive on diesel whose spread over crude oil can reach an all-time high.

Crude oil prices: Another rise in the offing

China's economy reopening and near exhaustion of USA's ability to empty its SPR and control crude oil prices means that crude oil is set for another big rise. USA can keep blaming the Organization of Petroleum Exporting Countries or OPEC and other nations for bringing in energy inflation to the world. However, the real reason for this is the massive, short-sighted policies of the western world. Western countries assumed that somehow drying up finance to fossil fuel companies will automatically mean more investment and technological progress in renewable energy which will somehow magically solve all environmental problems. Keep kicking the proverbial can down the road is the favourite policy of western governments, organizations, and even their central banks.

We have seen years of sub-optimal investments in upstream assets ➤

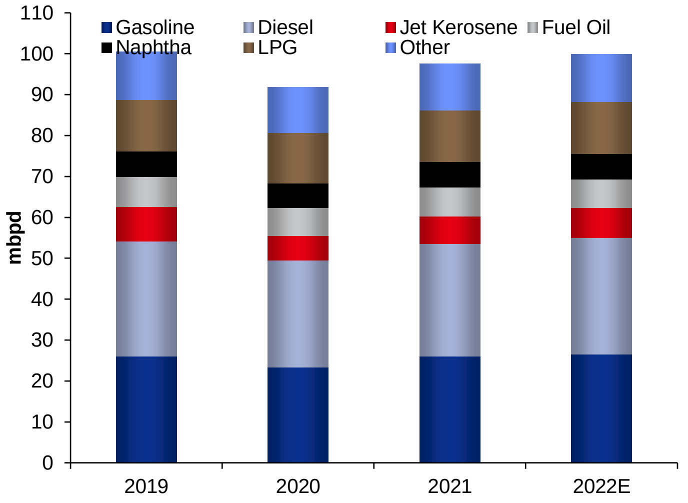
Figure 2: Saudi Aramco's presentation on crude oil



SOURCE: INCRED RESEARCH, SAUDI ARAMCO RESULT PRESENTATION

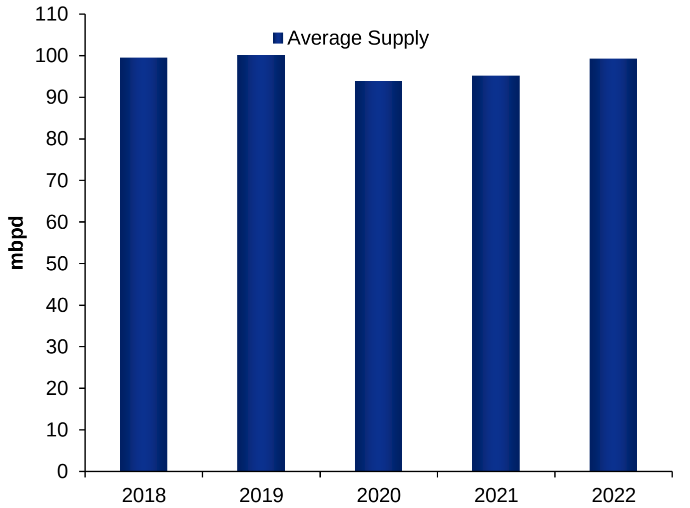
Despite China's lockdowns, global crude oil demand has remained robust so far in CY22 ➤

Figure 3: 2022 oil demand is back to the 2019 level



SOURCE: COMPANY REPORTS, INCRED RESEARCH

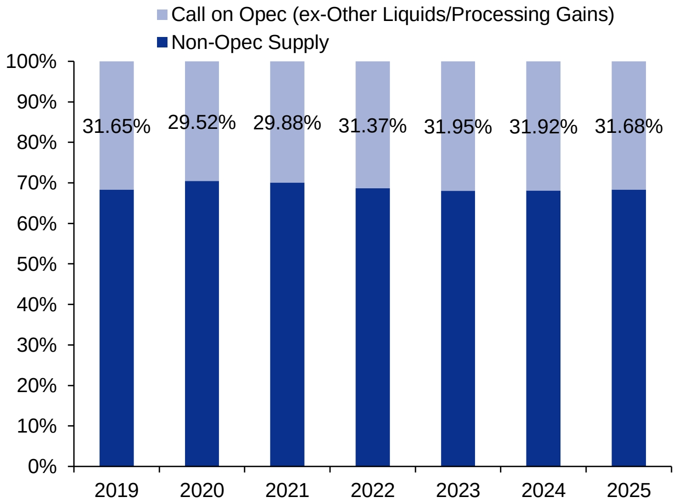
Figure 4: Global average supply of crude oil has remained around 99 mbpd in 2022



SOURCE: COMPANY REPORTS, INCRED RESEARCH

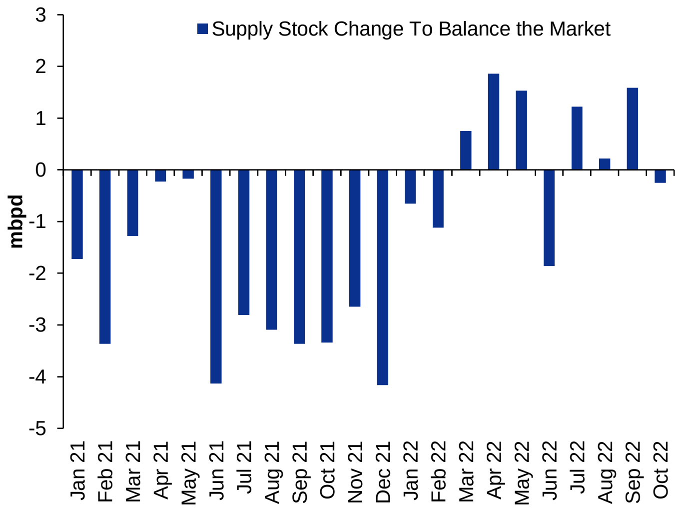
OPEC's power is increasing as the world is suffering from chronic undersupply of crude oil ➤

Figure 5: OPEC's power to control crude oil prices will only increase in the coming years



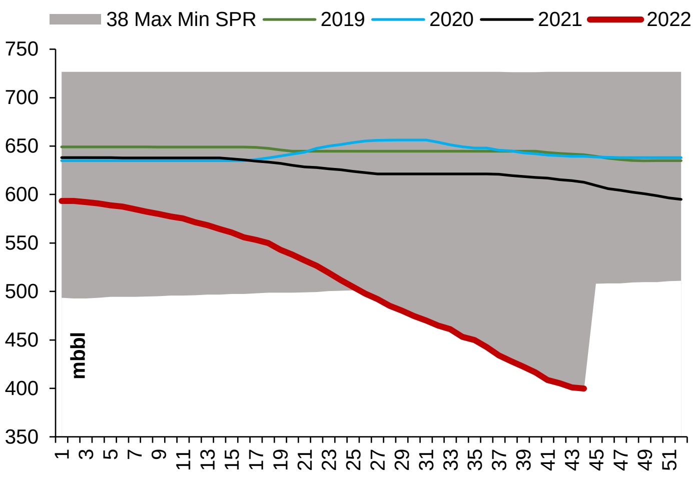
SOURCE: INCRED RESEARCH, ENERGY INTELLIGENCE

Figure 6: There was a massive inventory build-up during the Covid-19 pandemic which got consumed in 2022



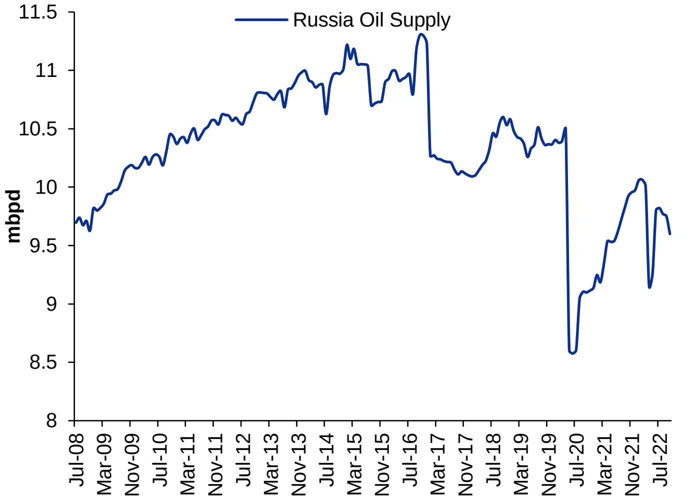
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 7: USA is adding to global supply through a massive release of SPR (it has added ~0.6% to global crude oil supply in 2022)



SOURCE: INCRED RESEARCH, COMPANY REPORTS

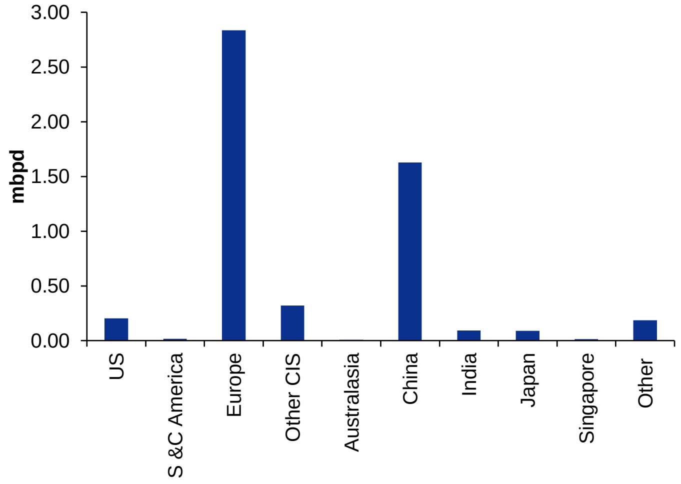
Figure 8: It will be interesting to see how the world copes up after ~9.7mbpd of crude oil is declared as a pariah after the price cap



SOURCE: INCRED RESEARCH, COMPANY REPORTS

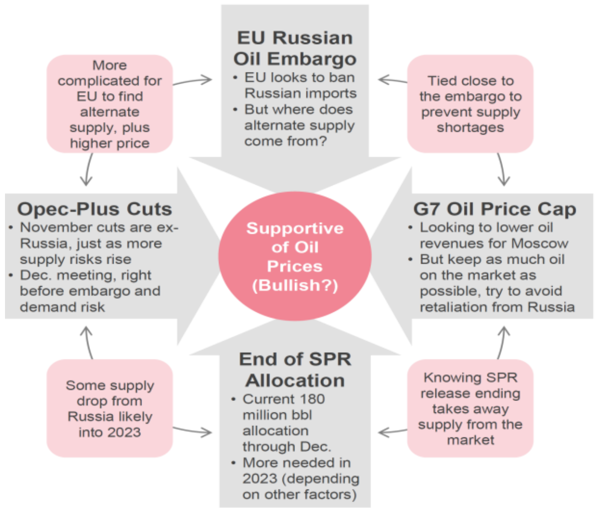
Price cap proposal on Russian crude oil - classical shooting from the hip

Figure 9: Russia exports ~5.4mbpd and 50% of that is exported to Europe



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 10: This chart from Energy Intelligence provides its summary take on the crisis after the EU embargo on Russian crude oil



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Please note that unless India and China participate in this price-cap mechanism, this is likely to fall much short of the intended outcome.

