

Chemicals

The Long View: Chemicals - Analysing the lasting impact on upstream chemicals of the Iran war



James Hooper
+44 20 7676 6995
james.hooper@bernsteinsg.com



Abdessamad Raghibi, Ph.D.
+212 5 22 86 79 41
abdessamad.raghibi@bernsteinsg.com



Sebastien Afoy
sebastien.afay@bernsteinsg.com

Specialist Sales



James Brady
+44 20 7762 5272
james.brady@bernsteinsg.com



Steve Song
+1 917 344 8401
steve.song@bernsteinsg.com

With US-Iran negotiations often [reported to be in their final stages](#), now is a good time to examine the long-term impacts of the crisis on upstream chemicals. On balance, we see some long-term benefits to market structure. Petrochemical demand is typically resilient, with many consumer-facing applications. On the supply side, we expect some lasting cuts, even if the majority of currently closed capacity comes back online. Better supply-demand combined with [expected higher oil prices](#) means we increase our long-term polyolefin price estimates by c. 5-15%. There are risks (e.g. demand destruction, no long-term capacity changes), but this analysis gives us conviction that if upstream chemical share prices decline materially on a peace agreement, there could be a long-term opportunity.

We see petrochemicals supply-demand as improving. Petrochemicals volume demand tends to be relatively resilient, with 2007-09 the only down years in the last 20, supported by many consumer-facing applications. On the supply side, in most currently impacted countries we believe petrochemicals is a nationally strategic industry (e.g. the Middle East, China, Taiwan), but we don't expect all capacity to reopen given the higher costs and lasting damage to Qatari LNG facilities.

We raise our long-term polyolefin price forecasts. Our proprietary polyolefins supply-demand model uses 3 factors to drive petrochemical prices: the operating rate, GDP growth and Brent Crude prices (the marginal commodity). With better supply-demand and higher oil prices outweighing a possible decline in GDP, we raise our estimates by between 5-15% over 2027-30.

The lasting changes: we see a steeper cost curve and therefore better economics for natural gas-based producers, mostly in the Middle East and North America. But possible \$5 Henry Hub looms as a risk for North America. The marginal commodity of most petrochemicals is oil, given the supply balance is in Europe and East Asia. The oil-gas spread has recently moved considerably in favour of gas, and North American petchem plants are currently beneficiaries. We believe Middle Eastern producers will also benefit once logistics costs normalise. But for North American capacity, [our house \\$5 Henry Hub view](#) looms as a risk to the current prosperity. In oil-based feedstock regions, we see integration as a greater advantage in a higher cost environment, potentially benefiting BASF.

We're ready to buy a possible end-of-war dip in our upstream names. In our view, it's likely that share prices across our upstream coverage fall on a formal announcement of the end of the conflict. But we think this could create an opportunity. For **BASF**, our forecast structural improvements to upstream markets mean we think the €40-50 share price trading range of recent years is no longer merited, and the floor is higher. For **Borouge** and **SABIC**, although rated Market-Perform on the current challenges, we become more bullish on their long-term prospects. The **industrial gases** could also benefit across a variety of our scenarios, from supporting new North American petchem capacity to higher-for-longer commodities creating pricing opportunities.

BERNSTEIN TICKER TABLE

			22 May	TTM		Adjusted EPS				Adjusted P/E (x)		
			2026									
			Closing	Price	Rel.							
Ticker	Rating	Cur	Price	Target	Perf.	Cur	2025A	2026E	2027E	2025A	2026E	2027E
AI.FP (Air Liquide)	O	EUR	180.38	207.00	(17.4)%	EUR	6.70	7.39	8.14	29.6	25.8	23.3
APD (Air Products)	O	USD	290.19	344.00	(21.2)%	USD	12.06	13.25	14.64	24.1	21.9	19.8
AKZA.NA (Akzo Nobel)	M	EUR	51.88	59.00	(29.1)%	EUR	3.63	3.99	4.24	14.3	13.0	12.2
AKE.FP (Arkema)	M	EUR	62.20	68.00	(21.4)%	EUR	4.34	4.62	5.24	14.3	13.5	11.9
BAS.GR (BASF)	O	EUR	52.05	61.00	6.3%	EUR	2.24	2.62	2.78	23.2	19.9	18.7
BOROUGE.UH (Borouge)	M	AED	2.51	2.48	(15.2)%	USD	0.04	0.03	0.05	18.6	21.2	12.8
CLN.SW (Clariant)	M	CHF	7.94	8.30	(27.8)%	CHF	0.68	0.64	0.75	11.7	12.4	10.6
LIN.UW (Linde)	O	USD	514.51	561.00	(2.0)%	USD	16.46	18.10	19.99	31.3	28.4	25.7
PPG (PPG)	O	USD	106.63	130.00	(32.0)%	USD	7.64	7.95	8.75	14.0	13.4	12.2
SOLB.BB (Solvay)	M	EUR	26.00	26.60	(24.4)%	EUR	2.82	2.28	2.74	9.2	11.4	9.5
SYENS.BB (Syensqo)	O	EUR	66.50	70.00	(13.6)%	EUR	3.72	3.85	4.36	17.9	17.3	15.3
SABIC.AB (Saudi Basic Industries)	M	SAR	57.20	67.80	(45.6)%	SAR	(0.51)	1.25	1.37	11.1	10.2	8.3
EDME			1,564.91									
SPX			7,473.47									
ASIAX			1,963.21									

O - Outperform, M - Market-Perform, U - Underperform, NR - Not Rated, CS - Coverage Suspended

SABIC.AB estimate is Reported EPS; AI.FP valuation is Reported P/E (x); SABIC.AB valuation is EV/EBITDA (x);

Source: Bloomberg, Bernstein estimates and analysis.

INVESTMENT IMPLICATIONS

We expect the Middle East's petrochemicals advantage to increase once logistics costs normalise. We rate **Borouge and SABIC Market-Perform**, given the short-term uncertainties about the conflict and its duration.

For BASF we see upstream conditions as slightly better, but margin improvements are more limited given their mostly oil-based feedstock. However, we see BASF as better-positioned than most in the new environment given that it benefits from the integration advantage, and over the next couple of years we expect greater European domestic demand before memories of the conflict fade. **We therefore believe that BASF is now less likely to return to the €40-50 trading range we have seen in the last few years. We rate BASF Outperform.**

If North American natural gas prices stay below \$5 for an extended period of time, that would encourage more North American petrochemicals capacity. This would benefit the industrial gas companies: **Linde, Air Products and Air Liquide**, all rated Outperform. If North American natural gas does go to \$5, higher commodity prices mean an excuse to use their ample pricing power (see report 7 May 2026 - [The Bernstein Industrial Gases Primer: How the industry structure can support long-term outperformance](#)).

Elsewhere in our coverage, higher-for-longer petchem prices will mean a test of pricing power. Both Paints & Coatings & downstream industrials will need to price for their likely higher-for-longer petrochemical input costs. We are less concerned about Paints & Coatings pricing power, albeit there may be an incoming volume blip. We rate PPG Outperform and Akzo Nobel Market-Perform. We are more concerned about our non-integrated diversified names, where some of the chemistry may lack the pricing power to address the higher upstream costs, and some end-uses are more discretionary. We rate Syensqo Outperform. We rate Arkema, Clariant and Solvay Market-Perform.

DETAILS

SUMMARISING THE MULTI-YEAR BULL CASE FOR UPSTREAM CHEMICALS

In our previous sector report, we set out the position that we're expecting an Iran-related cycle: short-term supernormal profits, but potentially a subsequent painful reset (see report [Chemicals: Positioning for an Iran-related cycle and upgrading Arkema to Market-Perform](#)). In this report we seek to look beyond the next few months or even year, and look for structural changes. We start by examining the bull case.

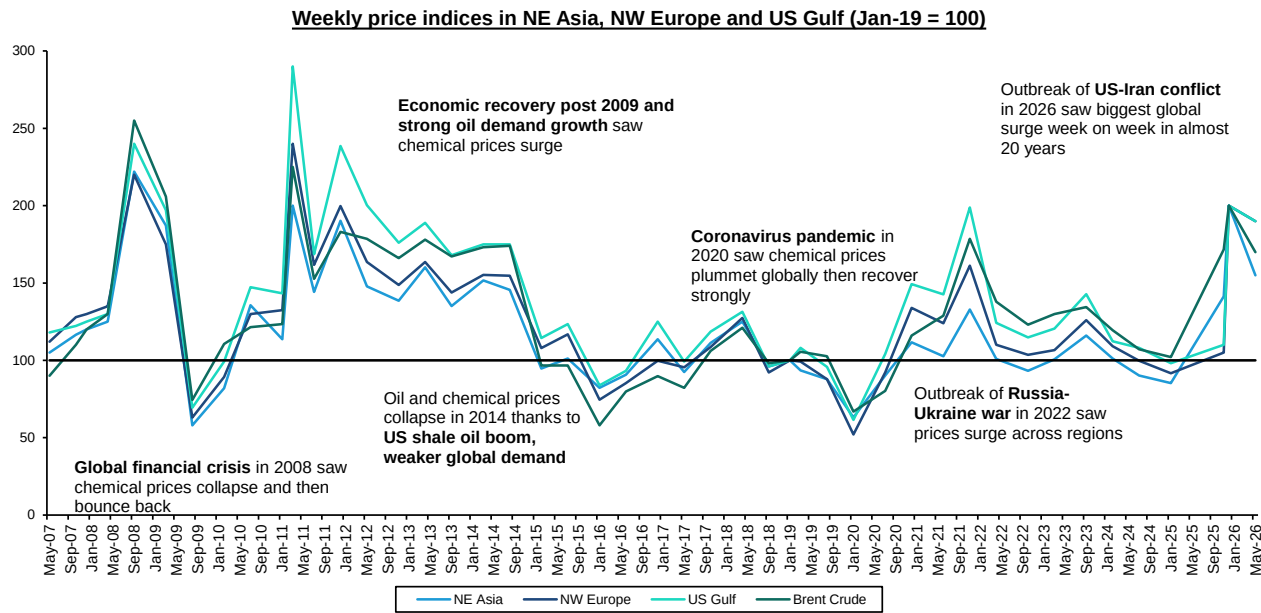
Higher for longer petrochemical prices without impacting demand will mean structurally higher margins. To start with the obvious: petrochemical prices are currently very high, and the recent price hikes were the steepest in almost 20 years ([Exhibit 1](#)). US olefin prices are currently very elevated, with ethylene up ~68% YTD (+64% YoY) and polymer-grade propylene up ~83% YTD. Butadiene stands out, surging ~194% YTD (+79% YoY), while China exhibit similar trends ([Exhibit 2](#), [Exhibit 3](#)). In essence, the bull case is very simple. If petrochemical prices are sustained at historically high levels, that will likely imply higher profitability for producer. We can build this bull case using the two key pillars of commodity chemicals: supply and demand.

- **Supply permanently reduces for upstream chemicals.** It was well established that the petrochemicals industry has been suffering from oversupply in recent years (see [link](#), [link](#)). The impact of this crisis has been to effectively reduce previous Asian overcapacity, such that the market is now undersupplied ([link](#)). If one assumes that much of these supply cuts become permanent, and that future capacity additions are slowed / cancelled, then the market immediately becomes structurally more balanced. The possible reasons for more permanent cuts include re-regionalisation to bring supply chains home from the Middle East / Asia; an opportunity to exit high-cost capacities in the context of Chinese anti-involution or other Asian / European petrochemical capacity cuts; or renewed inflation making new project construction in higher cost regions less economic.
- **Demand to stay resilient, or even increase.** Tighter supply is likely to increase prices, but reduced supply would have little meaning if demand were to collapse under the weight of inflation. However, many petrochemicals are used as building blocks for important everyday items where demand is expected to be relatively inelastic (e.g. food packaging). And it is difficult to "downtrade" from petrochemicals given they are typically the cheapest chemical grade anyway; demand could even increase as R&D departments try to substitute cheaper materials and consumers stay in to save money. Therefore, demand could prove surprisingly resilient.

Dow Chemical and LyondellBasell (neither covered) in their recent 1Q26 results provided some visual accompaniments ([Exhibit 4](#) to [Exhibit 6](#)).

We spend the next sections of the report looking in more detail at the supply and demand sides of this argument, before adjusting our proprietary polyolefin supply-demand model ([Global Polyolefins Market Model](#)) and drawing some conclusions.

EXHIBIT 1: A history of petchem prices since 2007



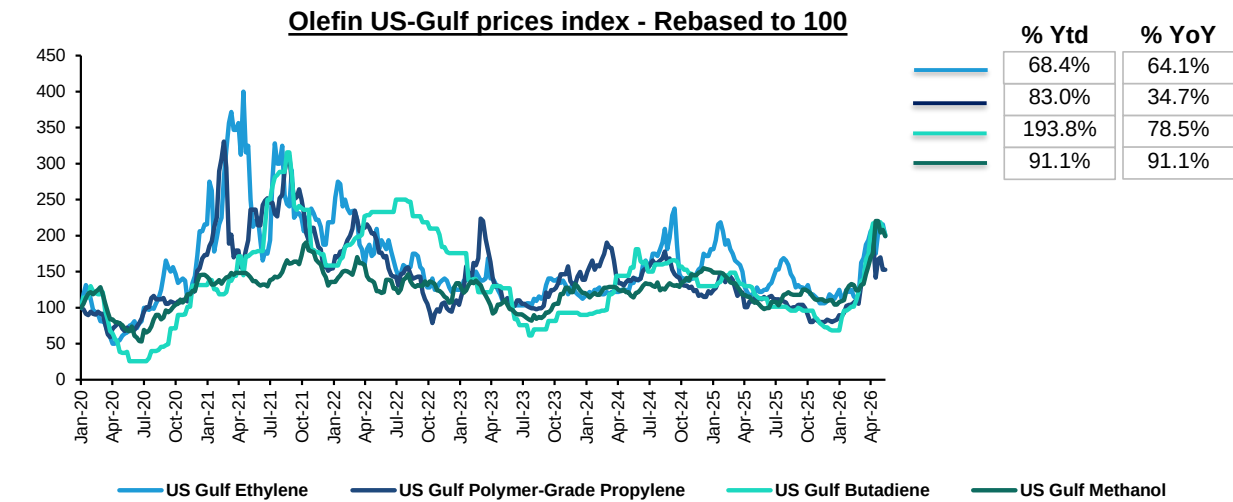
NE Asia: CFR incoterm used for all chemicals, China location used for methanol

Europe = CIF incoterm used for benzene and ethylene, FD used for propylene, FOB used for butadiene, methanol, toluene and xylenes