1. The combination of the European Union or EU's Russian oil embargo and G-7 countries' proposed oil price cap will be critical market-focal points. We believe that a key challenge for the EU is looking for alternate supply of barrels/cargo — we see limited options for crude oil and its products, and a complicated period of redirected flows.
2. The price cap is designed to help offset some of the displaced barrels. Recent reports have pointed to the price cap being limited to G-7 nations, without buying from India/China, but shipping and insurance restrictions to be factored in.
3. Questions also remain from the Russian side, including finding adequate tankers and buyers for the supply redirected away from Europe. If supply is impacted, they will not mind higher prices whether it is for crude oil or its products.

4. As we see it, the price cap may make only a slight change from the current market pricing (discount) mechanism, but the EU faces a large supply risk.

Will USA release more SPR to keep crude oil prices under check? As per the International Energy Agency or IEA guidelines, it can ➤

- SPR still has about 400m bbl of crude oil in its storage caverns in Texas and Louisiana. That is not dangerously low, for now, despite various such claims. But the US Congress has also already separately committed to selling close to 300m bbl through 2031F. If those volumes don't change, SPR would fall towards the 100m bbl level in a decade.
- **That would still be above the level that USA needs under international guidelines. USA's SPR is a part of the global supply security system under the umbrella of the IEA, which tells large consuming countries to hold at least 90 days of net imports in tanks to protect against supply disruption**.
- Back in 2005, USA's net oil imports peaked at 12.5m bpd — and it was considering building up the SPR beyond its 700m bbl capacity. Now, thanks to the surge in domestic shale crude and natural gas liquid (NGL) production, USA is a net exporter of liquids at around 1m bpd.

However, as USA is running an unbalanced supply chain, it should stop SPR oil release ➤

- USA still needs to import ~6.5-7 mbpd (only heavy crude) to feed its old refineries which need heavy crude oil as a feed.
- While 4.5 mbpd comes from Canada, USA still needs to import ~2 mbpd of heavy crude oil from the Gulf of Persia and the Gulf of Aden. Please note that the time to ship crude oil from this region to USA is ~35-60 days.
- By its regulations, USA needs to maintain 40% heavy crude oil in its SPR and so, as of now, SPR has 160mb of heavy crude oil. This is sufficient for 22 days of its heavy crude oil requirement.
- Hence, USA is running an unbalanced supply chain. Further SPR oil release, in our view, will make it even more unbalanced.

Should OECD's combined reserves be considered as emergency reserves for these countries ? We don't believe so➤

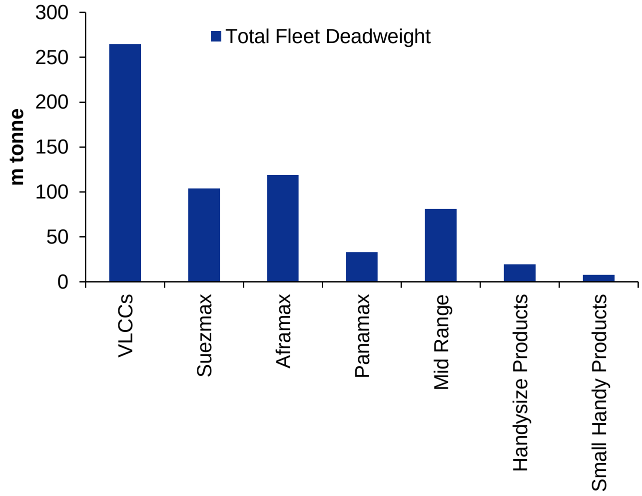
On a combined basis, the Organization for Economic Co-operation and Development or OECD countries have still around 1,200 m bbl of crude oil reserves, but the distances between these countries present a logistical nightmare. We don't believe even individual countries would be looking at the overall OECD reserves as a reference point.

In case of a price cap on Russian crude oil, big logistics challenge can emerge ➤

Figure 11: With the likely change in trading patterns, Aframax and Suezmax will become the most important vessels for crude oil transit

SOURCE: HTTPS://WWW.AA.COM.TR/EN/ECONOMY/CHANGES-SEEN-IN-HYDROCARBON-TRADE-AS-COUNTRIES-COMPENSATE-FOR-RUSSIAN-SUPPLY-LOSSES/2574187#

Figure 12: However, carrying capacity of Aframax and Suezmax (combined) vessels is barely 80% of VLCC capacity



SOURCE: INCRED RESEARCH, COMPANY REPORTS

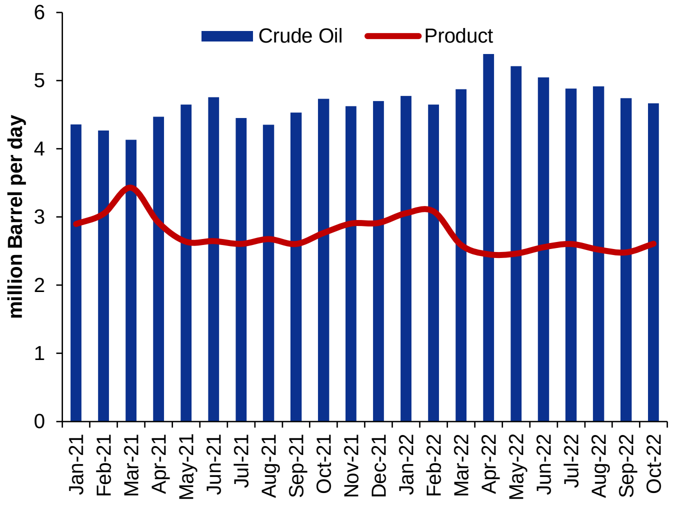
Hence, even if demand slows quite a bit and OPEC doesn't cut supply, then also crude oil prices will go up ➤

The changing trade pattern means that crude oil inventory in transit will go up significantly which, in turn, means that despite demand slowdown one can see a substantial rise in crude oil prices.

Contrary to popular belief, Russian crude oil supply has not come down materially even after the Ukraine war ➤

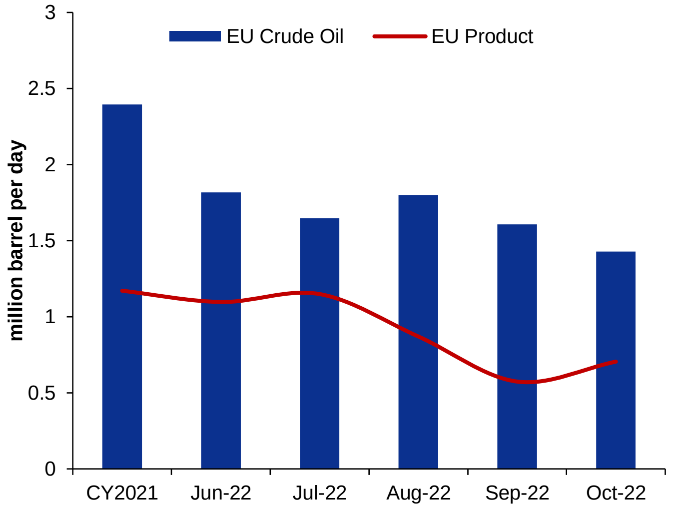
The changing trade pattern means that crude oil inventory in transit will go up significantly which, in turn, means that despite the demand slowdown one can see a substantial rise in crude prices.

Figure 13: Global supply of crude oil and its products from Russia has not come down significantly



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 14: There is a perceptible decline in oil supply to the EU, but that cannot be responsible for the global price rise



SOURCE: INCRED RESEARCH, COMPANY REPORTS

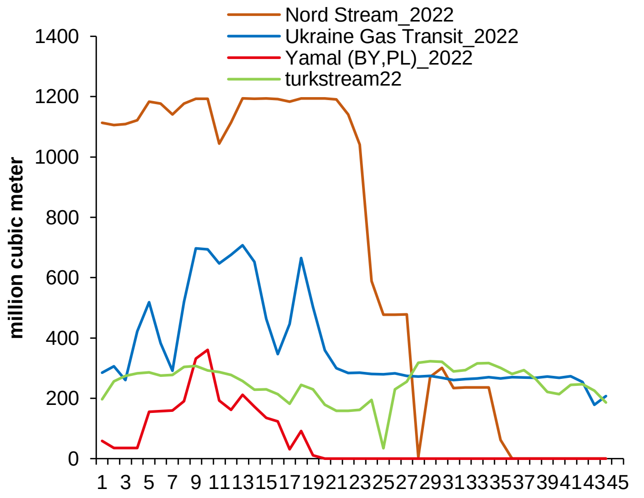
LNG prices will go up significantly next year

Much to the chagrin of global users, Europe's self-inflicted problem has now become the world's problem. Europe won't buy gas from Russia or Russia won't sell gas to Europe. Either way, India and the developing world will be the losers. Russia doesn't have gas liquefaction capacity and hence, unlike crude oil, India cannot buy LNG from Russia. There is a significantly difficult year ahead for natural gas as well as LPG users.

Europe needs at least ~220 bcm LNG next year

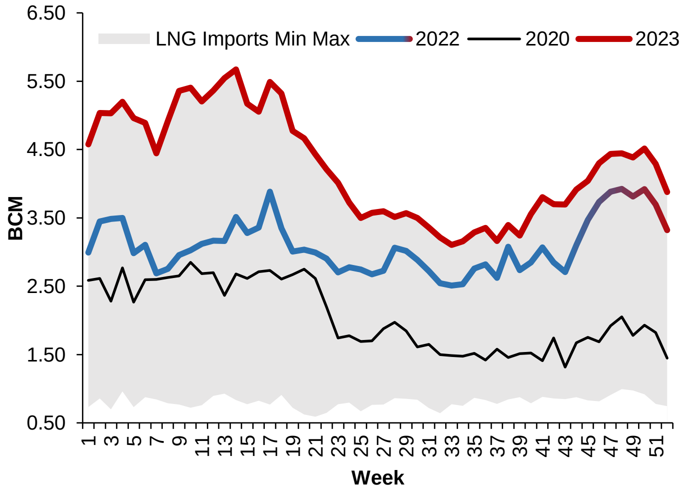
Assuming a demand decline of 5% over 2022F and Russian supply of ~20 bcm, European LNG demand in 2023F will be at least ~220 bcm.

Figure 15: Annualized supply of gas from Russia to Europe is barely 12-13 bcm as Nord stream pipeline is closed and Yamal pipeline has also stopped transmitting gas



SOURCE: INCRED RESEARCH, COMPANY REPORTS

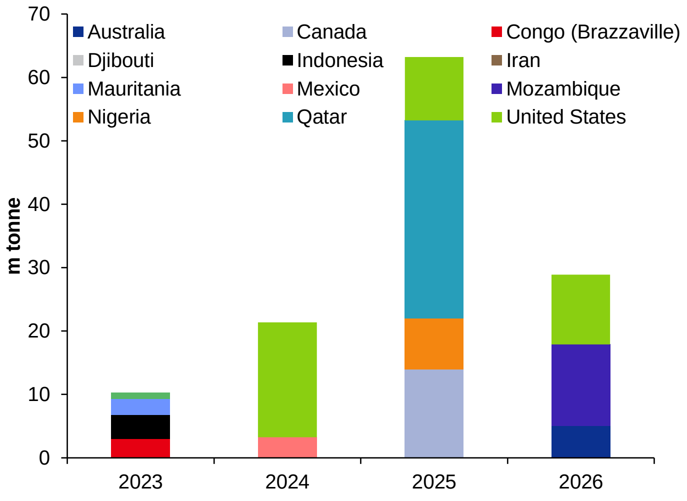
Figure 16: Assuming a 5% demand rationalization over 2022F, Europe will need ~220 bcm of LNG in 2023F; please note that in 2022 there is already ~10% demand reduction



SOURCE: INCRED RESEARCH, COMPANY REPORTS* RED LINE IS FORECAST

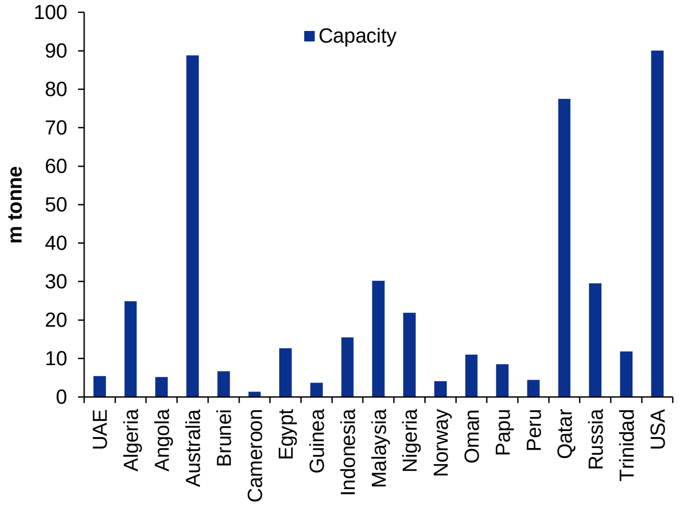
Extra supply of LNG to come mostly in CY25F

Figure 17: Most of the extra LNG supply to come in 2025F



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 18: Approximately 7% of the current capacity is in Russia, which is a no-no for Europe

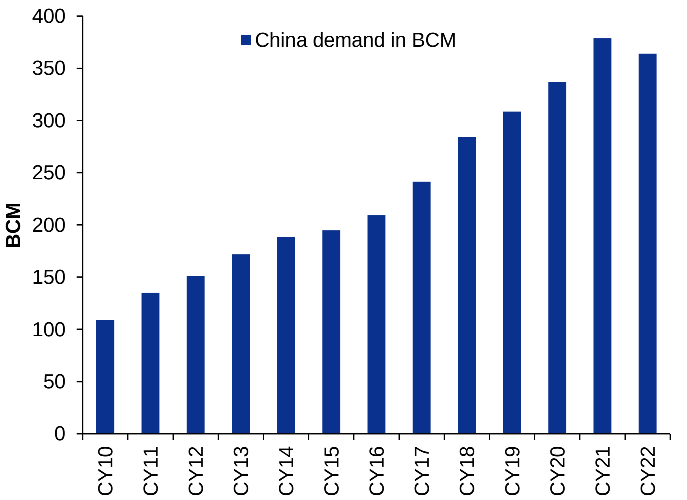


SOURCE: INCRED RESEARCH, COMPANY REPORTS

As is evident, most of the extra supply is expected in 2025F. Russian projects of ~10mt are stagnant and given the sanctions, we feel they are unlikely to come on line any time soon.

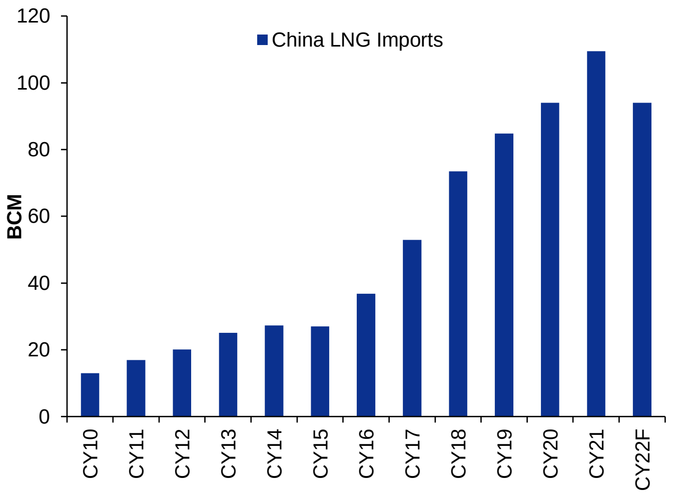
2022 world is still OK as Chinese demand is on the decline

Figure 19: Chinese natural gas demand is set to decline by ~4% in CY22F



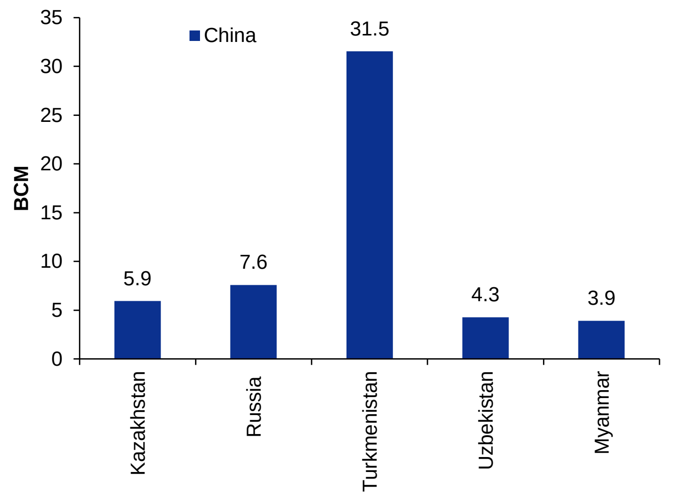
SOURCE: COMPANY REPORTS, INCRED RESEARCH

Figure 20: Consequently, its LNG imports can decline by ~12% in CY22F



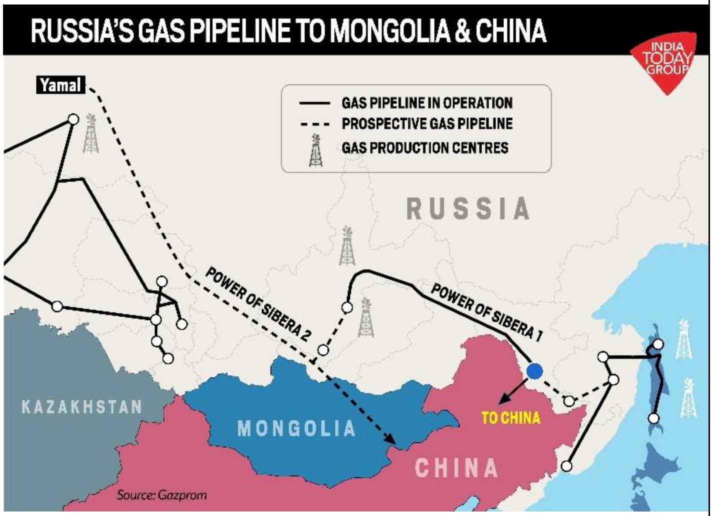
SOURCE: COMPANY REPORTS, INCRED RESEARCH

Figure 21: China's piped gas imports from different countries (shown in the graph) amounted to 53.5 bcm in CY21



SOURCE: INCRED RESEARCH, COMPANY REPORTS

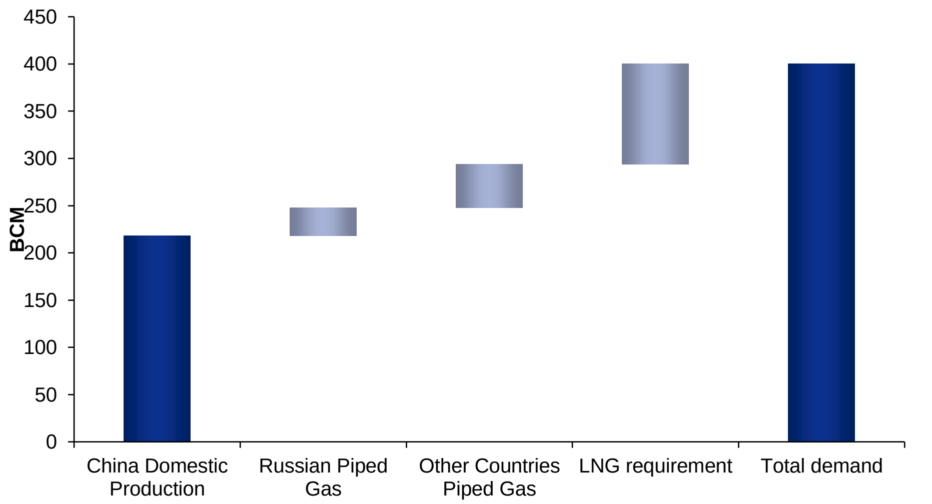
Figure 22: The commencement of power supply to Siberia gas pipeline is a shot in the arm for China's energy security and it can import 38 bcm gas from Russia in CY23F



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Even after accounting for extra pipe gas inflow from Russia, China's LNG demand wil rise to 106 bcm in CY23F

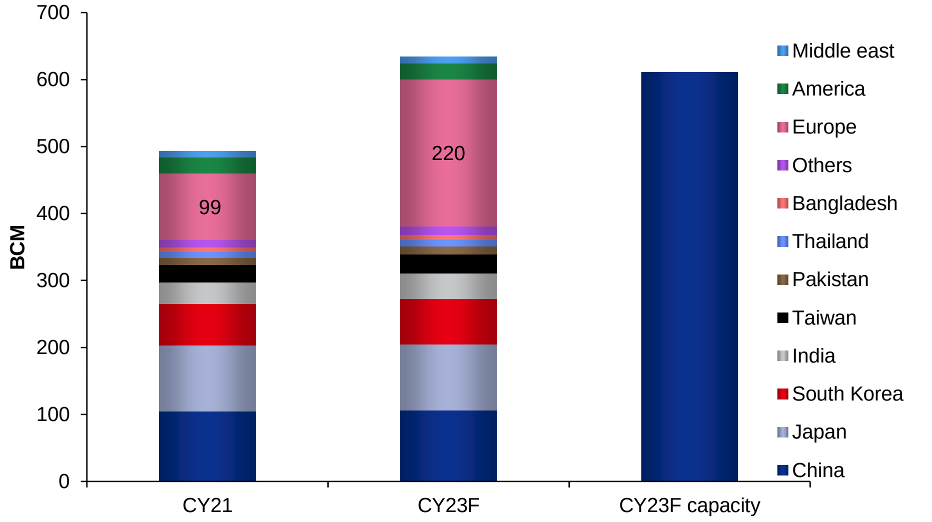
Figure 23: LNG import requirement of China can rise by 14% YoY to 106 bcm in CY23F



SOURCE: INCRED RESEARCH, COMPANY REPORTS

As per current calculations, global demand for LNG will be higher than the operating capacity in CY23F