US Gulf = CIF incoterm used for butadiene, DDP incoterm used for benzene, DEL incoterm used for ethylene and propylene, FOB used for methanol, toluene and xylenes

Source: ICIS, Bernstein analysis

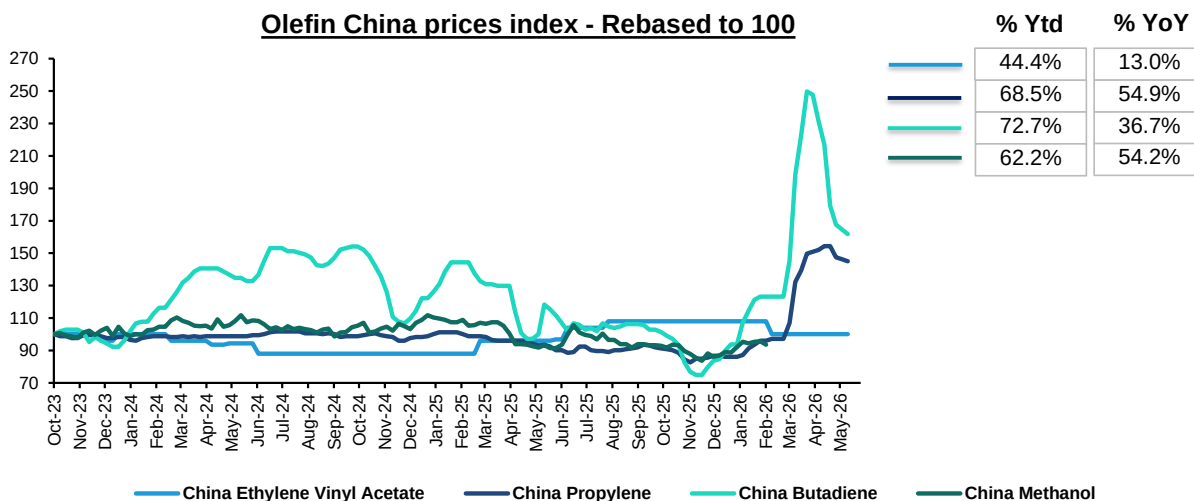
EXHIBIT 2: In the US, olefin prices have rallied since the onset of the Iran conflict and show no signs of easing.



Source: Bloomberg, Bernstein analysis



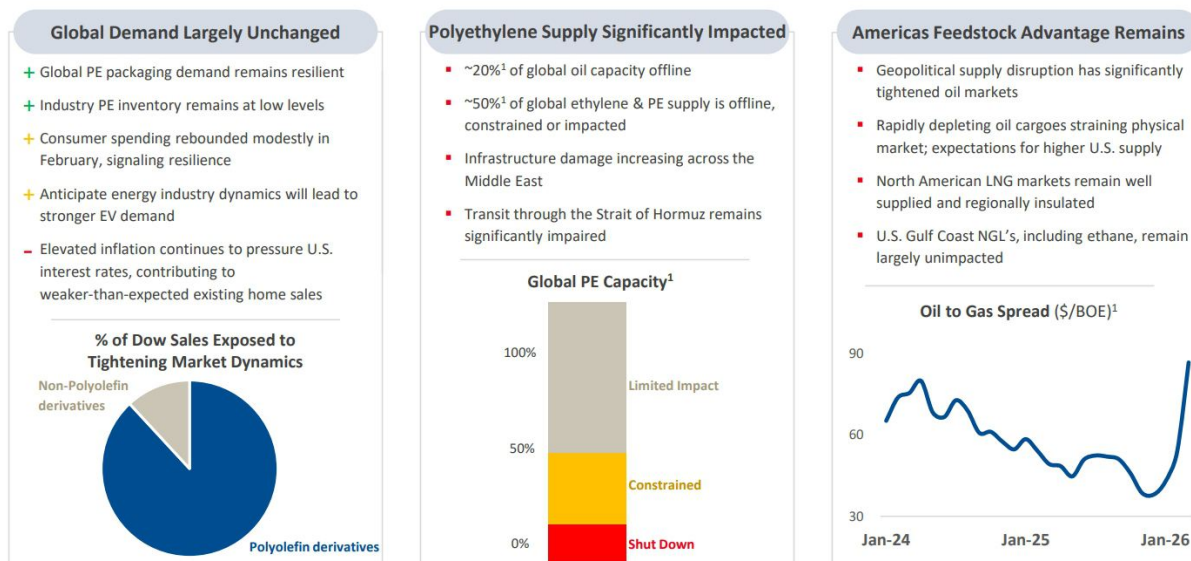
EXHIBIT 3: Chinese olefin prices have surged since the onset of the Iran conflict and began stabilizing in April.



Source: Bloomberg, Bernstein analysis

EXHIBIT 4: Dow provided a two-slide summary of the bull case for upstream chemicals in their most recent earnings presentation (1/2)

GLOBAL DEMAND IS STEADY, SUPPLY DYNAMICS ARE CONSTRAINED



1. Dow analysis based on 3rd party data

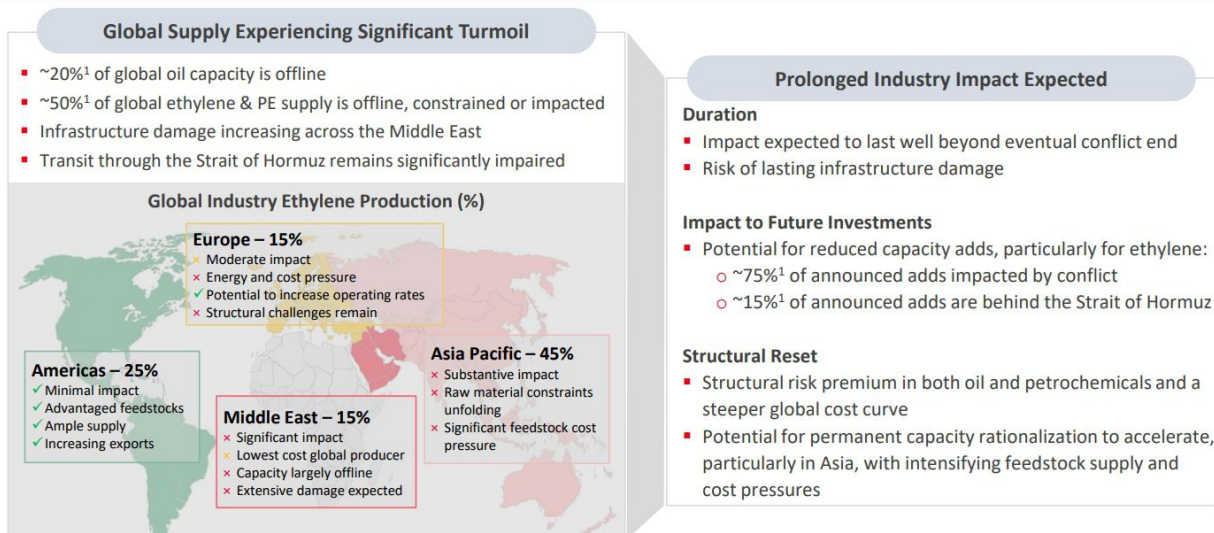


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Source: Dow Chemical 1Q26 presentation

EXHIBIT 5: Dow provided a two-slide summary of the bull case for upstream chemicals in their most recent earnings presentation (2/2)

MIDDLE EAST CONFLICT REPRESENTS A MAJOR INDUSTRY DISRUPTION



Dow's advantaged portfolio, European feedstock flexibility and agile global supply chains position us well to win in the markets we serve

1. Dow analysis based on 3rd party data

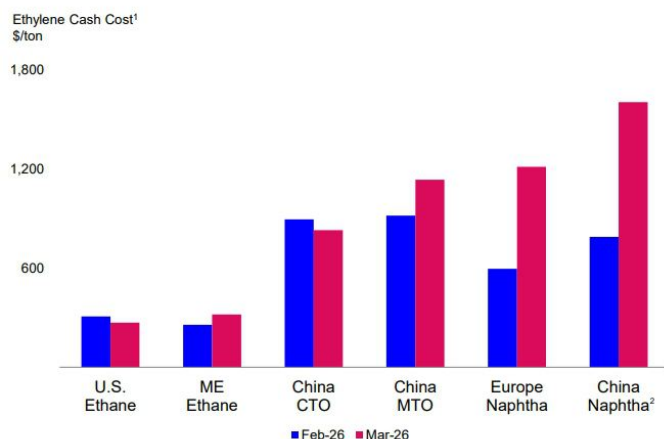


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Source: Dow Chemical 1Q26 presentation

EXHIBIT 6: LYB also have made the case for lasting changes to the petrochemical industry in their 1Q26 presentation

Middle East war creating structural shifts in economics LYB is well-positioned to benefit from strengthened cost advantage



CTO = Coal-to-Olefins; MTO = Methanol-to-Olefins
 1. Source: Chemical Market Analysis and S&P Global; LYB internal analysis
 2. Feb-26 China naphtha ethylene cash cost assumes \$10/bbl discount to Brent (ICE) Crude

War steepens the global petrochemical cost curve

- Higher crude prices increase costs for naphtha-based petchems
- Crude oil discounts for China and India have largely disappeared
- Security of supply questions for Asian and Middle East capacity

Economic and logistical impacts will persist

- Higher risk premium for crude oil increases naphtha-based costs
- Discounts on sanctioned crude oil unlikely to return
- Direct damage to assets and prolonged logistical disruptions extend the duration of tight markets for petrochemicals
- Some temporary shutdowns could become permanent
- Idle capacity insufficient to fill supply gap
- Downside risk to discretionary demand could materialize

LYB US Gulf Coast (USGC) and European assets to benefit

- LYB USGC assets benefiting from low costs and export demand
- LYB European assets quickly passing through higher feedstock costs; increasing volumes to address lack of imports
- Similar cost curve benefits for most LYB O&P and I&D products

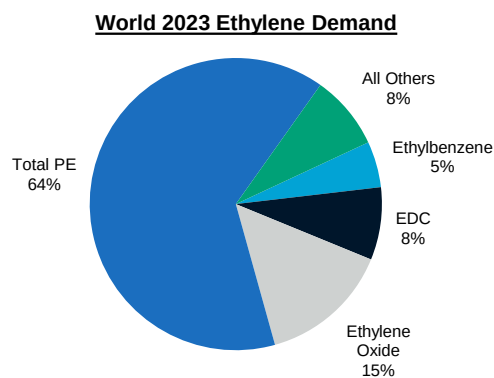
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Source: LyondellBasell 1Q26 presentation

PETROCHEMICALS DEMAND IS RELATIVELY RESILIENT

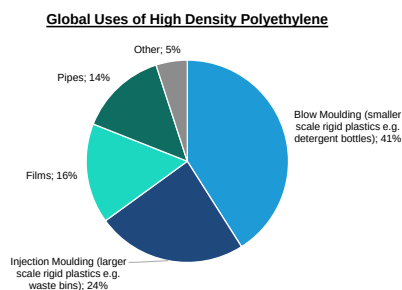
Our coverage has more focus on olefins and polyolefins, so we focus on those as a case study. Key olefins ethylene and propylene are two of the most manufactured petrochemicals by volume. 2/3 of them become polyolefins: polyethylene and polypropylene ([Exhibit 7](#), [Exhibit 8](#)). These are typically used for plastic packaging, films, and other consumer-facing applications ([Exhibit 9](#) to [Exhibit 11](#)). These everyday uses have meant that demand has historically been growing over time with the rise of the Asian middle class.

EXHIBIT 7: Key commodity chemicals are typically used as intermediates for other chemical processes: (1: Ethylene)



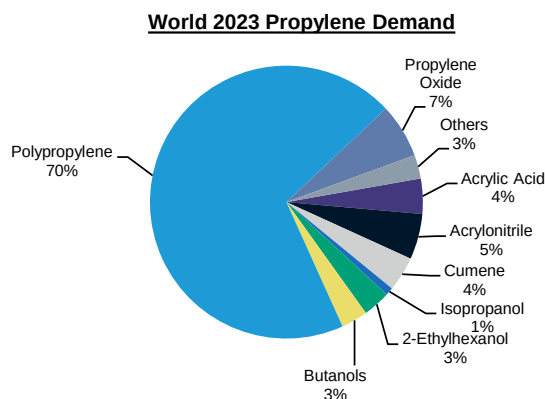
Source: OPIS, Bernstein analysis

EXHIBIT 9: Polyethylene uses vary by grade (part 1: high density)



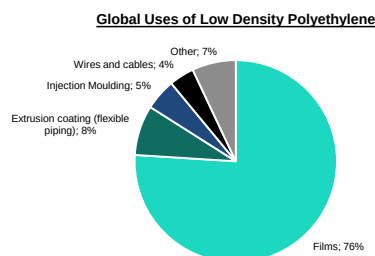
Source: The Essential Chemical Industry, Bernstein analysis

EXHIBIT 8: Key commodity chemicals are typically used as intermediates for other chemical processes: (2: Propylene)

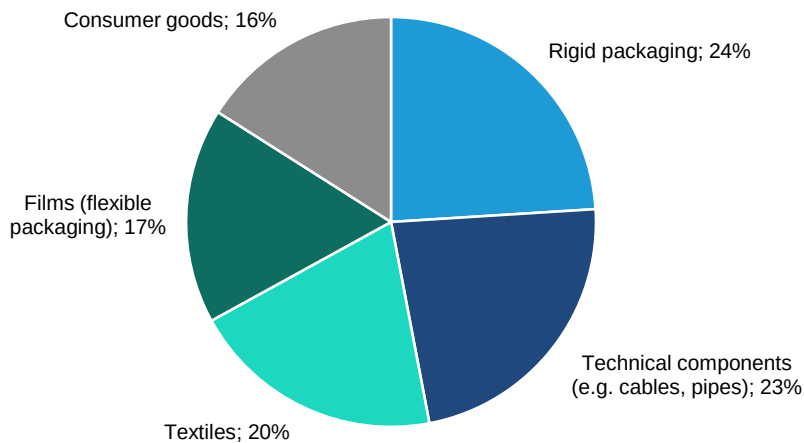


Source: OPIS, Bernstein analysis

EXHIBIT 10: Polyethylene uses vary by grade (part 2: low density)

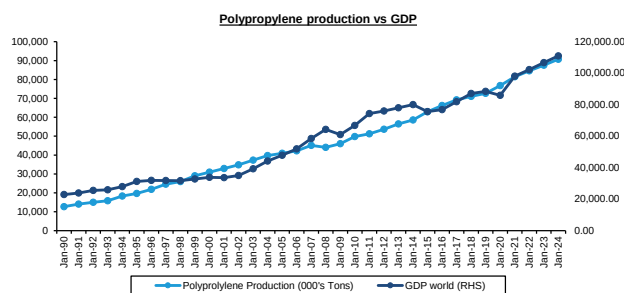


Source: The Essential Chemical Industry, Bernstein analysis

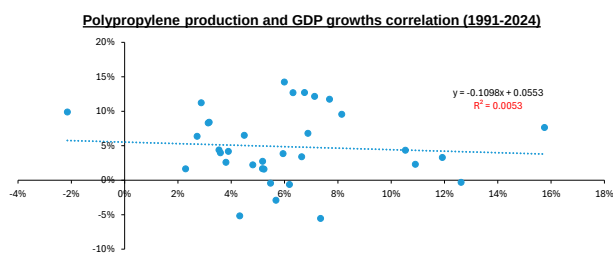
EXHIBIT 11: **Polypropylene end uses are varied****Polypropylene End Use by Application**

Source: ICIS, Bernstein analysis

Historically, polyolefin production has grown steadily, and is not correlated with GDP growth rates. Over the past 30 years, both global GDP and polyolefin production have increased steadily. However, we see no strong correlation between polyolefin production growth and GDP growth. We believe this is because one of the major drivers of GDP growth throughout our data set (1990-2024) has been the rise of the Asian, and especially Chinese, middle class, creating hundreds of millions more plastic consumers, with other parts of GDP composition providing more variance. This has meant that consumption downturns have been rare: our data set only shows a downturn in consumption in 2007-09 across the major polyolefins ([Exhibit 12](#) - [Exhibit 15](#)).