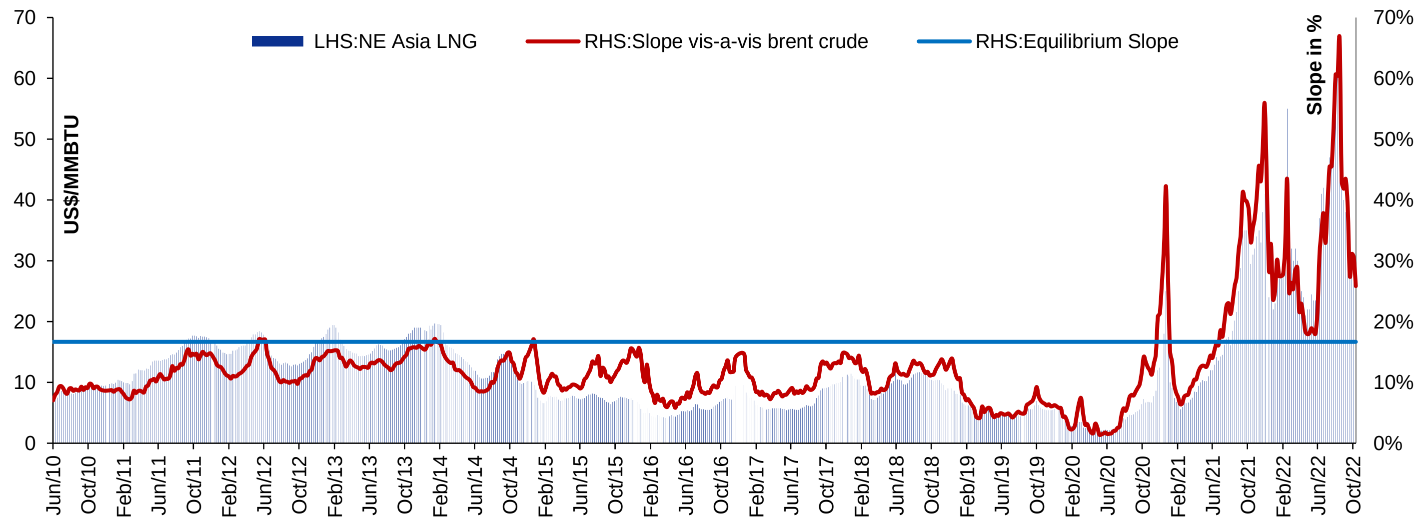
Figure 24: Global capacity at 100% utilization will be lower than demand by 4% in CY23F; synchronous 100% utilization globally has an extremely low probability



SOURCE: INCRED RESEARCH, COMPANY REPORTS

So, what will happen to LNG slope? We don't see any respite for the same

Figure 25: GCV equilibrium slope of LNG vis-à-vis crude oil is at ~16.67%; over the past 20 months, LNG has traded well above this slope, and we don't think in the coming two-to-three years it's likely to trade anywhere near it

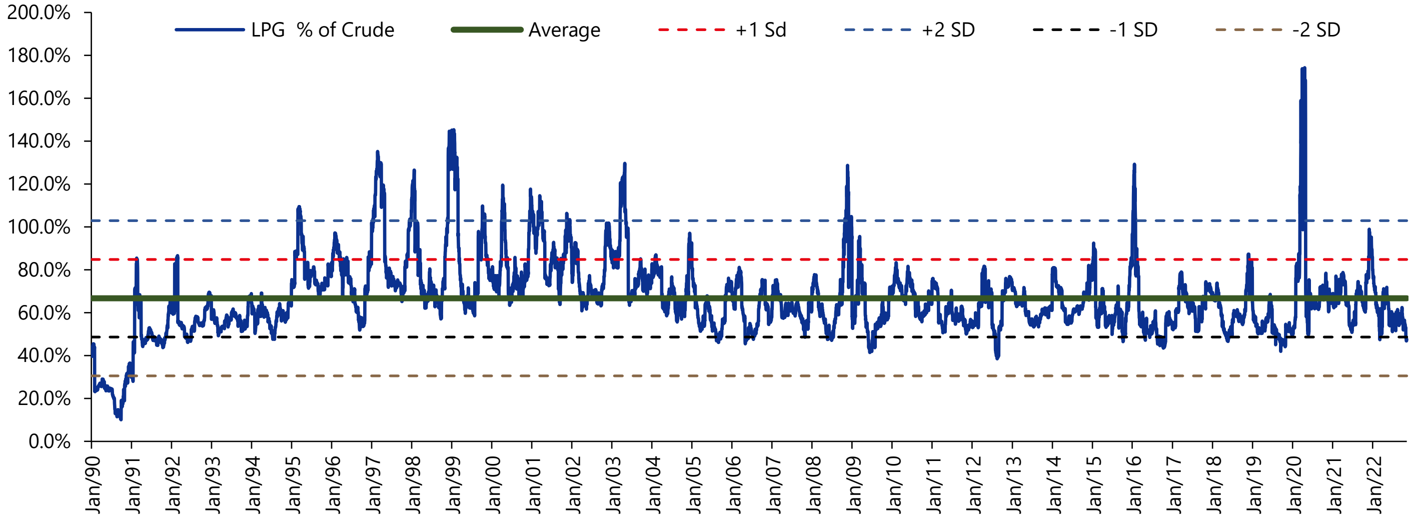


SOURCE: INCRED RESEARCH, COMPANY REPORTS

What will happen to LNG prices? As a percentage of Brent crude oil prices, they will rise in the coming weeks ➤

As of now, LNG is trading at a discount to its historical mean levels. Filled gas storage in Europe and a milder winter are creating temporary headwinds for this commodity.

Figure 26: LPG trades near its long-term bottom vis-à-vis Brent crude oil and as LNG becomes scarce, it will rise to +1 SD



SOURCE: INCRED RESEARCH, COMPANY REPORTS

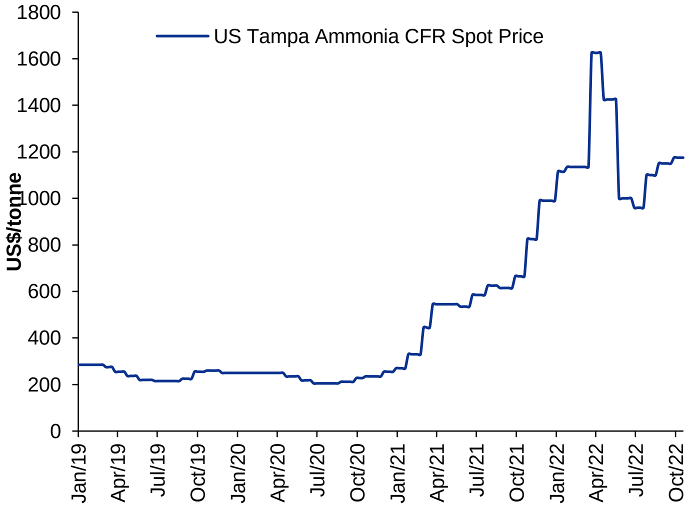
Rise in LNG and crude oil prices – expect a rise in base chemicals as well as fuel prices

LNG and LPG are used alternatively by many industrial users. In our view, especially tile-makers will have a tough time in the coming months.

Rising LNG and crude oil prices will lead to higher ammonia as well as methanol prices ➤

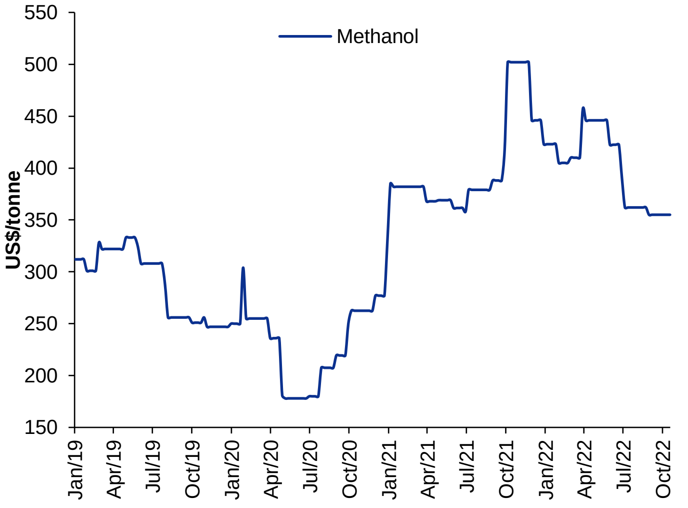
1 tonne of ammonia needs approximately 36 mmBtu of natural gas and hence, rising natural gas prices will lead to higher ammonia prices.

Figure 27: After a sharp drop in ammonia prices, they are rising again



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 28: Similarly, methanol prices are also rising

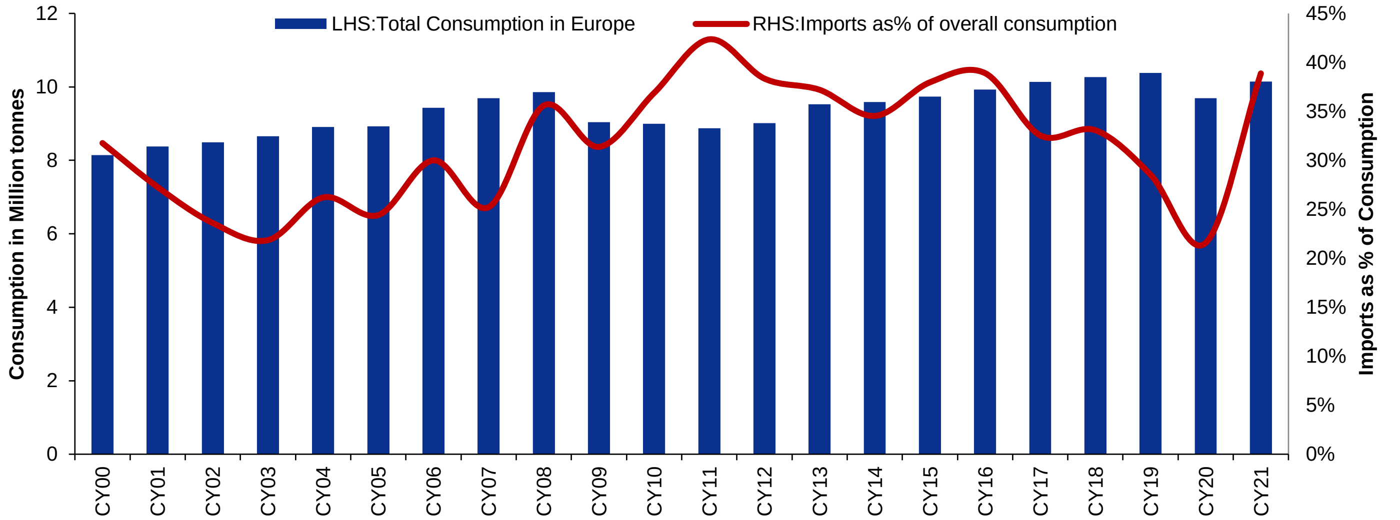


SOURCE: INCRED RESEARCH, COMPANY REPORTS

EU is a big importer of methanol despite producing ~6mt of the chemical annually

Methanol also consumes significant energy apart from its raw materials. On an average, methanol consumes 10GJ/t of energy.

Figure 29: EU consumes nearly 10mt of methanol, out of which ~40% is imported; the energy crisis will lead to lower methanol production and hence, higher imports

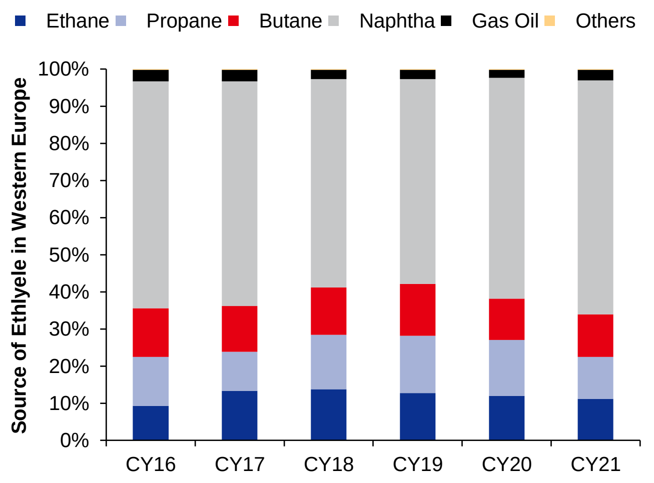


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Ethylene is another energy-intensive commodity whose prices can witness an upswing

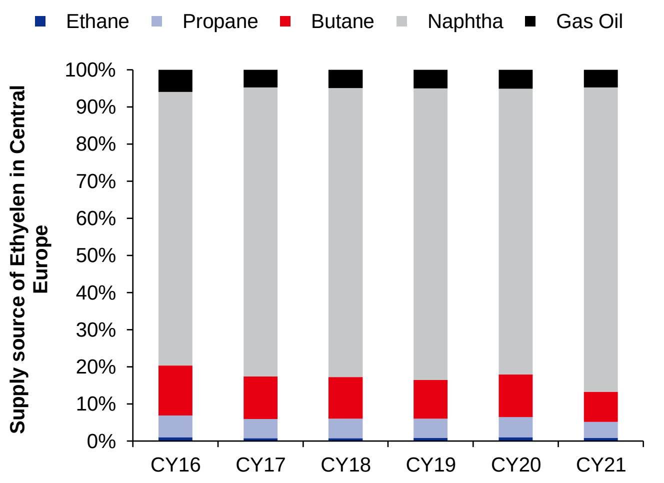
1 tonne of ethylene consumes around 26MJ of energy, which is scarce in Europe. Hence, in our view, ethylene production in the EU is bound to take a hit.

Figure 30: Naphtha is the main source of ethylene production in western Europe, but a major portion comes from ethane (a natural gas derivative)



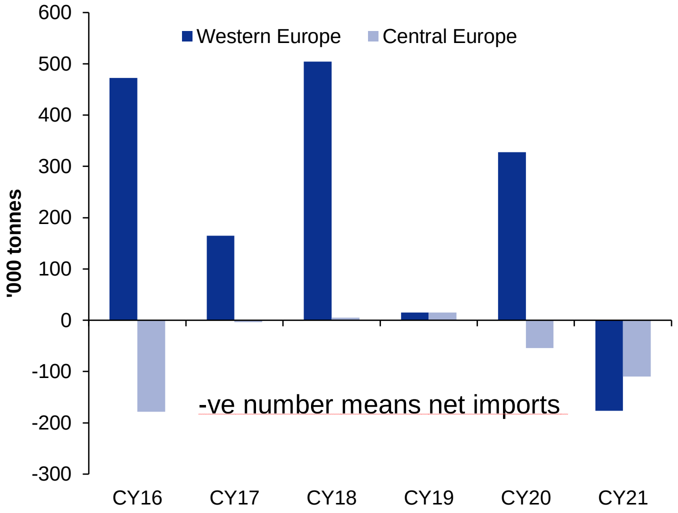
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 31: Naphtha is the main source of ethylene production in Central Europe as well



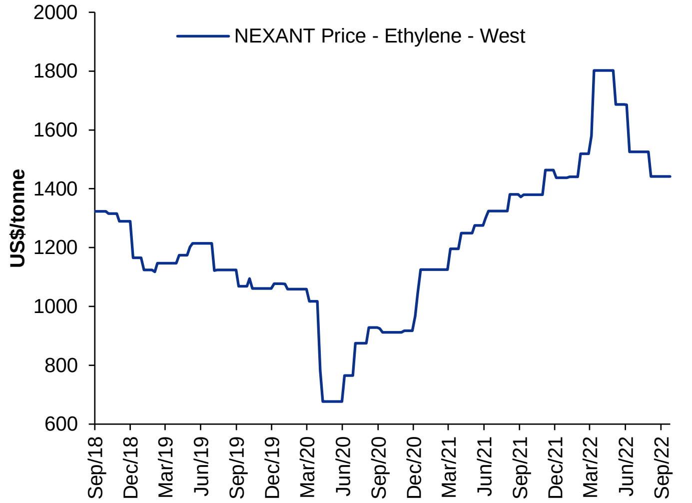
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 32: Both central and western Europe were importers of ethylene in CY21, and production may have come down further in CY22F…



SOURCE: INCRED RESEARCH, COMPANY REPORTS

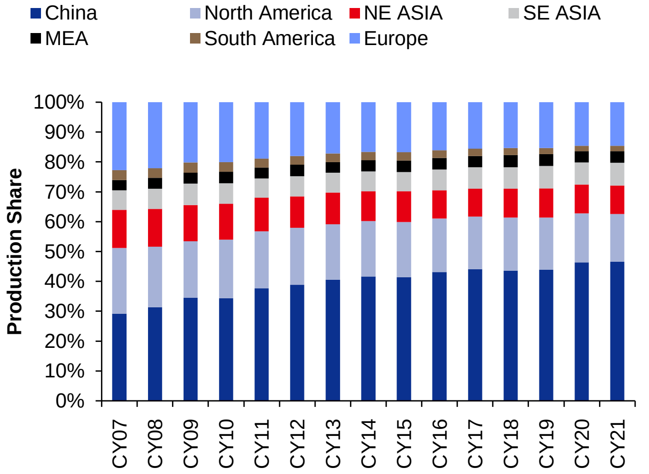
Figure 33: …that's why, despite falling naphtha prices, ethylene prices are up in western Europe which will fuel a global rally



SOURCE: INCRED RESEARCH, COMPANY REPORTS

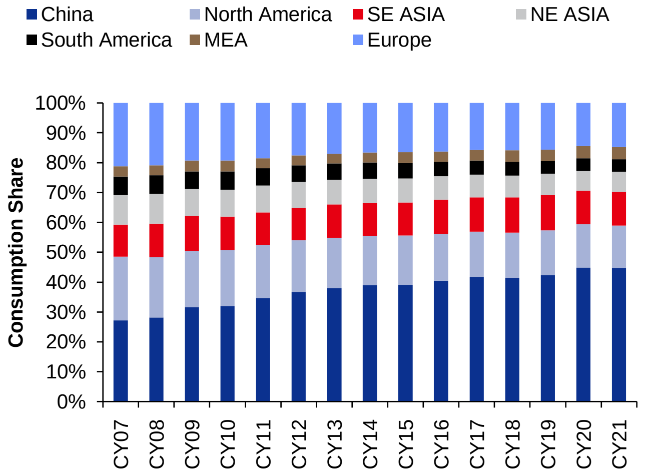
Caustic soda prices are also poised for a decent rally

Figure 34: Europe commands ~15% share in global production of caustic soda…



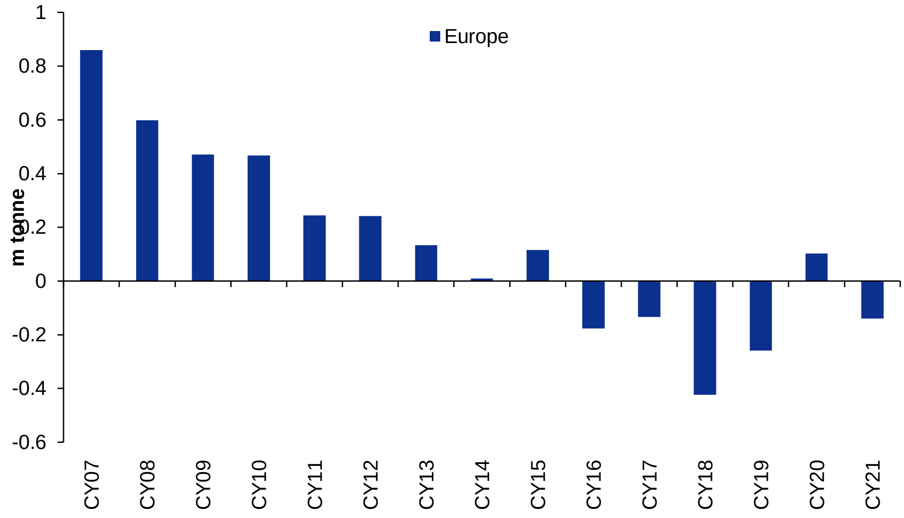
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 35: …and a similar share in consumption as well



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 36: Currently, the EU produces around 11.9mt of caustic soda and consumes ~12.1mt; power shortage will cause a havoc on caustic production and hence, shortage is likely

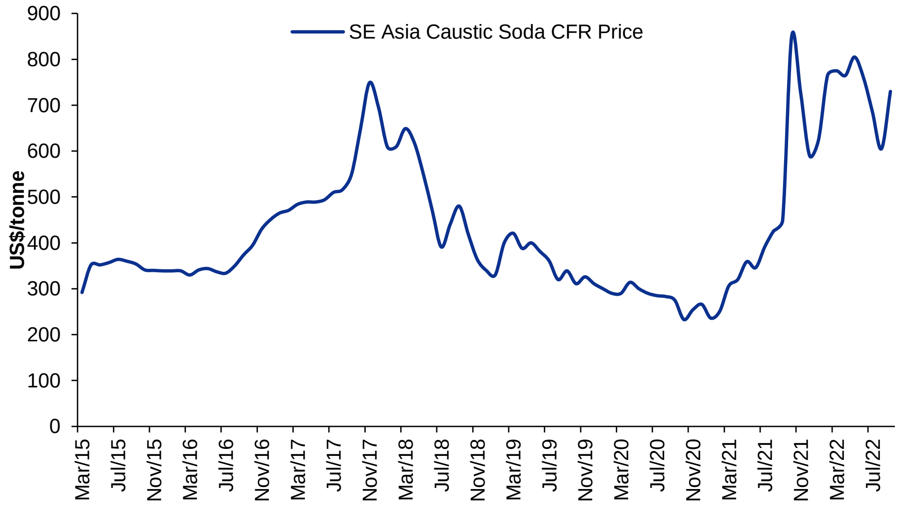


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Caustic soda prices may rise further in the coming weeks

We feel caustic soda prices are already strong and should rise further in the coming weeks. EU's energy crisis means that caustic soda production will be limited there, which will lead to higher imports and ultimately higher prices of the commodity. Germany has one the biggest chlorine capacities in the world, and it will suffer even more from the energy crisis.