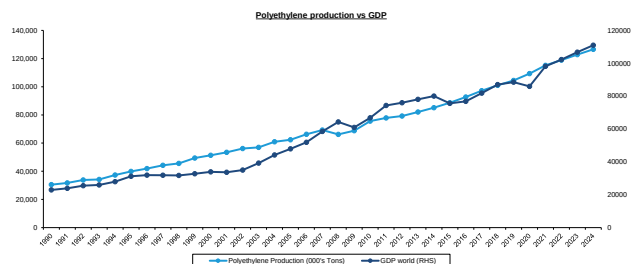
EXHIBIT 12: **Polypropylene production grows steadily over time ...**

Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 13: **... with no strong correlation with GDP growth rates.**

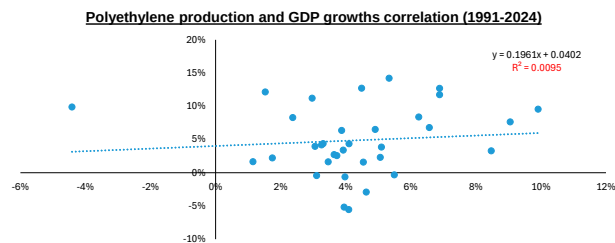
Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 14: The same applies for polyethylene (1/2)



Source: Bloomberg, Bernstein analysis and estimates

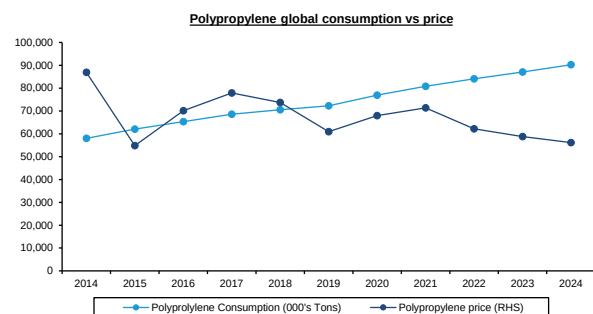
EXHIBIT 15: The same applies for polyethylene (2/2)



Source: Bloomberg, Bernstein analysis and estimates

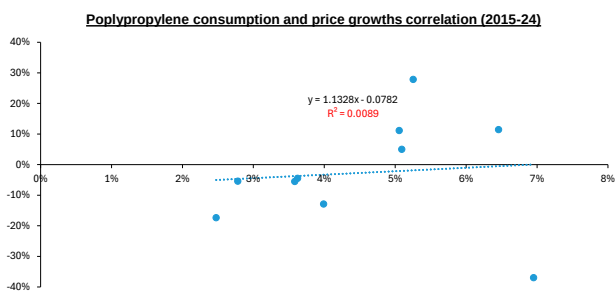
Polyolefins demand appears relatively inelastic. Exhibit 16 to Exhibit 19 show that despite price declines or increases, consumption kept increasing steadily in the past 10 years. We believe this resilience reflects the fact that polyolefins are used in defensive, non-discretionary applications such as food packaging, and broader consumer goods. These end-markets are driven more by population growth, urbanisation, and basic consumption needs than by short-term price fluctuations, making demand structurally stable across economic cycles.

EXHIBIT 16: Despite price volatility, polypropylene consumption continue to grow steadily over time...



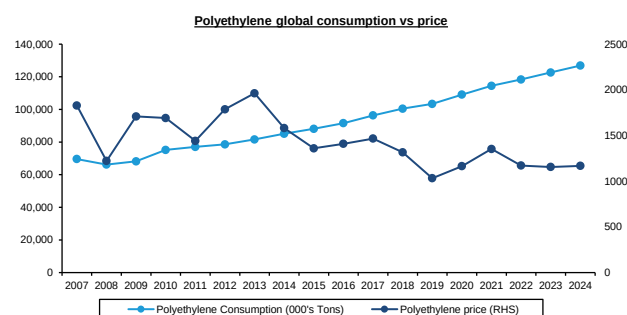
Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 17: ... so there's no strong correlation between consumption and price



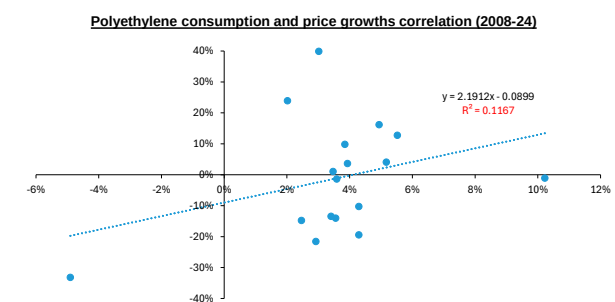
Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 18: The same applies to polyethylene (1/2)



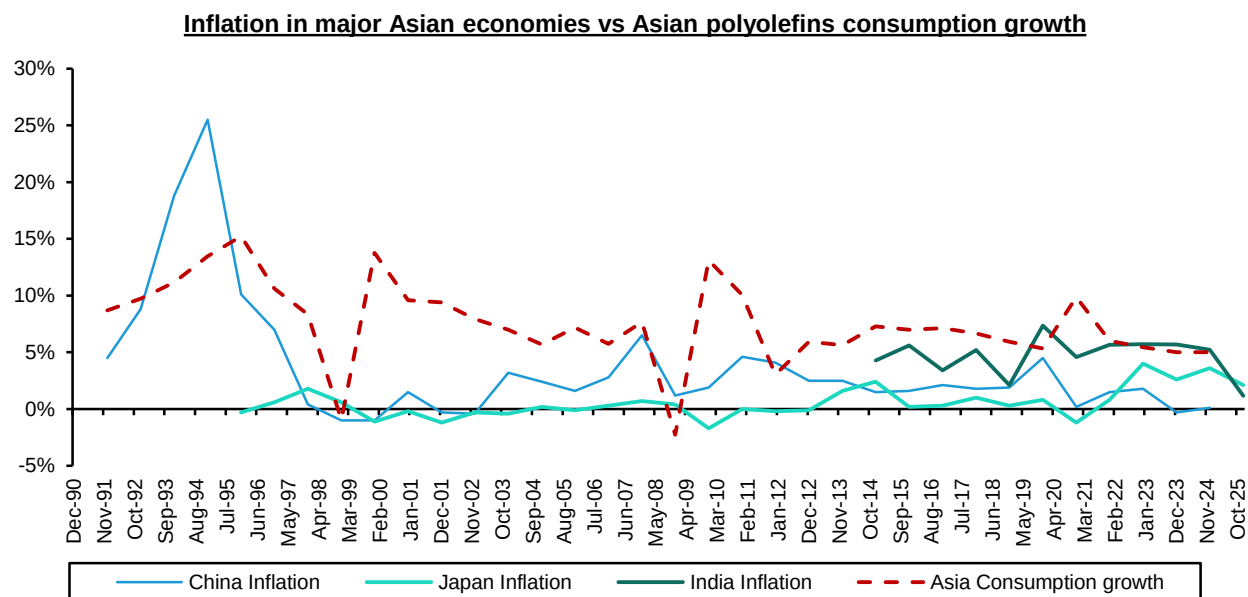
Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 19: The same applies to polyethylene (2/2)

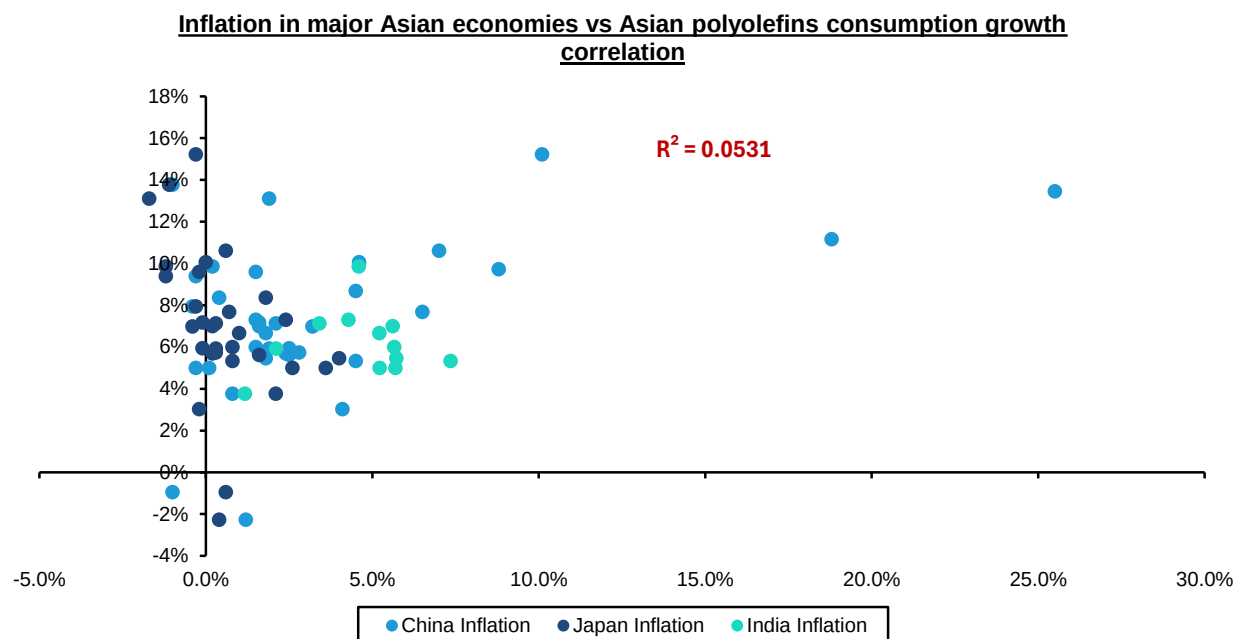


Source: Bloomberg, Bernstein analysis and estimates

But what if demand is as bad as 2008? So far it seems demand for key petrochemicals is very resilient, subject to major Global Financial Crisis-level shocks. But it would be remiss if we didn't cover the possibility of a major economic downturn. And for petrochemical demand specifically, we think Asia could be an area where the market could be underestimating the possibility of a demand crunch. Our analysis finds that major Asian economies have not had to grapple with much inflation over the last two decades, meaning that there is limited statistical correlation between polyolefin production and inflation (Exhibit 20, Exhibit 21). But with Asian inflation likely to accelerate, an extended crisis could considerably damage middle-class demand in key regions, and break the previous resilience.

EXHIBIT 20: **Major Asian economies have dealt with little inflation in the last 20 years**

Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 21: **Inflation therefore has little impact on polyolefin consumption growth rates**

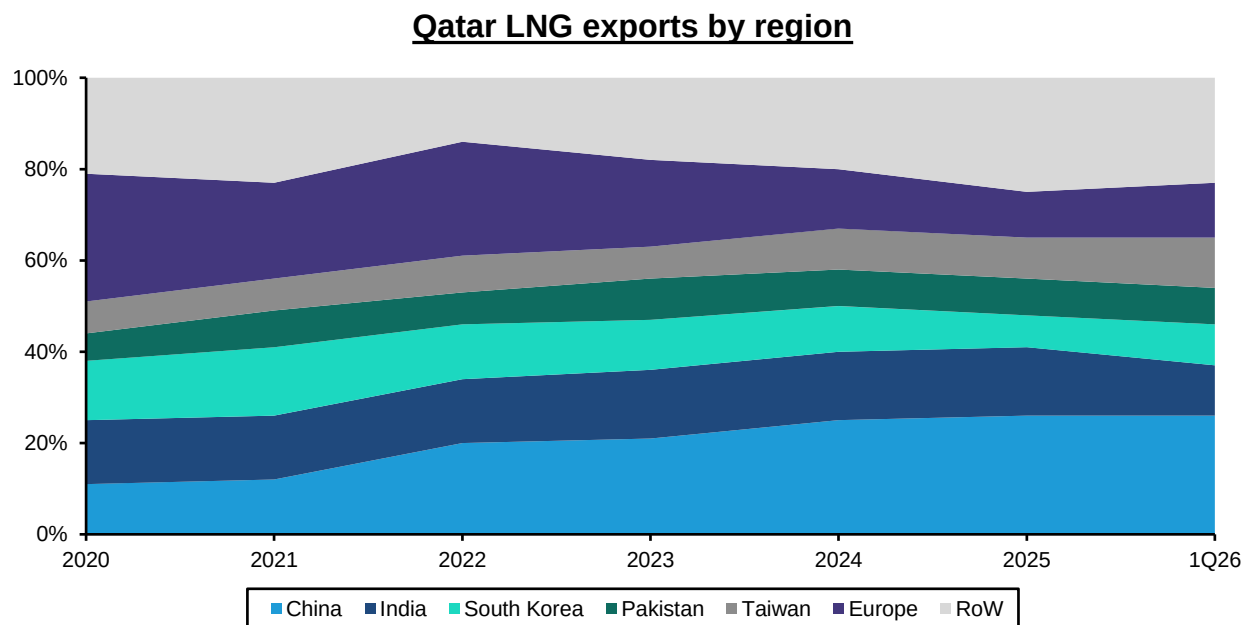
Source: Bloomberg, Bernstein analysis and estimates