Figure 37: Asian caustic soda prices are on the rise, and we expect them to strengthen further in the coming weeks

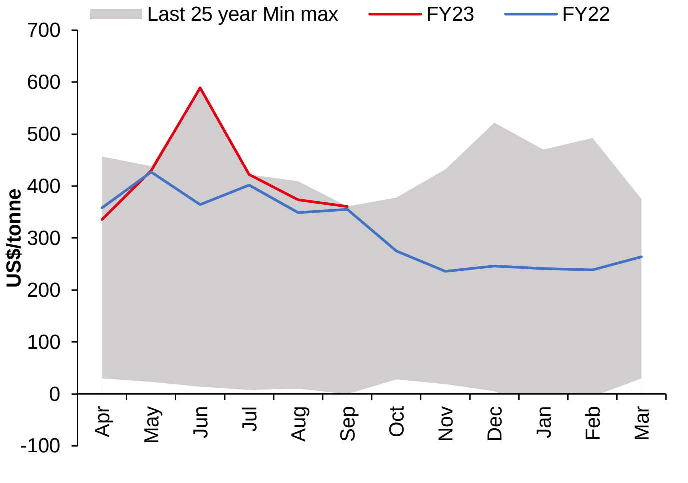


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Rising crude oil prices will lead to a rise in benzene prices; propylene is linked directly to consumer demand and hence, margins to get squeezed

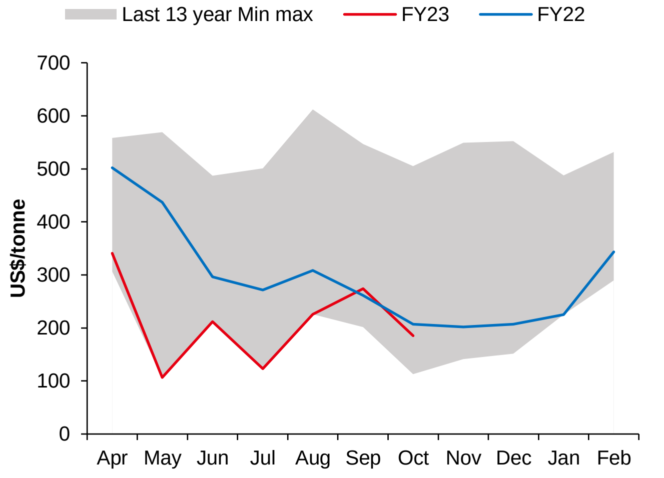
Globally, slowing consumer demand is playing havoc on the commodities that are directly used in consumer applications. While benzene is not directly used in consumer products, the derivatives of benzene are used. However, propylene has no such comfort. Its products, polypropylene and BOPP, are directly used in consumer items and hence, producers are not able to pass on the rise in cost.

Figure 38: Benzene's margins over naphtha are on the rise again, which is bad news for phenol-makers



SOURCE: INCRED RESEARCH, COMPANY REPORTS

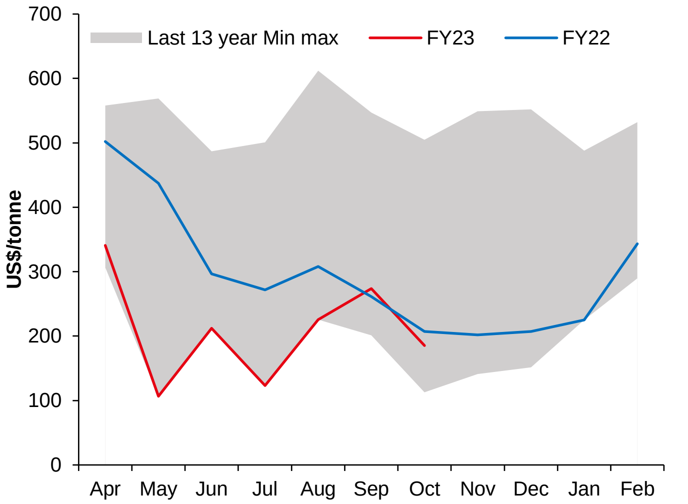
Figure 39: PP-naphtha spreads are well below FY22 levels, indicating demand stress



SOURCE: INCRED RESEARCH, COMPANY REPORTS

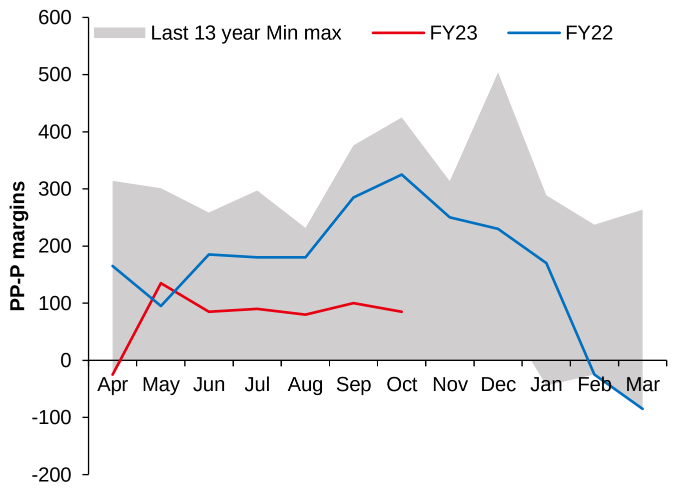
Polypropylene or PP is suffering because of lack of consumer demand, which is bad news for even BOPP film-makers

Figure 40: Propylene-makers are suffering; it appears that propylene, which is directly used in many consumer applications, is witnessing demand slowdown



SOURCE: COMPANY REPORTS, INCRED RESEARCH

Figure 41: Polypropylene or PP's margins over propylene are well below FY22 levels - indicating demand problem for PP - which is not good news for BOPP manufacturers

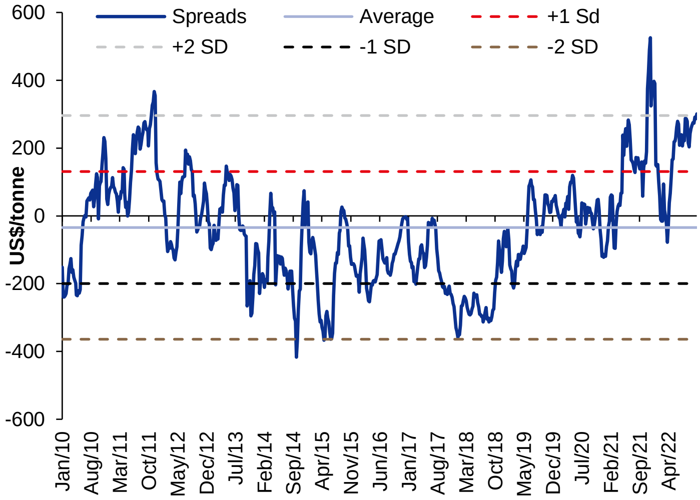


SOURCE: COMPANY REPORTS, INCRED RESEARCH

Rising ethylene prices will lead to a rise in ethyl alcohol prices, which is not good news for multiple users

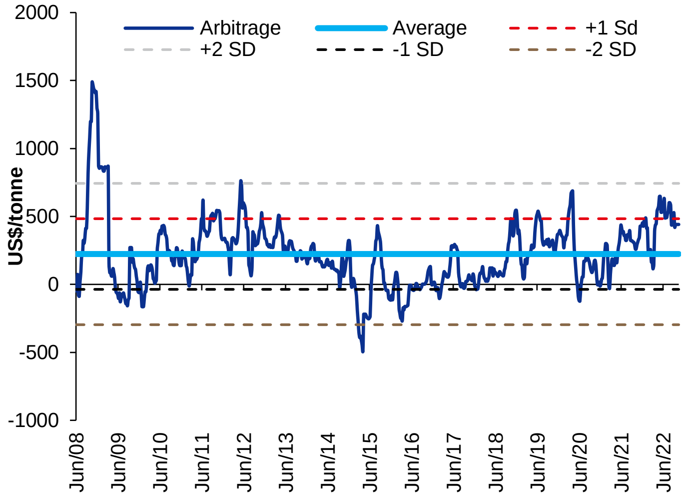
Ethanol, on a large scale, is made through the catalytic hydration of ethylene with sulfuric acid as the catalyst. This route traditionally has never made money and hence, other routes such as calcium carbide, coal, oil, gas and other sources were preferred. However, in the recent past, energy security quest of big economies is leading to usage of the naphtha-----→ ethylene---→ ethanol route as well. We expect ethylene prices to rise, and it will force ethanol prices to go up as well.

Figure 42: Ethanol through the ethylene route has never made money until the recent past



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 43: South East Asia's ethylene is just too attractive vis-a-vis western Europe and presents a classic arbitrage opportunity; South East Asia ethylene prices will also rise, putting tailwinds to ethanol



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Rising methanol prices will lead to a rise in acetic acid prices as well ➤

Acetic acid is mainly produced via the chemical route which involves homogeneous as well as heterogeneous catalytic methods. The carbonylation of methanol via the Monsanto process is the most adapted route, which further evolved as the Cavita process with a choice of catalysts and process intensification.

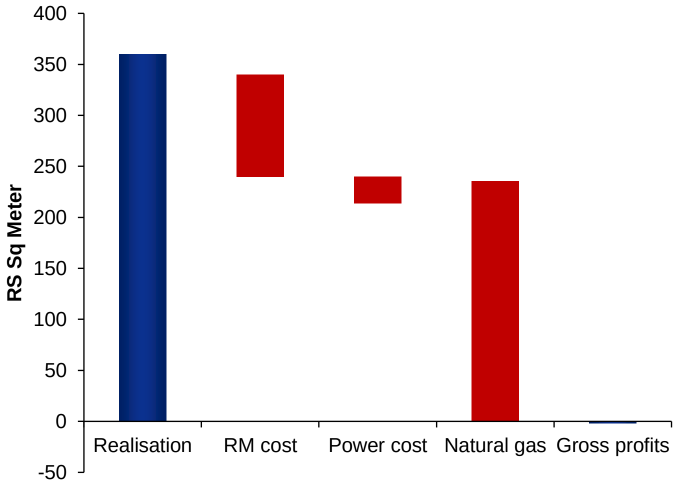
Styrene prices can also go up in the coming days ➤

The conventional method of producing styrene involves the alkylation of benzene with ethylene to produce ethylbenzene, followed by dehydrogenation of ethylbenzene to styrene. Styrene undergoes polymerization by all the common methods used in plastics technology to produce a wide variety of polymers and copolymers. Bharat Petroleum Corporation or BPCL is the only producer of styrene in India and rest of the styrene is imported in the country. As is evident, styrene is not consumed directly by the customers but rather it's an input in consumer goods and therefore, even in a slowing demand scenario, styrene prices can go up.

Impact on industries

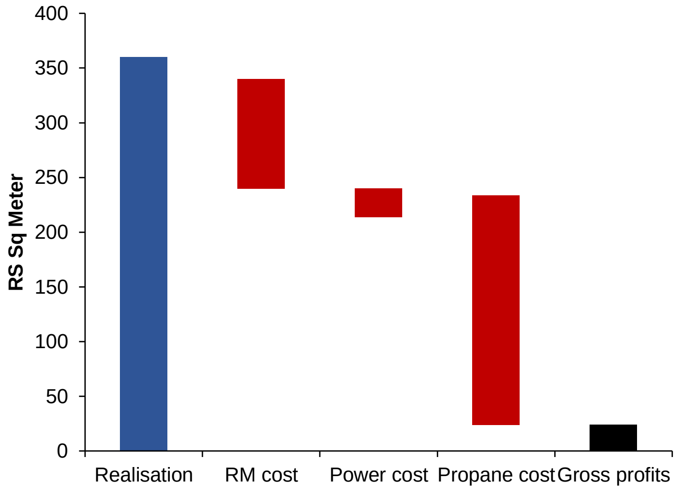
Tile manufacturers' margins will remain under stress

Figure 44: An average tile-maker non-branded) will not make any gross profit by using natural gas



SOURCE: INCRED RESEARCH, COMPANY REPORTS

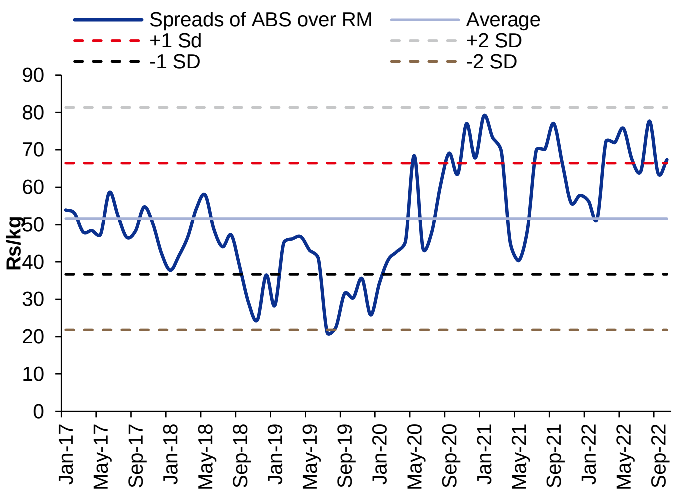
Figure 45: Tile-makers' gross profit will be miniscule but still positive by using LPG



SOURCE: INCRED RESEARCH, COMPANY REPORTS

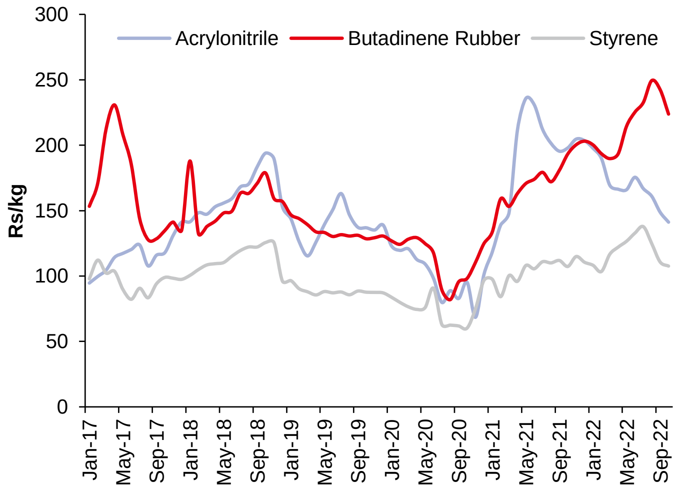
Styrene copolymer-makers, like ABS manufacturers, are having a wonderful time but it will not last for long

Figure 46: ABS manufacturers' margins are near a five-year high, but they won't stand for long as rising styrene prices will erode the margins



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 47: All input material prices declined as crude oil prices had corrected, but with the rise in crude oil prices now input material prices will go up, thereby compressing ABS margins

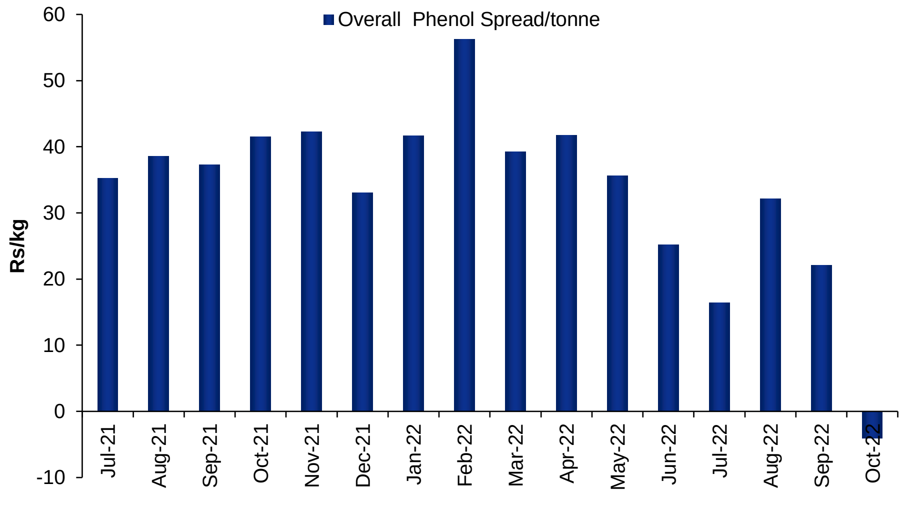


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Similarly, phenol which uses benzene and propylene, will face margin compression in the coming days

Phenol-makers are already facing margin decline and in the coming days we feel this scenario will worsen.

Figure 48: A phenol-maker like Deepak Nitrite is already facing margin pressure and it will accentuate going ahead

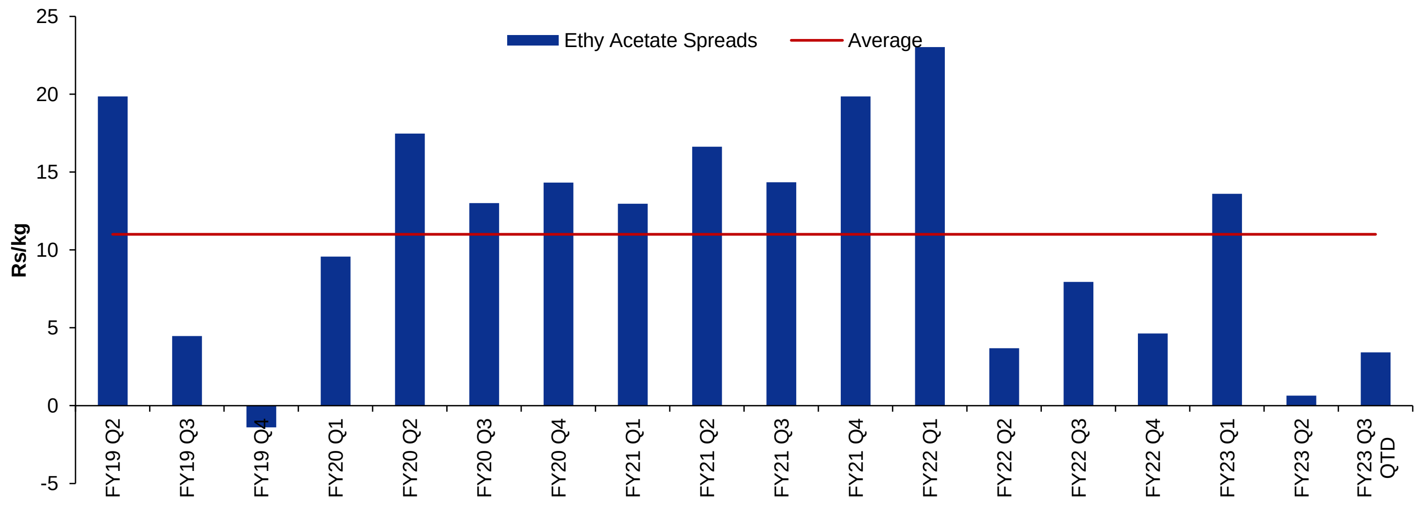


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Margins of ethanol users (like ethyl acetate-makers) will also suffer

Ethyl acetate-makers are already facing margin problems because of the decline in consumer demand, but going ahead the situation can worsen.

Figure 49: Rising ethanol and falling main product prices will hurt the margins of ethyl acetate companies like Laxmi Organics and Jubilant Ingrevia

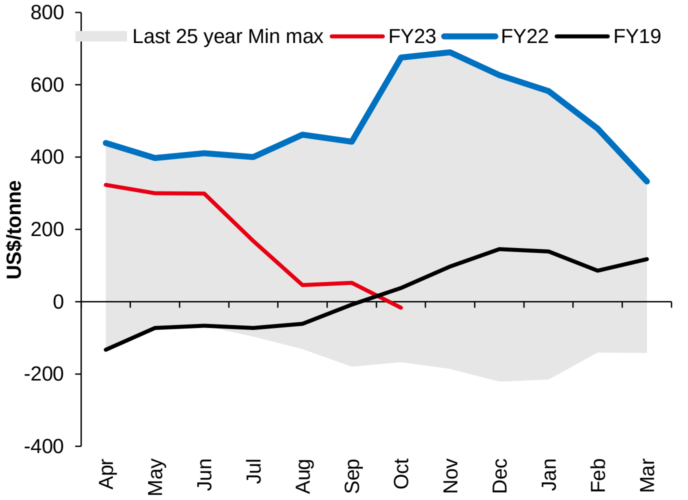


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Rising ethylene prices are negative for integrated PVC-makers

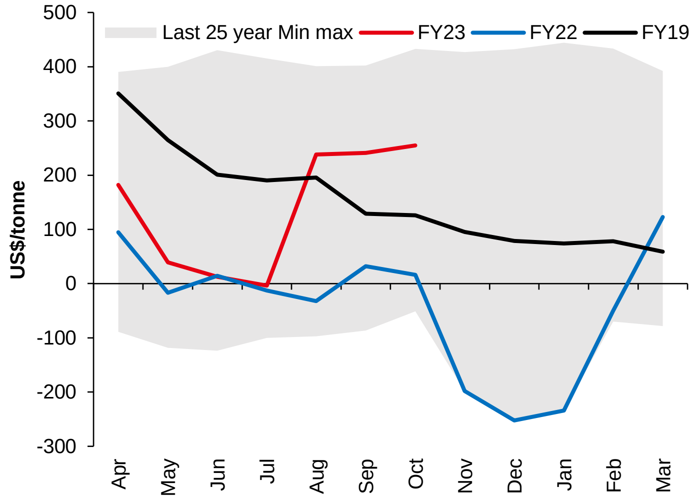
Integrated PVC-makers use ethylene to make EDC and then PVC. Rising ethylene prices will erode EDC margins. PVC prices may have bottomed out but a rise in its prices in sync with ethylene prices is unlikely.

Figure 50: EDC-makers, who used to buy ethylene, never made money till the Covid-related supply chain shortage in FY22



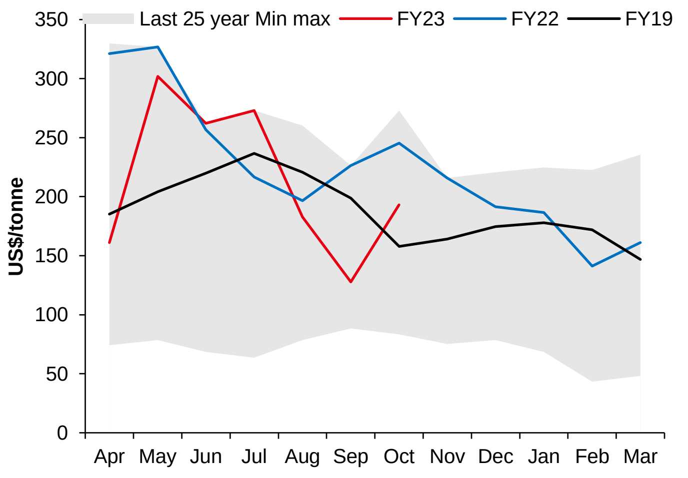
SOURCE: COMPANY REPORTS, INCRED RESEARCH