THE LASTING IMPACT ON SUPPLY: WE EXPECT A FEW PLANTS TO REMAIN CLOSED

Power and feedstock challenges have led to considerable amounts of Asian capacity declaring force majeure, and profits elsewhere. The combination of the Strait of Hormuz being closed and Qatar declaring force majeure has affected Asia the most ([Exhibit 22](#), [Exhibit 23](#)). This has led to a long list of Asian chemicals plants declaring force majeure, particularly compared to other regions ([Exhibit 24](#) to [Exhibit 27](#)), and many others also running with reduced output that are not captured by our data. In particular, with Asian operating rates significantly reduced - we estimate by close to 20 percentage points given

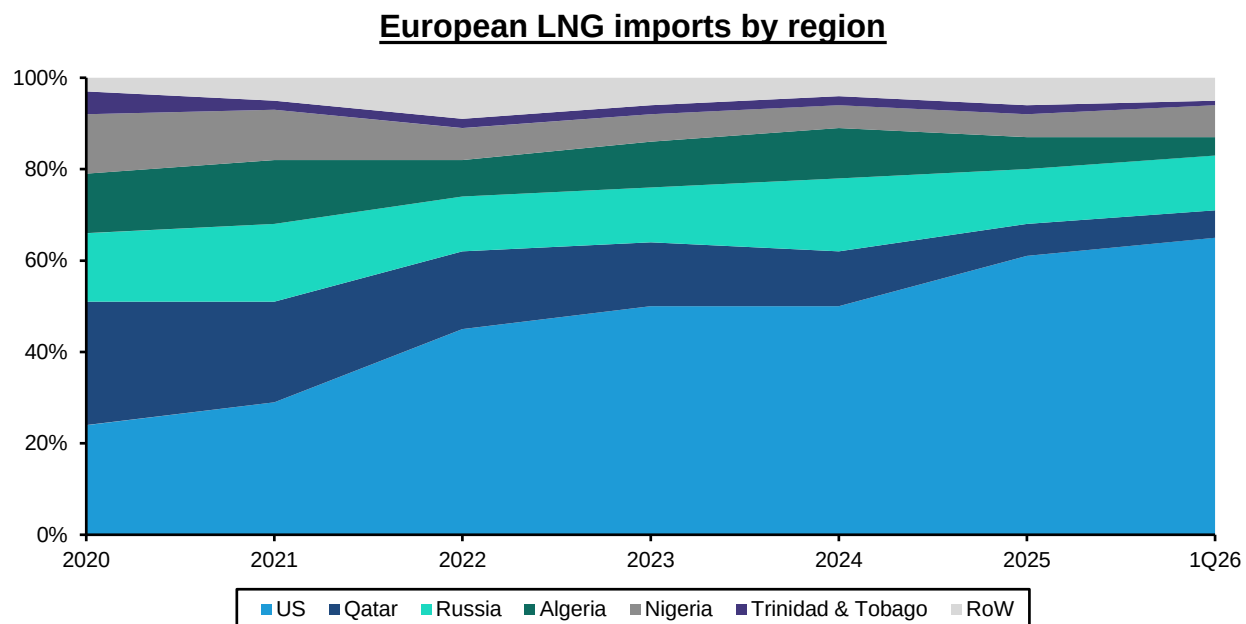
outages in some countries ([Exhibit 28](#)) - upstream producers globally who have previously been struggling with overcapacity have benefitted from scarcity value and very strong pricing. Especially in North America, where gas-based production costs have changed little, much of this pricing is leading to increased profitability.

EXHIBIT 22: Qatar LNG exports mainly go to Asia



Source: ICIS, Bernstein analysis

EXHIBIT 23: The US represents 65% of European LNG imports



Source: ICIS, Bernstein analysis

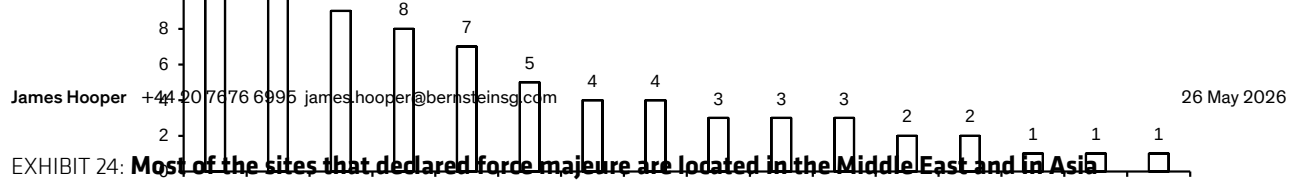


EXHIBIT 25: Sites that announced force majeure in Asia and the Middle East

Force Majeure date	Company	Region/Country	Sites	Major products
28 April	Thai Paraxylene	Thailand	Sriracha	Paraxylene (PX), benzene, toluene, xylene isomer, and mixed xylenes isomer grade (MX)
28 April	Hengyi	Brunei	Pulau Muara Besar	Paraxylene
21 April	Saudi Polyolefins (SPC)	Saudi Arabia	Al Jubail	HDPE, LDPE
21 April	Saudi Polyolefins (SPC)	Saudi Arabia	Al Jubail	Polypropylene (PP)
13 April	Al-Waha Petrochemical Co	Saudi Arabia	Al Jubail	Polypropylene (PP)
13 April	Hanwha TotalEnergies Petrochemical	South Korea	Daesan	Paraxylene
26 March	SABIC	Saudi Arabia	Ar Razi, Ibn Sina	Methanol
26 March	Petrokemya	Saudi Arabia	Al Jubail	Styrene monomer, ethanalamines
24 March	China Petrochemical Development Corporation (CPDC)	Taiwan	Kaohsiung, Miaoli	Caprolactam (capro), polyamide 6 (PA6) capacities
24 March	Formosa Chemicals & Fibre Corp (FCFC)	Taiwan	Mailiao, Xingang, Dongshan	Styrene monomer, phenol, plastics, purified terephthalic acid (PTA)
17 March	SHARQ	Saudi Arabia	Al Jubail	Monoethylene glycol (MEG)
16 March	Alkyl Amines Chemicals	India	Patalganga, Kurkumbh, Dahej	Methylamines, ethylamines and their derivatives
16 March	Dairen Chemical	Taiwan	Kaohsiung, Mai Liao	Vinyl acetate monomer (VAM)
13 March	Sanfame Group	China	Jiangyin	Polyethylene terephthalate (PET)
13 March	Idemitsu Kosan	Japan	Chiba, Chita, Tokuyama	Paraxylene
12 March	Petro-Oxo Nusantara (PON)	Indonesia	Gresik	Oxo-alcohols
12 March	Tosoh Chemical Industries	China	Guangzhou	Polyvinyl chloride (PVC)
12 March	EQUATE	Kuwait	Shuaiba	Ethylene glycol
11 March	Tianjin Bohua Chemical Development	China	Dagang, Tanggu	Caustic soda, ethylene dichloride (EDC), vinyl chloride monomer (VCM), polyvinyl chloride (PVC)
11 March	China Resources Chemical Innovative Materials Holdings (CRC)	China	Zhuhai, Changzhou, Jiangyin	Polyethylene terephthalate (PET)
10 March	Shandong Longhua	China	Zibo (Shandong)	Polyether polyols
10 March	Tangshan Zhonghao	China	Tangshan	Adipic acid (ADA)
10 March	Formosa Plastics Corp (FPC)	Taiwan	Kaohsiung, Mai Liao, Lin Yuan, Jen-Wu	HDPE, LDPE, LLDPE, PP, PVC, EDC, VCM, Caustic soda
10 March	Tianjin LG Bohai	China	Tianjin, Dagou	Caustic soda, ethylene dichloride (EDC), vinyl chloride monomer (VCM), polyvinyl chloride (PVC)
9 March	Sadara Chemical Co	Saudi Arabia	Al Jubail	Glycol ethers
9 March	Sadara Chemical Co	Saudi Arabia	Al Jubail	Ethanalamines
9 March	Sulfindo Adiusaha	Indonesia	Bojonegara	Caustic soda, ethylene dichloride (EDC), vinyl chloride monomer (VCM), polyvinyl chloride (PVC)
9 March	Yisheng Petrochemical	China	Yangpu, Dalian	Polyethylene terephthalate (PET)
9 March	China Petrochemical Development Corp (CPDC)	Taiwan	Kaohsiung	Acrylonitrile
9 March	ENEOS Corp	Japan	Kawasaki, Mizushima, Oita, Sakai, Sendai	Paraxylene
9 March	Formosa Petrochemical Corp (FPCC)	Taiwan	Mai Liao	Olefins
9 March	Bahrain Petroleum Company (BAPCO)	Bahrain	Sitra	Group III base oil
9 March	The Polyolefin Co (Singapore)	Singapore	Jurong Island	Polypropylene, LDPE, EVA
8 March	Kuwait Styrene Company (TKSC)	Kuwait	Shuaiba	Styrene monomer
7 March	SAJ Industries	India	Surat (Gujarat)	Polyethylene terephthalate (PET) resins, polyester chips, biaxially oriented polyethylene terephthalate (BOPET) film
7 March	Deepak Phenolics	India	Dahej	Phenol, acetone
7 March	Wanhua Chemical Group	China	Yantai, Fuqing, Penglai	Ethylene, propylene, MDI, caustic soda, methanol, styrene monomer
6 March	Qatar Fertilizer Company (QAFCO)	Qatar	Mesaieed	Melamine
6 March	Rayong Olefins (Part of Siam Cement Group)	Thailand	Map Ta Phut	Ethylene, propylene
6 March	Hanwha Solutions	South Korea	Yeosu	Ethylene dichloride, caustic soda
6 March	Dairen Chemical Singapore	Singapore	Jurong Island	Vinyl acetate monomer
6 March	Aster Chemicals and Energy	Singapore	Bukom Island, Jurong Island	Ethylene, propylene, ethylbenzene, ethylene glycol, polyether polyols, propylene, propylene glycols, styrene, surfactants
5 March	PCS	Singapore	Jurong Island	Ethylene, benzene, butadiene, mixed xylenes, MTBE, propylene, toluene
4 March	Kuwait Aromatics	Kuwait	Shuaiba	Paraxylene
4 March	Yeochoon NCC Co (YNCC)	South Korea	Yeosu	Ethylene, benzene, butadiene, mixed xylenes, MTBE, propylene, styrene, toluene
4 March	Chandra Asri	Indonesia	Cilegon	Ethylene, propylene, LLDPE, HDPE, PP
4 March	QatarEnergy Group	Qatar	Mesaieed	Urea, polymers, methanol

Until 30th of April 2026

Source: ICIS, Bernstein analysis

EXHIBIT 26: **Sites that announced force majeure in Europe**

Force Majeure date	Company	Region/Country	Sites	Major products
8 April	MOL Petrochemicals	Europe	Tiszaújvaros, Hungary	HDPE, LDPE, PP
8 April	Sasol	Europe	Augusta, Italy	Linear alkyl benzene
11 March	Indorama	Europe	Full region	PET
10 March	LyondellBasell	Europe	Frankfurt, Munchmunster, Wesseling, Berre, Knapsack, Brindisi, Ferrara, Moerdijk, Tarragona, Carrington	HDPE, LDPE, LLDPE, PP

Until 30th of April 2026

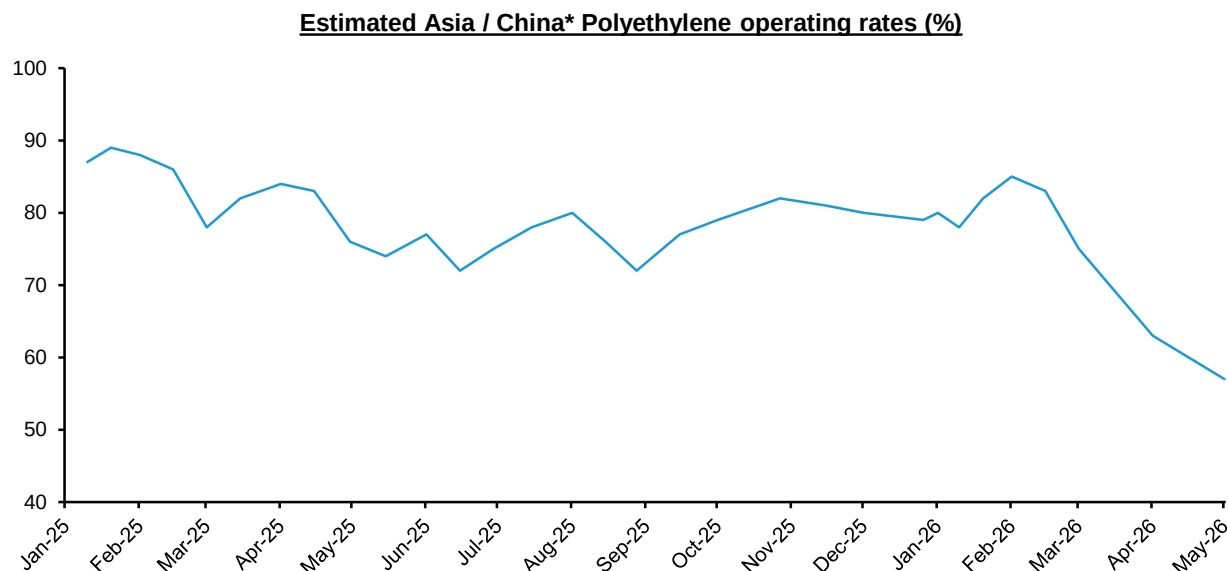
Source: ICIS, Bernstein analysis

EXHIBIT 27: **Sites that announced force majeure in the Americas**

Force Majeure date	Company	Region/Country	Sites	Major products
10 March	Dow	US	Deer Park Texas	GMAA, MMA

Until 30th of April 2026

Source: ICIS, Bernstein analysis

EXHIBIT 28: **Operating rates in Asia are understood to be falling**

* We use China polyethylene operating rates until Feb 26 and Asia crackers operating rates from Mar 26 onwards

Source: Plasmatch, ICIS, Bernstein analysis and estimates

We think much of the closed Asian capacity will come back online once the crisis is resolved. The story of polyolefin capacity additions over the last 25 years has been one of increasing Asian self-sufficiency, and of the Middle East expanding their presence in order to diversify away from an oil-based economy (see [MENA Energy: Chaos is a Ladder ... Initiating with a Positive Stance](#) and [Exhibit 29, Exhibit 30](#)). Before the conflict started, this trend was expected to continue in key polyolefins ([Exhibit 31](#) and [Exhibit 32](#)), despite Chinese anti-involution programmes and South Korean capacity cuts. We believed anti-involution progress would be slow (see report [Chemicals Outlook 2026: A slow start, but there could be considerable upside potential. Downgrading Solvay to Market-Perform.](#)), but if there was ever a time to accelerate the process, it would be now. However, we still believe that much of the reduced and force majeure capacity will come back for the following 4 reasons:

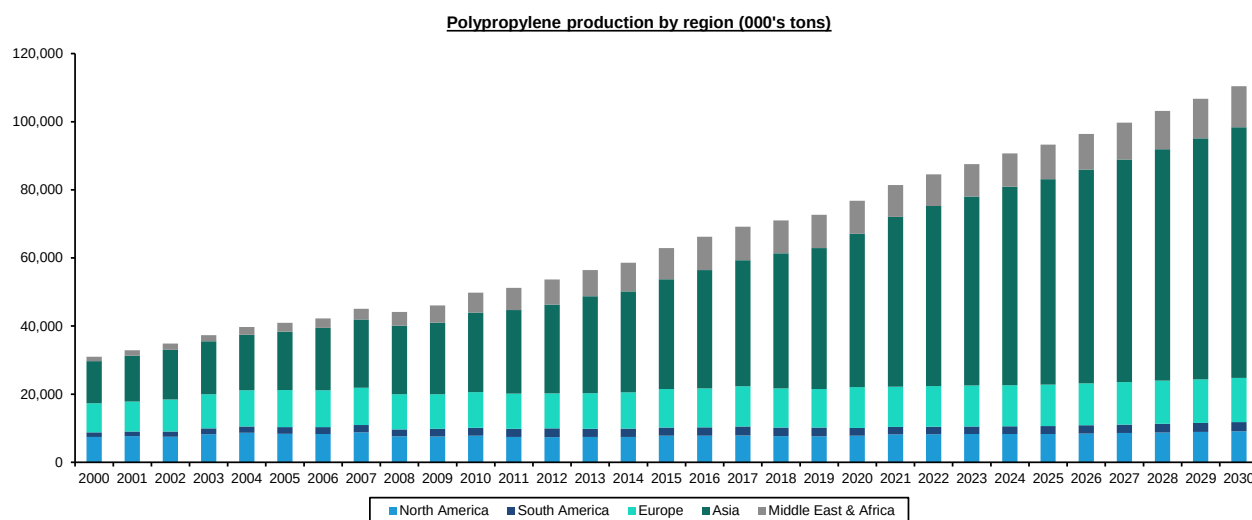
1. **The feedstock advantage of the Middle East is undimmed.** When the Strait reopens, the Middle East will likely remain the cheapest place in the world to make chemicals. Especially in the UAE, where natural gas is sold at very favourable prices. Volumes may ramp slowly as geopolitical risk encourages dual sourcing, [or even legislation in some parts of the world](#). But

we believe that as the memory of the crisis fades, price will again be the principal consideration behind buyer decisions, positioning the Middle East well.

2. **China may slow the speed of anti-involution.** We already expected anti-involution would be slow progress, perhaps following a one-in-one-out system. But the conflict has arguably provided a reminder of the resilience that strategic oil reserves can provide, and the need to be self-sufficient if there are broader conflicts. China has the most petrochemical plants that have declared force majeure - they may decide that they would prefer to have more output available during these times.
3. **For many countries with affected capacity in [Exhibit 24](#), chemicals is a nationally strategic industry.** Excluding Europe - as we believe the LyondellBasell force majeure was perhaps more of a pricing tool given we understand those plants are currently running - we expect many of the subsequent countries / regions in our chart are likely to restart their plants as soon as feasibly possible. Given the security backdrop, Taiwan has incentives to stay self-sufficient. We also see Japan and India as unlikely to seek to reduce their petrochemical industry sizes. In the Middle East, we also believe there will be some urgency to start up their chemical plants ([MENA Energy: Chaos is a Ladder ... Initiating with a Positive Stance](#)).
4. **We expect capacity additions to continue, particularly in the Middle East,** for the aforementioned reasons: chemicals is existential to their economic health.

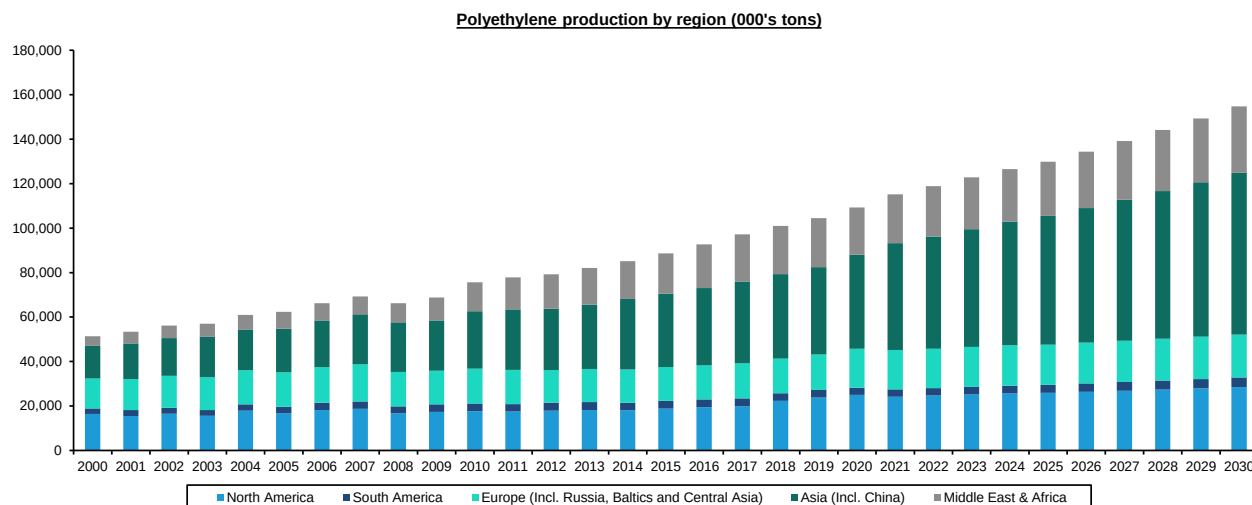
In mitigation, there will be some plants that have to remain closed because of direct damage to their feedstock suppliers. Particularly for countries relying on Qatari LNG, where the damage may take years to repair, there may be some ongoing supply constraints. Albeit we understand that a small percentage of the trains are starting up again. Furthermore, it seems likely that Iranian capacity has been damaged by the bombing, so may take time to become fully operational.

EXHIBIT 29: **Asia is the leading global producer of Polypropylene...**



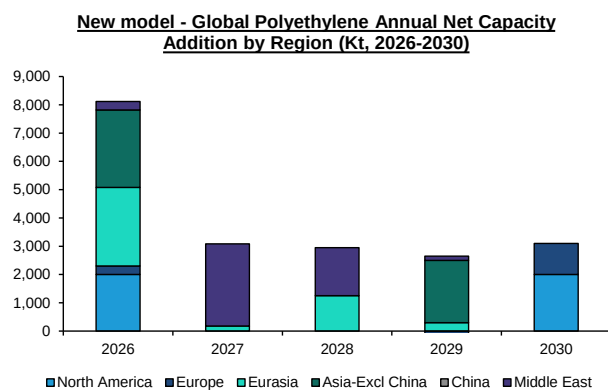
Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 30: ... and polyethylene.



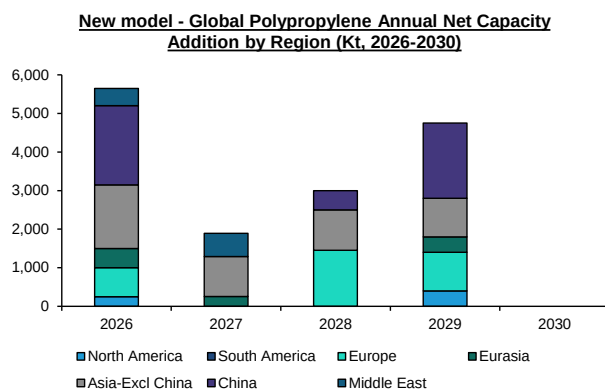
Source: Bloomberg, Bernstein analysis and estimates

EXHIBIT 31: We see slightly more than 8mt of PE capacity coming online in 2026, stemming from multiple regions



Source: Wood Mackenzie, JLC, Bernstein analysis

EXHIBIT 32: Slightly less than 6mt of polypropylene capacity is expected to come online in 2026 mainly from China, wider Asia and the Middle East



Source: Wood Mackenzie, Company websites, Bernstein analysis

WHAT DOES THIS ALL MEAN? UPDATING OUR PROPRIETARY POLYOLEFIN PRICE FORECAST AND SUPPLY-DEMAND MODEL

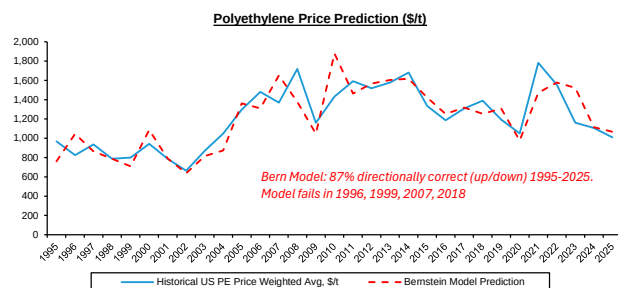
In our Borouge initiation, we debuted our proprietary polyolefin supply demand model, which includes a price forecast. For a deep dive into the workings of the model, please see report [Borouge: Mid-Metamorphosis. Initiating at Market-Perform](#). In this section **we provide a brief refresher on how it works, and update our long-term view of polyolefin prices for the supply and demand views above. The model is linked below.**

[Global Polyolefins Market Model](#)

Our proprietary model uses over 30 years of historical supply and demand data to forecast polyolefin pricing through 2030 using a multivariate regression. Our forecasting method is driven by statistical analysis to analyse historical price trends, **and we see three key determinants of polyolefin prices: 1) changes in operating rates (effectively production / demand divided by capacity for each polyolefin); 2) changes in the oil price; and 3) changes in GDP growth.** Our model is not perfect, but it predicts the historical direction of prices 84% of the time for polypropylene and 87% of the time for polyethylene over a 30-year history ([Exhibit 33](#) to [Exhibit 36](#)). It is also flexible, with scenarios for supply and demand scenarios, allowing you

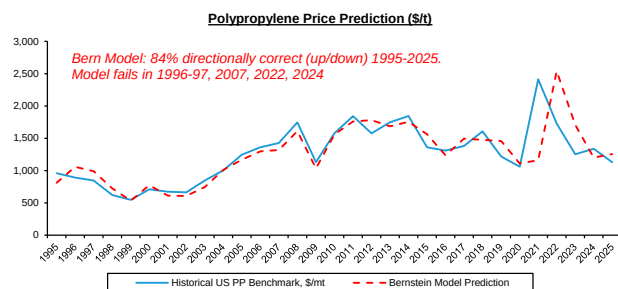
to review our cases and overlay your own assumptions.

EXHIBIT 33: Our polyethylene model, back-tested, provides useful directional context for price forecasting (1/2)



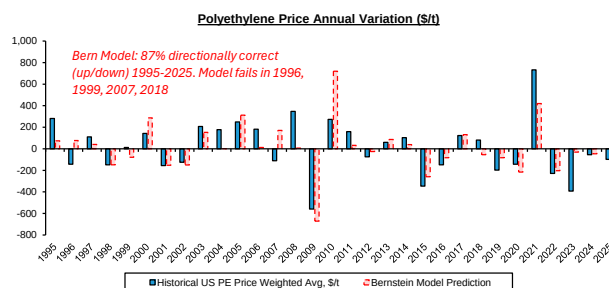
Source: Bloomberg, Nexant ChemSystems, Wood Mackenzie, JLC, Bernstein analysis and estimates

EXHIBIT 35: Our polypropylene model, back-tested, provides useful directional context for price forecasting (1/2)



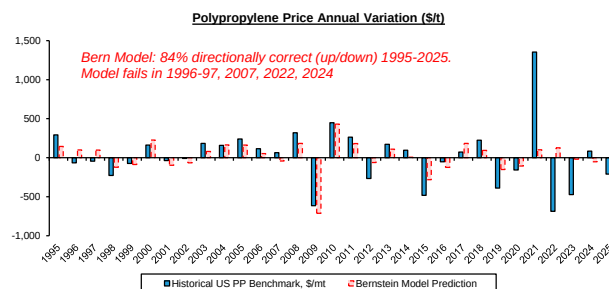
Source: Bloomberg, Nexant ChemSystems, Wood Mackenzie, JLC, Bernstein analysis and estimates

EXHIBIT 34: Our polyethylene model, back-tested, provides useful directional context for price forecasting (2/2)



Source: Bloomberg, Nexant ChemSystems, Wood Mackenzie, JLC, Bernstein analysis and estimates

EXHIBIT 36: Our polypropylene model, back-tested, provides useful directional context for price forecasting (2/2)



Source: Bloomberg, Nexant ChemSystems, Wood Mackenzie, JLC, Bernstein analysis and estimates

1) CHANGES IN OPERATING RATES

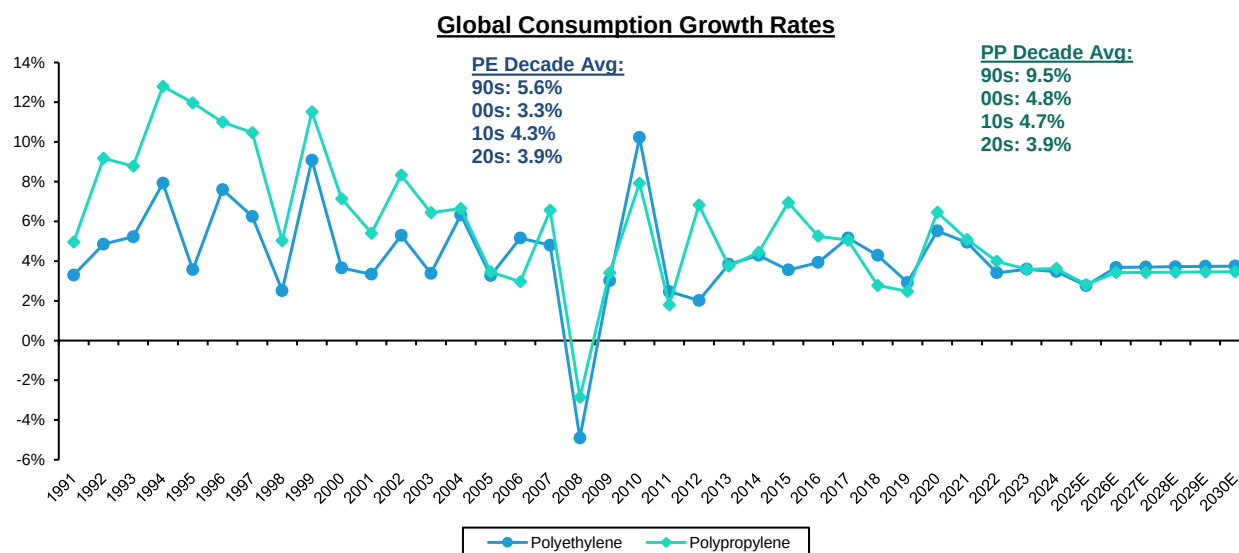
Operating rates matter because they show the balance between supply and demand in each polymer market. When operating rates are above their multi-year average, it generally signals robust demand, as production levels tend to align closely with consumption over time. Although higher operating rates reduce marginal production costs due to better fixed cost absorption, prices typically rise because strong demand outpaces the increased supply. Conversely, when operating rates are historically low, this suggests that polyolefin demand is weak relative to the available production capacity. In this scenario, prices usually fall because the demand shortfall outweighs the cost pressures from higher marginal costs associated with idle capacity and lower production efficiency.