Figure 51: Naturally, this led VCM-makers to suffer during the last one year



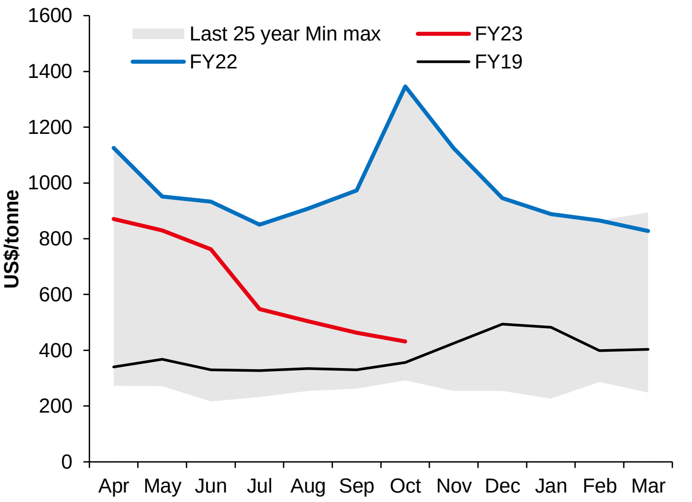
SOURCE: COMPANY REPORTS, INCRED RESEARCH

Figure 52: FY22 was the best for last-mile PVC sellers like Chemplast as well (reason: supply chain shortage)



SOURCE: INCRED RESEARCH, COMPANY REPORTS

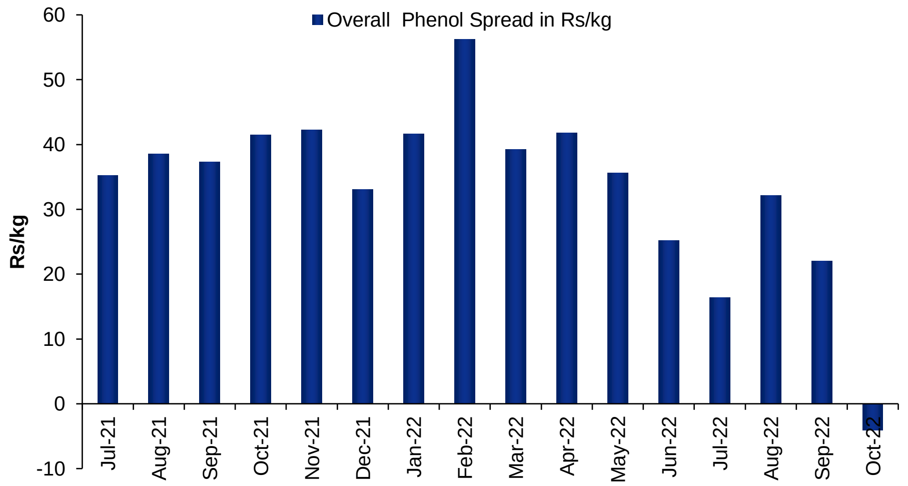
Figure 53: FY22 was the best for totally integrated players but product shortage also minted money for them



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Phenol-makers like Deepak Nitrite are likely to witness their first bear market in the coming couple of years ➤

Figure 54: Phenol spreads are likely to remain subdued for leading Indian phenol-makers like Deepak Nitrite



SOURCE: COMPANY REPORTS, INCRED RESEARCH

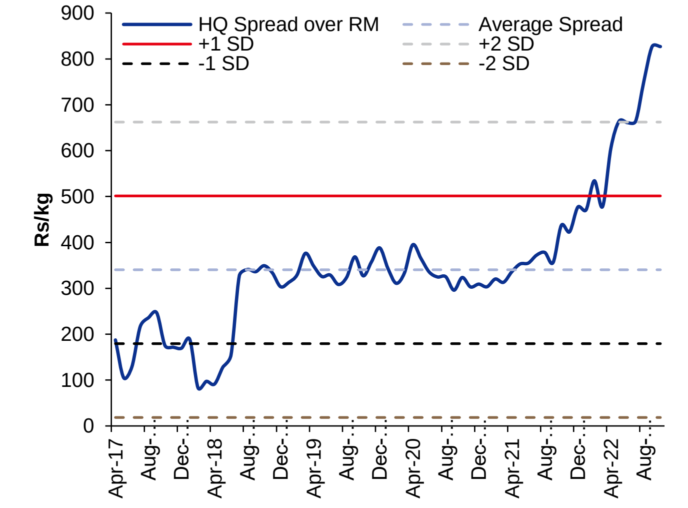
Hydroquinone or HQ prices can remain strong as high power prices in Europe will dent its production

The global market size of HQ is approximately 50,000t, and CFS is one of the biggest players globally. The other players in this market are:

1. Solvay
2. Eastman
3. Mitsui Chemicals
4. UBE
5. Camlin Fine Sciences.

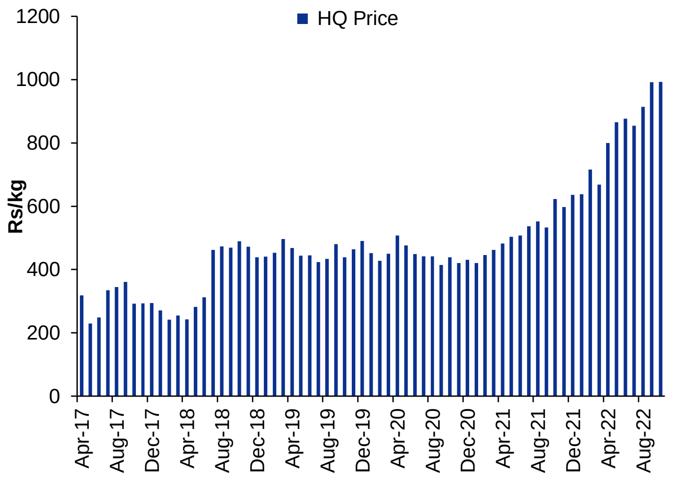
Approximately, 1t of HQ will need ~2,000 units of power. Hence, in power-scarce Europe, manufacturing of HQ is becoming difficult. This is leading to a rise in manufacturing cost and thus, HQ prices.

Figure 55: HQ spreads are near their five-year high for Indian HQ-makers



SOURCE: INCRED RESEARCH, COMPANY REPORTS

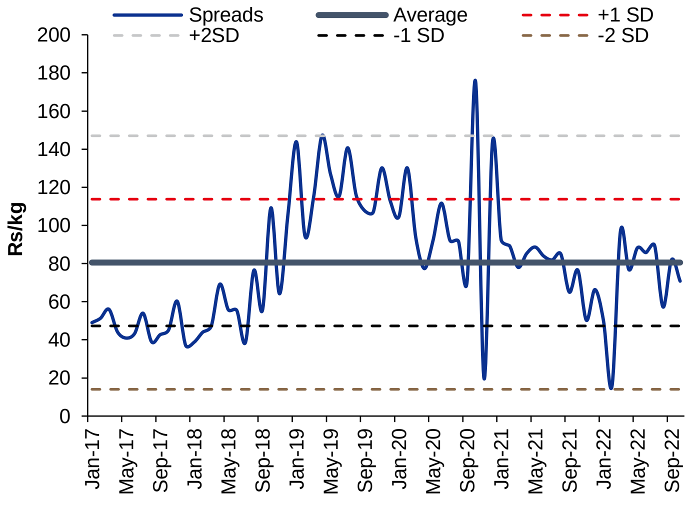
Figure 56: Worsening power supply scenario in Europe led HQ prices to rise rapidly since Oct 2021 and in the past five months, HQ prices have risen by 50%



SOURCE: INCRED RESEARCH, COMPANY REPORTS

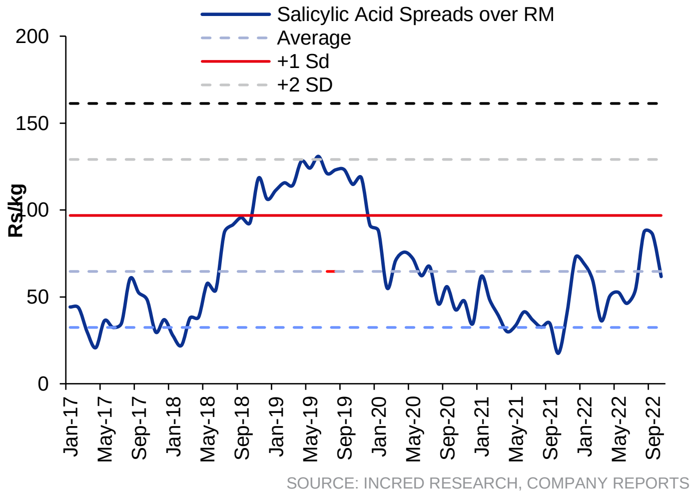
We don't have high hopes from a commodity API like methyl salicylate as well

Figure 57: Methyl salicylate spreads are near their five-year average; Ami Organics is thinking of manufacturing it, and all we can say is that the timing is not right



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 58: However, we expect salicylic acid prices to rise, mainly driven by higher caustic soda prices; its spreads may not expand much but cost will be passed on to consumers

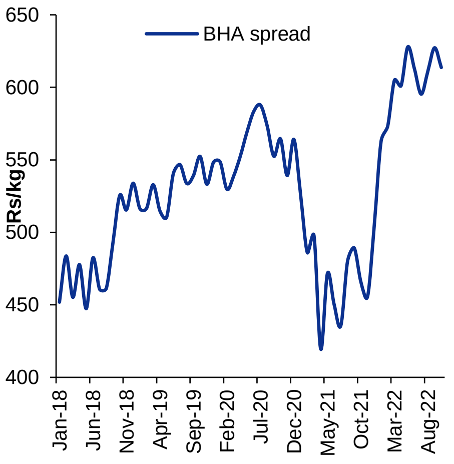


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Rising methanol prices have the potential to derail the clean run of Clean Science

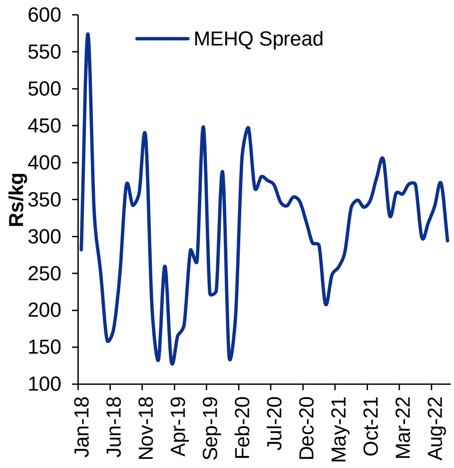
Clean Science uses methanol, phenol, and hydrogen peroxide in a variety of its products. While the spreads of phenol, hydrogen peroxide, and methanol may not rise, cost push will lead to some rise in their prices which will lead to margin erosion for Clean Science. Already, we are witnessing a fall in margins of MEHQ, BHA, and 4- methoxy acetophenone for Clean Science.

Figure 59: BHA spreads have peaked …



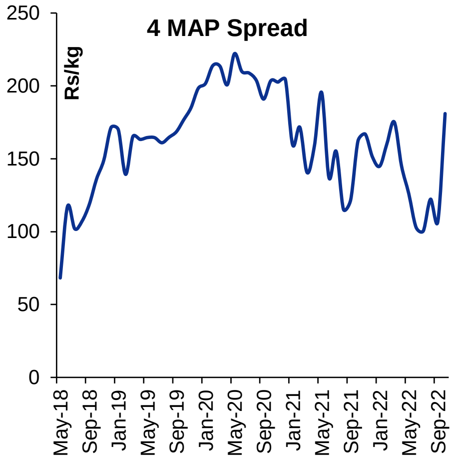
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 60: …and so are MEHQ spreads…



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 61: …but only 4-MAP spreads look strong



SOURCE: INCRED RESEARCH, COMPANY REPORTS

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