We see no reason to change our overall assumptions from slower-than-historical growth. The pace of polyethylene and polypropylene consumption growth has been slowing since 2020 ([Exhibit 37](#)) as a result of weak European growth and lower consumer spending (and greater budgeting) in China. Fundamentally, with packaging and more general consumption such key drivers of demand, we see this slowdown as a consequence of weaker lower-income outcomes, caused by the squeezed consumer, as well as weaker demographics. In the context of renewed inflation, particularly in Asia, we see some new downside risks to the demand forecast. But at this time we're not expecting a full crisis, and our previous analysis indicates that the polyolefins have relatively inelastic volume demand. Therefore, our forecasts of consumption growth rates remain 3.6% for HDPE and LDPE, 3.9% for LLDPE and 3.4% for Polypropylene. As production equals consumption over the long run, these growth rates also apply to production.

Over 2026-27, we increase our expectations of ethylene supply cuts from 8 to 10%, and now also expect some propylene supply cuts (3%). We also expect capacity additions to slow somewhat, given the lack of feedstock and

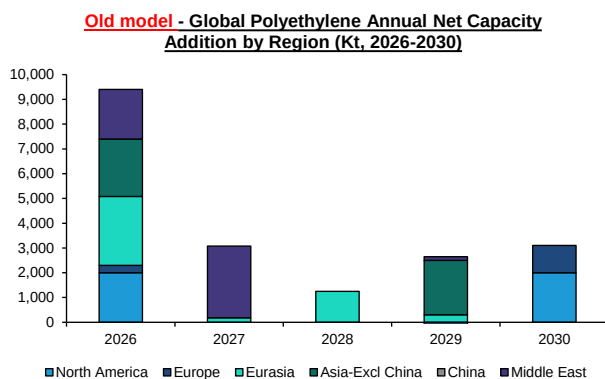
some delays in shipping parts. Therefore, we model c.2,000kt and c.1,000kt less capacity additions in Polyethylene and Polypropylene in 2026 after applying a six months delay to all capacity additions coming from the Middle East and Asia.

EXHIBIT 37: We expect the more muted demand growth rates of the early 2020s to continue



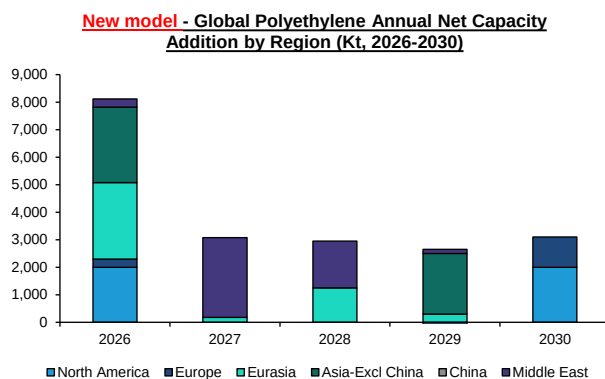
Source: Bloomberg, Nexant ChemSystems, Wood Mackenzie, JLC, Bernstein analysis and estimates

EXHIBIT 38: We now see less PE capacity coming online in 2026 as a result of capacity delays in the Middle East and in Asia... (1/2)

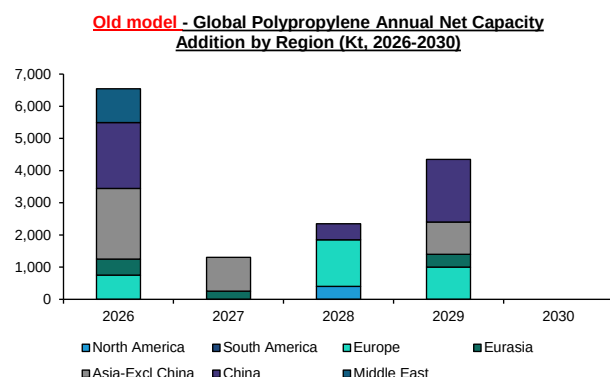


Source: Wood Mackenzie, JLC, Bernstein analysis

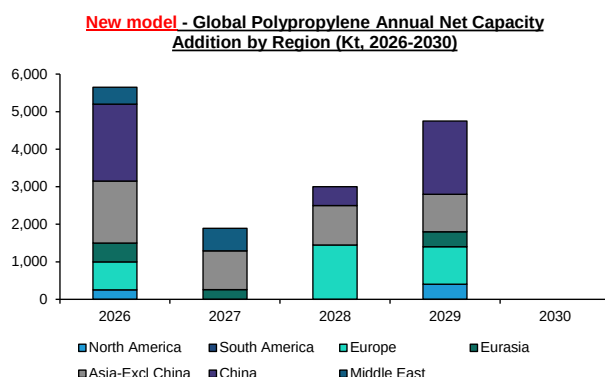
EXHIBIT 39: We now see less PE capacity coming online in 2026 as a result of capacity delays in the Middle East and in Asia... (2/2)



Source: Wood Mackenzie, JLC, Bernstein analysis and estimates

EXHIBIT 40: ... which we also see happening for Polypropylene (1/2)


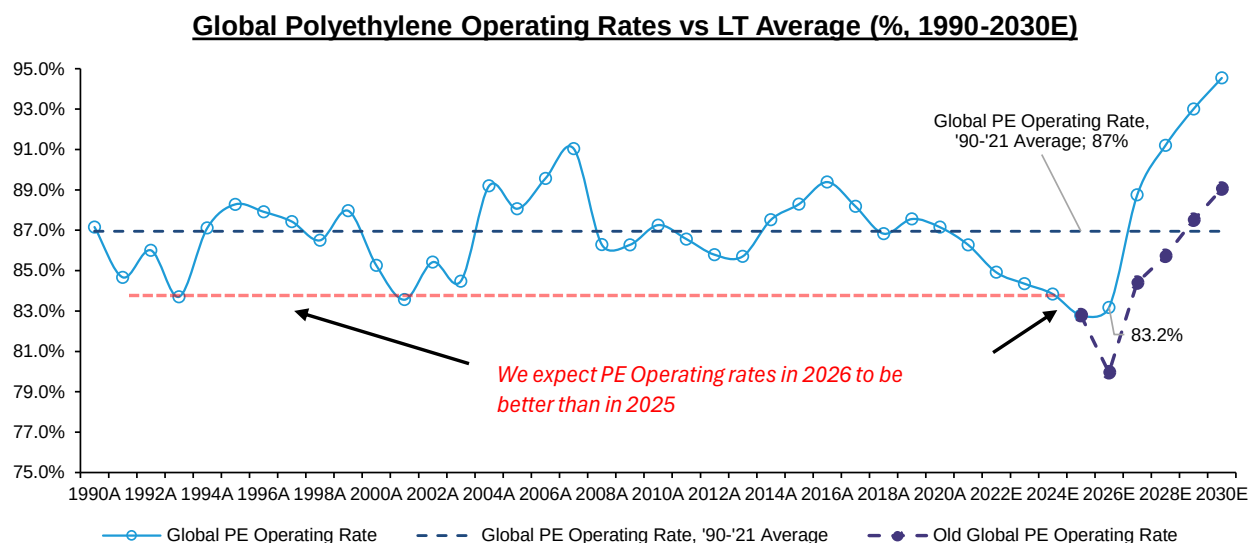
Source: Wood Mackenzie, Company websites, Bernstein analysis

EXHIBIT 41: ... which we also see happening for Polypropylene (2/2)


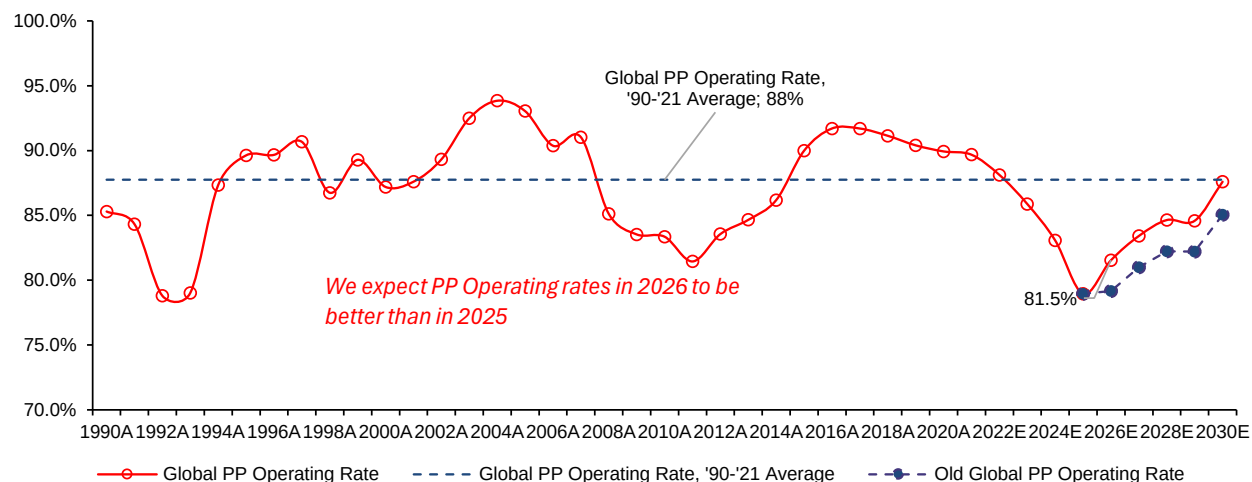
Source: Wood Mackenzie, Company websites, Bernstein analysis and estimates

This leads to slightly better operating rates after a trough in 2025. The combination of sustained high capacity growth relative to production translated into global operating rates for polyethylene and polypropylene falling from 87% and 89.9% in 2020 to 82.8% and 79.0% in 2025 respectively. For the purposes of this long-term exercise If we assume “steady state” capacity in 2026 - i.e. excluding the current supply disruption - with now less capacity additions but resilient consumption, and thus production, we expect operating rates to slightly improve in 2026 to 80.3% and 79.2% in 2026 for PE and PP respectively, and continue to improve subsequently.

For our updated supply demand model, please see: [Global Polyolefins Market Model](#)

EXHIBIT 42: We increase our long-term operating rate assumptions for polyethylene


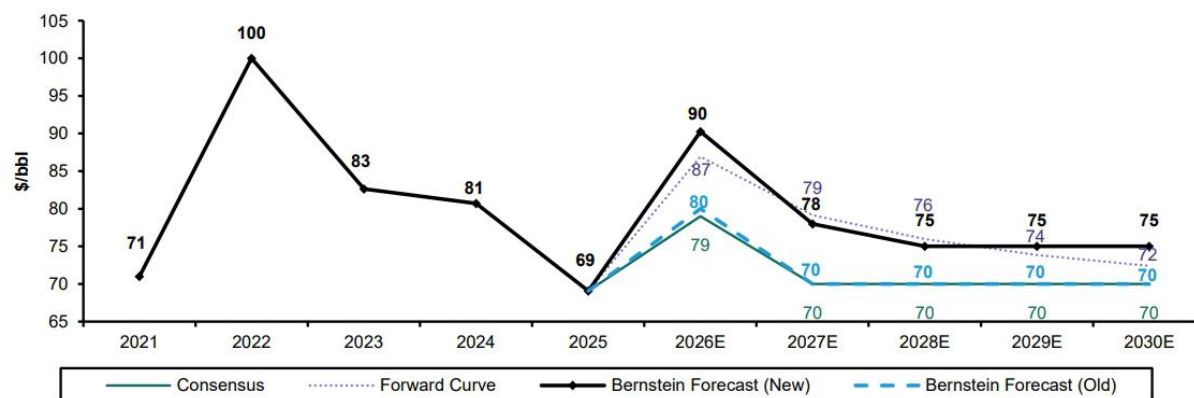
Source: Nexant ChemSystems, Bloomberg, Bernstein analysis and estimates

EXHIBIT 43: **We increase our long-term operating rate assumptions for polypropylene****Global Polypropylene Operating Rates vs LT Average (% 1990-2030E)**

Source: Nexant ChemSystems, Bloomberg, Bernstein analysis and estimates

2) CHANGES IN THE OIL PRICE

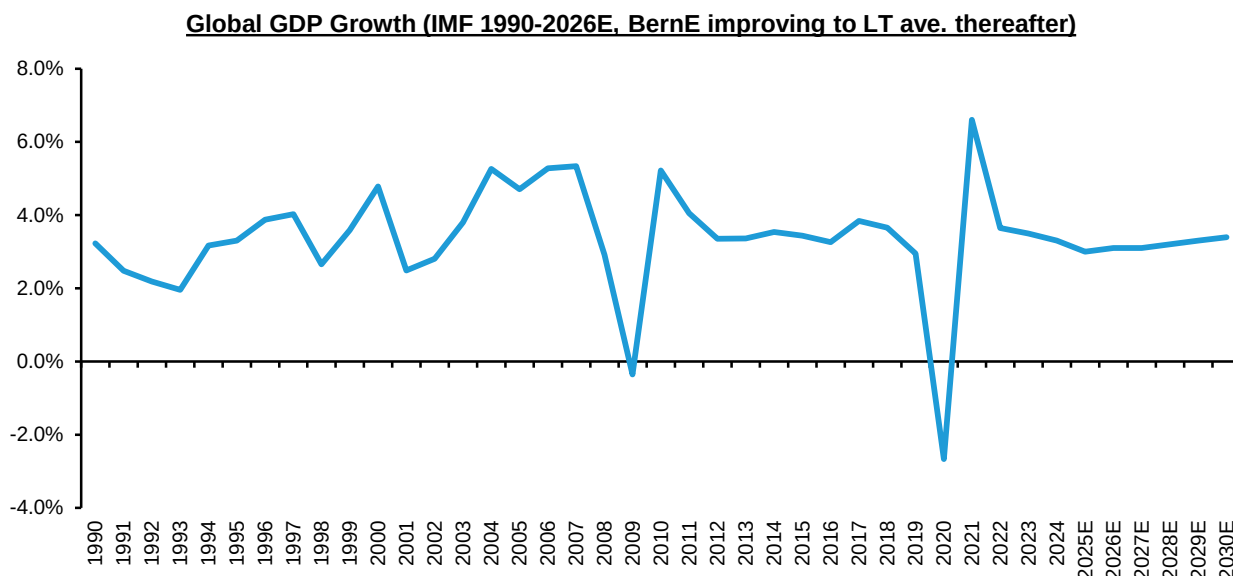
For the change in oil prices, we follow our house oil price forecast ([see link](#)), which goes to \$90/bbl in 2026 and then declines to settle at \$75/bbl by 2028 ([Exhibit 44](#)).

EXHIBIT 44: **Our Global O&G colleagues expect the oil price to settle at \$70/bbl****Forecast Brent Price versus Forward Curve and Consensus**

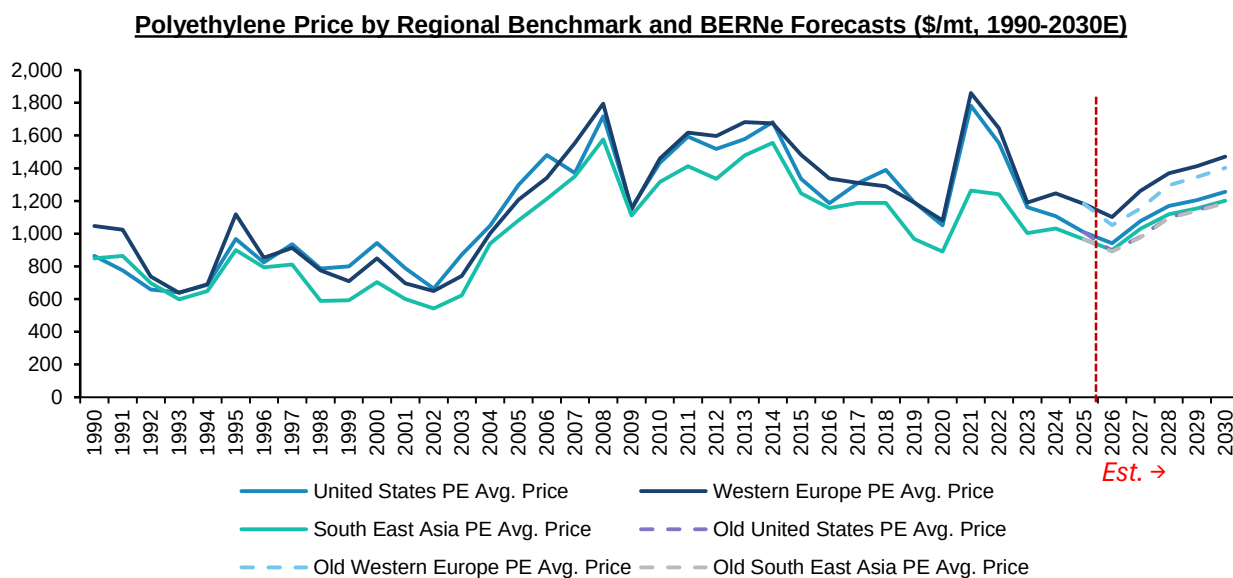
Source: Bloomberg, Bernstein Global O&G Team analysis & estimates

3) CHANGES IN GDP

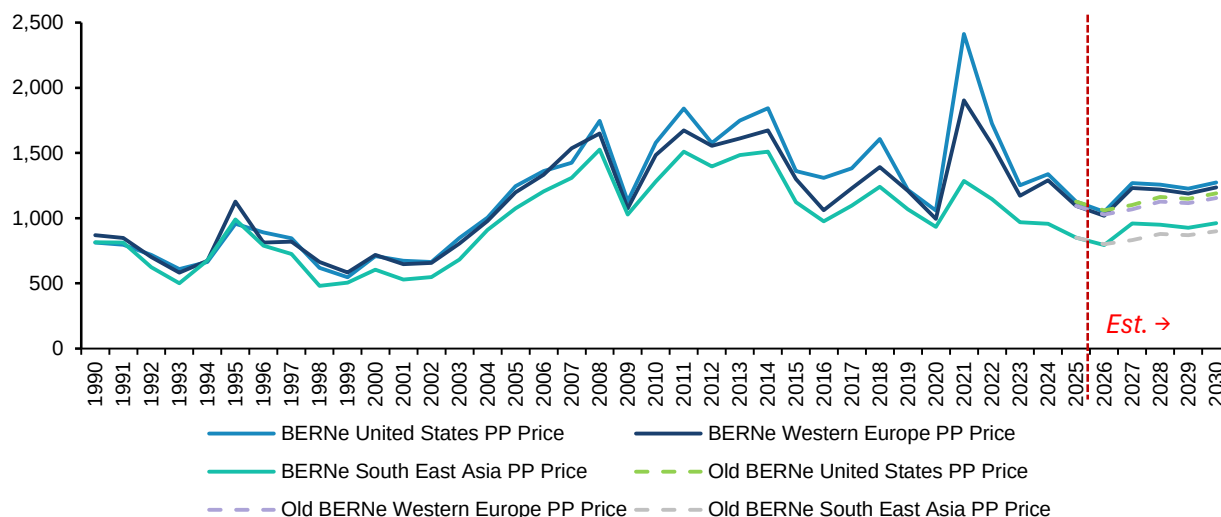
For the change in GDP, we follow the IMF's forecast GDP growth increase from 3.0% in 2025 to 3.1% 2026, and then trend this back to the 20-year historical global GDP growth average of 3.4% ([Exhibit 45](#)). This framework is broadly consistent with the IMF and World Bank's 2026–27 outlooks, but we note that the IMF's baseline assumes the Strait of Hormuz shock remains contained; a more prolonged disruption would likely weigh on growth and lift inflation, which would argue for caution in the long-term forecast.

EXHIBIT 45: **We expect GDP to slowly trend back to historical average growth rates****OUR NEW PRICE FORECASTS**

As a result of healthier supply environment and resilient demand, we expect polyolefin prices to increase lower the long run. For PE, our 2027 price increases 10%, our 2028 price increases 6% and our 2029-30 prices increase 5% ([Exhibit 46](#)). For PP, our 2027 price increases 15%, our 2028 price increases 8% and our 2029-30 prices increase 7% ([Exhibit 47](#))

EXHIBIT 46: **We increase our long-term PE prices from 5-10%**

PE Avg. prices for each region are price weighted averages of HDPE, LLDPE and LDPE benchmarks
Source: Bloomberg, Nexant ChemSystems, Bernstein analysis and estimates

EXHIBIT 47: **We increase our long-term PP prices from 7-15%****Polypropylene Price by Regional Benchmark and BERNe Forecasts (\$/mt, 1990-2030E)**

Source: Bloomberg, Nexant ChemSystems, Bernstein analysis and estimates

BULL AND BEAR CASE POLYOLEFIN PRICES: WHAT ASSUMPTIONS WOULD BE REQUIRED BY OUR MODEL?

In this section, we provide a thought exercise on what would need to happen to maintain the current spot prices using our polyolefins model, or reach renewed lows. In these assumptions we continue to use our house oil price forecasts.

OUR SCENARIOS

- **Downside scenario: The only lasting impact is higher-for-longer inflation and therefore weaker demand**

In this scenario, we assume a rapid return to normal conditions, including the oil price, but with one key difference: lasting inflation. This effectively brings the industry back to the pre-conflict oversupply environment, but with more constrained consumer demand. Therefore, we expect capacity growth to outpace a still modest demand recovery (GDP ~2.8%). Operating rates remain structurally low at around ~77%, reflecting persistent excess capacity. In this environment, oversupply dominates, and pricing remains under sustained pressure, with **PE and PP prices falling to \$875/t and \$1,038/t, respectively over 2027-30.**

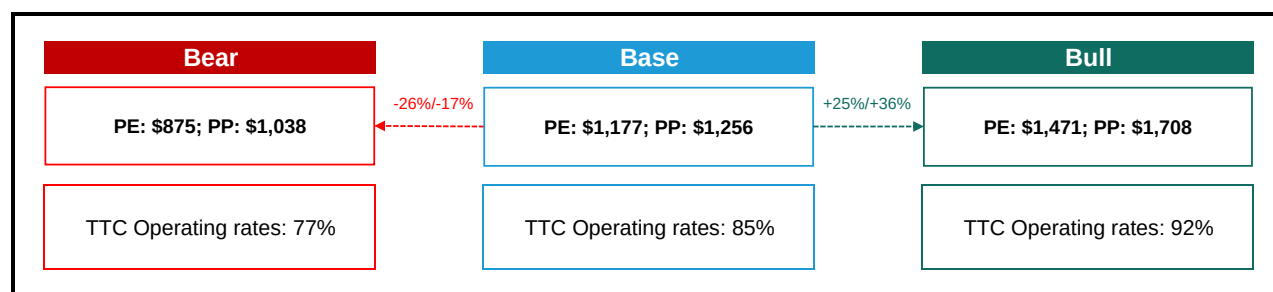
- **Base case: Assumptions per the previous section.**

PE and PP averaging \$1,177/t and \$1,256/t respectively over 2027-30.

- **Upside scenario: Supply reductions and resilient demand**

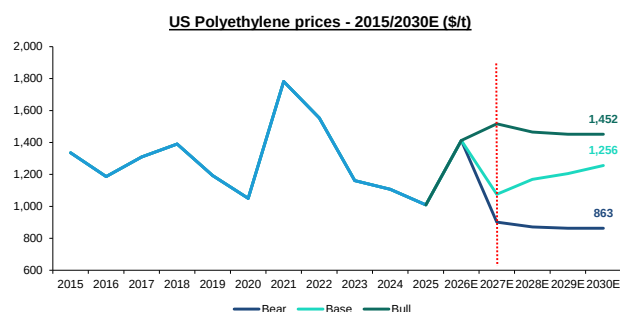
In an upside scenario, a **prolonged or even renewed conflict** delays the return of supply and keeps part of global capacity offline due to force majeure and logistical disruptions. In this context, some mothballed capacity is never brought back online and / or there is destruction of more facilities in the Middle East. Demand, however, remains resilient and in line with previous expectations, given the often inelastic demand for key petrochemical applications. This combination leads to a much tighter market, and operating rates rebounding quickly around ~92% (2015/2016 levels). As a result, the industry experiences a period of genuine tightness, driving strong prices, with **PE and PP averaging \$1,471/t and \$1,708/t respectively over 2027-30.**

EXHIBIT 48: Our polyolefin price scenarios



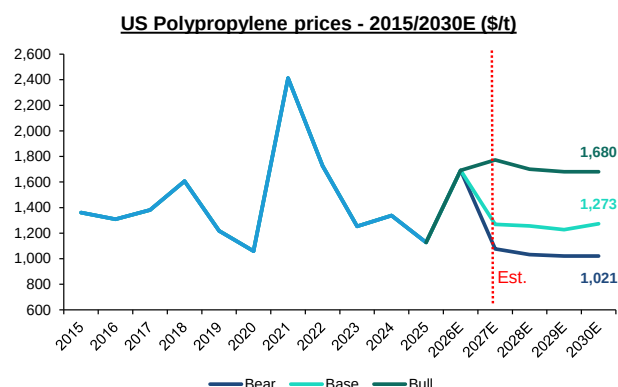
Source: IMF, Bloomberg, Bernstein analysis and estimates

EXHIBIT 49: In a bull case scenario, we see polyolefin prices remain around current levels (1/2)



Source: IMF, Bloomberg, Bernstein estimates and analysis

EXHIBIT 50: In a bull case scenario, we see polyolefin prices remain around current levels (2/2)



Source: IMF, Bloomberg, Bernstein estimates and analysis

EXHIBIT 51: Bear case detailed output

Downside Case - Bernstein Oil Prices																
GDP growth (%)	2.78%															
Oil price (\$/bbl) - 2027	78.00															
Oil price (\$/bbl) - 2028	75.00															
Oil price (\$/bbl) - 2029	75.00															
Oil price (\$/bbl) - 2030	75.00															
Long-term operating rate	77%															
Long-term Supply/demand balance*	1.30															
Downside/Bernstein deck - BERN PE/PP price forecasts	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026E	2027E	2028E	2029E	2030E
Parameters																
GDP growth (%)	3.4%	3.2%	3.8%	3.6%	3.0%	-2.7%	6.6%	3.8%	3.5%	3.3%	3.3%	2.7%	2.8%	2.8%	2.8%	2.8%
Oil price (\$/bbl)	39.2	54.7	64.1	57.7	65.2	50.1	74.6	81.5	77.6	73.1	61.6	90.0	78.00	75.00	75.00	75.00
PE Operating rate (%)	92.7%	92.6%	88.8%	88.4%	89.4%	89.0%	84.2%	82.6%	81.4%	80.3%	78.8%	77.0%	77.0%	77.0%	77.0%	77.0%
PP Operating rate (%)	89.4%	90.5%	91.8%	88.9%	88.8%	86.7%	86.6%	84.9%	83.5%	81.1%	79.9%	77.0%	77.0%	77.0%	77.0%	77.0%
PE Supply/Demand ratio	1.14	1.13	1.14	1.16	1.15	1.15	1.17	1.18	1.19	1.19	1.20	1.30	1.30	1.30	1.30	1.30
PP Supply/Demand ratio	1.13	1.11	1.10	1.11	1.11	1.11	1.12	1.14	1.17	1.21	1.27	1.30	1.30	1.30	1.30	1.30
Polyolefin prices																
Polyethylene weighted avg. price	1,335	1,186	1,309	1,390	1,193	1,050	1,782	1,554	1,161	1,107	1,009		901	871	863	863
Polypropylene price	1,361	1,309	1,382	1,607	1,218	1,059	2,413	1,726	1,253	1,337	1,127		1,077	1,033	1,021	1,021
Downside/Bernstein deck - Through the cycle analysis (2026-2030)																
Average Oil price (\$/bbl)	78.6															
Average PE operating rates (%)	77.0%															
Average PP operating rates (%)	77.0%															
Average PE Supply/demand ratio	1.30															
Average PP Supply/demand ratio	1.30															
Average US PE prices 2027-30 (\$/t)	875															
Average US PP prices 2027-30 (\$/t)	1,038															

*Supply/demand is defined as capacity over consumption as production tends to meet consumption in the long-term

Source: IMF, Bloomberg, Bernstein estimates and analysis

EXHIBIT 52: **Bull case detailed output**

Upside Case - Bernstein Oil Prices																
GDP growth (%)	3.42%															
Oil price (\$/bbl) - 2027	78.00															
Oil price (\$/bbl) - 2028	75.00															
Oil price (\$/bbl) - 2029	75.00															
Oil price (\$/bbl) - 2030	75.00															
Long-term operating rate	93%															
Long-term Supply/demand balance*	1.08															
Upside/Bernstein deck - BERN PE/PP price forecasts																
Parameters	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026E	2027E	2028E	2029E	2030E
GDP growth (%)	3.4%	3.2%	3.8%	3.6%	3.0%	-2.7%	6.6%	3.8%	3.5%	3.3%	3.3%	3.3%	3.4%	3.4%	3.4%	3.4%
Oil price (\$/bbl)	39.2	54.7	64.1	57.7	65.2	50.1	74.6	81.5	77.6	73.1	61.6	90.0	78.00	75.00	75.00	75.00
PE Operating rate (%)	92.7%	92.6%	88.8%	88.4%	89.4%	89.0%	84.2%	82.6%	81.4%	80.3%	78.8%	93.0%	93.0%	93.0%	93.0%	93.0%
PP Operating rate (%)	89.4%	90.5%	91.8%	88.9%	88.8%	86.7%	86.6%	84.9%	83.5%	81.1%	79.9%	93.0%	93.0%	93.0%	93.0%	93.0%
PE Supply/Demand ratio	1.14	1.13	1.14	1.16	1.15	1.15	1.17	1.18	1.19	1.19	1.20	1.08	1.08	1.08	1.08	1.08
PP Supply/Demand ratio	1.13	1.11	1.10	1.11	1.11	1.11	1.12	1.14	1.17	1.21	1.27	1.08	1.08	1.08	1.08	1.08
Polyolefin prices																
Polyethylene weighted avg. price	1,335	1,186	1,309	1,390	1,193	1,050	1,782	1,554	1,161	1,107	1,009		1,517	1,465	1,452	1,452
Polypropylene price	1,361	1,309	1,382	1,607	1,218	1,059	2,413	1,726	1,253	1,337	1,127		1,773	1,700	1,680	1,680
Upside/Bernstein deck - Through the cycle analysis (2026-2030)																
Average Oil price (\$/bbl)	78.6															
Average PE operating rates (%)	93.0%															
Average PP operating rates (%)	93.0%															
Average PE Supply/demand ratio	1.08															
Average PP Supply/demand ratio	1.08															
Average US PE prices 2027-30 (\$/t)	1,471															
Average US PP prices 2027-30 (\$/t)	1,708															

*Supply/demand is defined as capacity over consumption as production tends to meet consumption in the long-term

Source: IMF, Bloomberg, Bernstein estimates and analysis

KEY CONCLUSIONS: A SLIGHTLY HEALTHIER MARKET AND A STEEPER COST CURVE. THE MIDDLE EAST IS WELL POSITIONED AND SO IS NORTH AMERICA, UNLESS WE SEE \$5 HENRY HUB

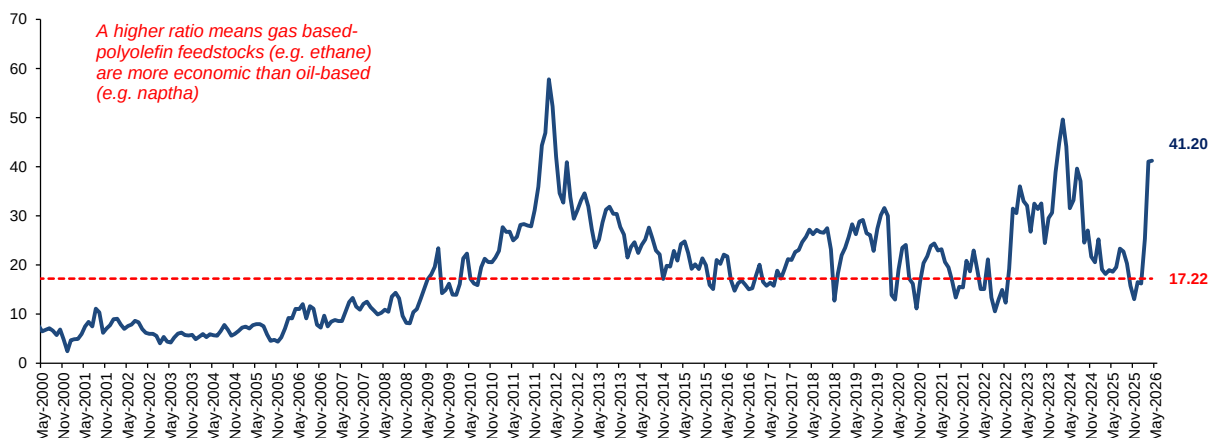
We believe the petrochemical supply-demand balance is in a healthier state, as long as 1) some capacity never restarts, and 2) demand doesn't reach crisis levels. On the supply side, we do expect some lasting changes, albeit at a low level. Some Asian countries were looking to reduce capacity in any case (e.g. South Korea), but we see most supply strategic politically. On the demand side, we believe volumes are likely resilient unless we see a 2008-esque decline in demand. Which is definitely possible, with looming inflation in Asia our greatest concern, but not our base case.

The cost curve is going to get steeper. We believe this favours ethane / natural-gas based petrochemicals... The use of ethane as a feedstock has yielded operational and economical cost benefits when used in steam cracking in recent years compared to naphtha and propane. Ethane is generally cheaper as it is derived from NGL refining, compared to naphtha which is primarily derived from crude oil refining, with the advantage becoming more noticeable in recent decades. Higher for longer oil prices without a move in the US natural gas price, as we have seen in the last few months, magnify this ethane advantage ([Exhibit 53](#) to [Exhibit 55](#)). Oil is the marginal commodity for most petrochemicals, and with higher oil setting the prices and limited changes in natural gas, the cost curve becomes steeper. This makes Middle Eastern and North American gas-based economics even more competitive ([Exhibit 56](#), [Exhibit 57](#)). However...

... but North America won't see the upside if we get \$5 Henry Hub, like our Americas E&T colleagues forecast. With Middle Eastern natural gas feedstocks often under long-term sovereign-sponsored agreements, we see higher oil prices as supportive to their margins, as long as lower shipping-based logistics costs return. Given the Middle East's logistical challenges, we see North America as currently the most economic place to make petrochemicals. However, a threat to this position would emerge if our Americas E&T colleagues are correct, and Henry Hub prices increase to \$5, versus the high \$3 Bloomberg forward curve ([Exhibit 58](#)). This would therefore decrease the oil-gas spread, and lower margins.

EXHIBIT 53: After the Middle-East conflict, the oil spread with Henry Hub spiked making gas-based polyolefin feedstocks more economic than oil-based ones

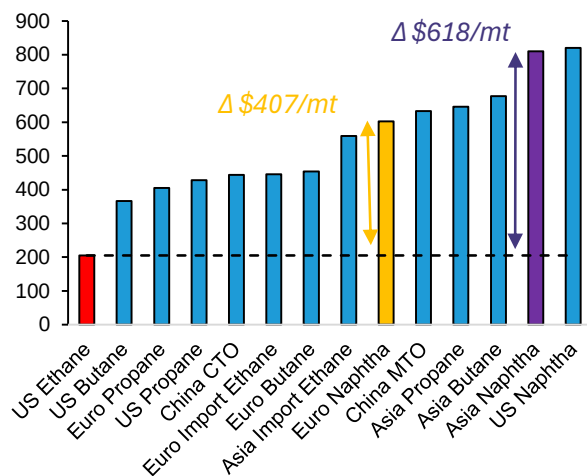
Brent to Henry Hub spread - 2000/2026



Source: Bloomberg, Bernstein analysis

EXHIBIT 54: The US Ethane advantage is high when oil prices are higher...

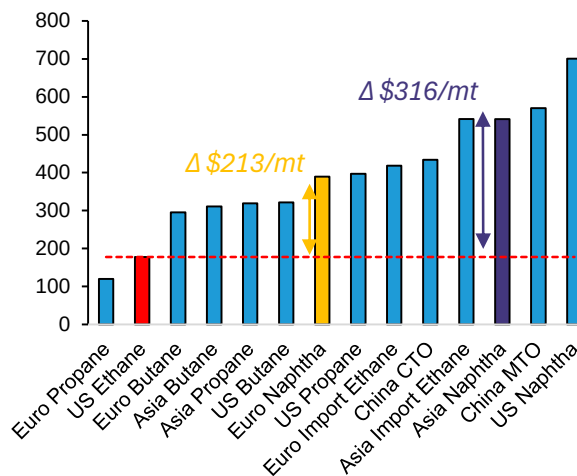
Global Ethylene Variable Cost of Production by Feedstock on March 12 2025 with Brent Spot @ \$70.95 (\$/mt)



Source: S&P Commodity Insights Presentation APIC 2025, Bernstein analysis

EXHIBIT 55: ... but that advantage declines when oil prices are lower

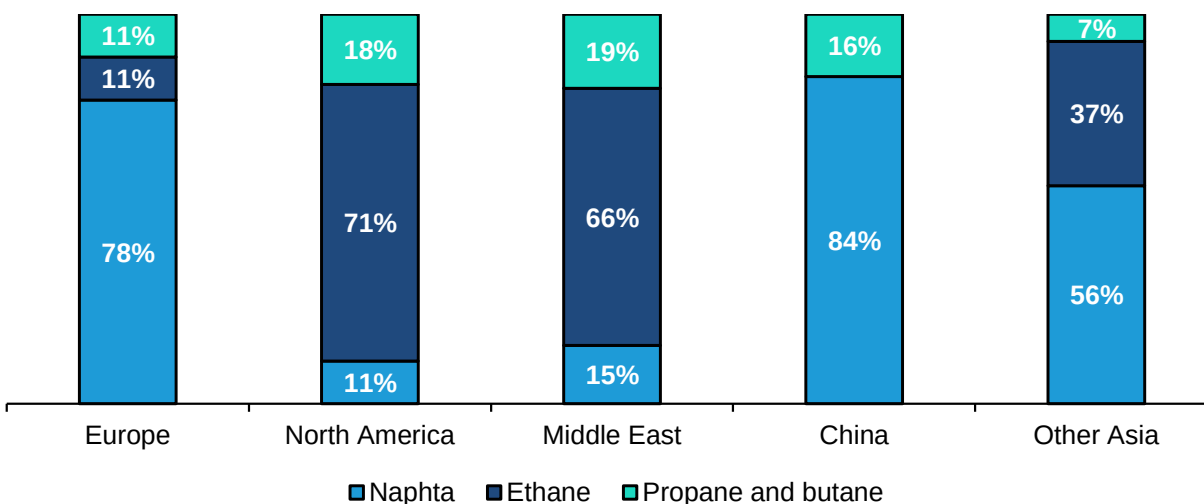
Global Ethylene Variable Cost of Production by Feedstock on April 9 2025 with Brent Spot @ \$65.48 (\$/mt)



Source: S&P Commodity Insights Presentation APIC 2025, Bernstein analysis

EXHIBIT 56: North America and the Middle East primarily rely on Ethane while Europe and China mainly produce petrochemicals with naphta

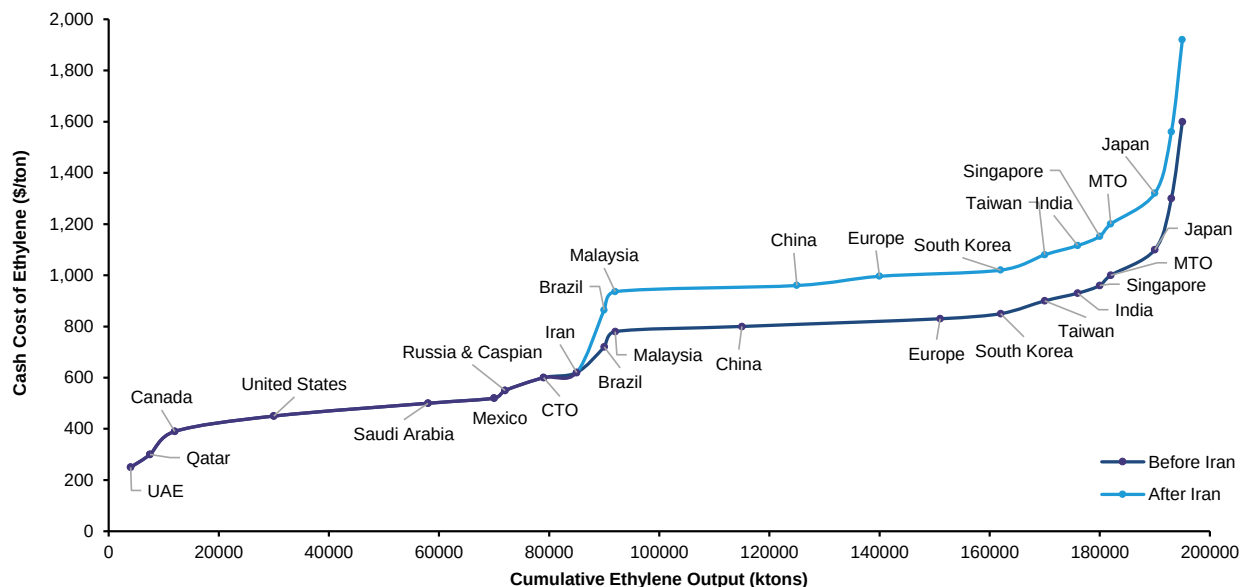
Share of petrochemical feedstocks by region



Source: Deloitte, Bloomberg, Krungsri Research, Bernstein analysis and estimates

EXHIBIT 57: Using Bloomberg forward curve natural gas, the ethane advantage becomes greater. But North America also moves up if we see \$5 Henry Hub

2025 Global Supply Curve before and after Iran, Ethylene Basis

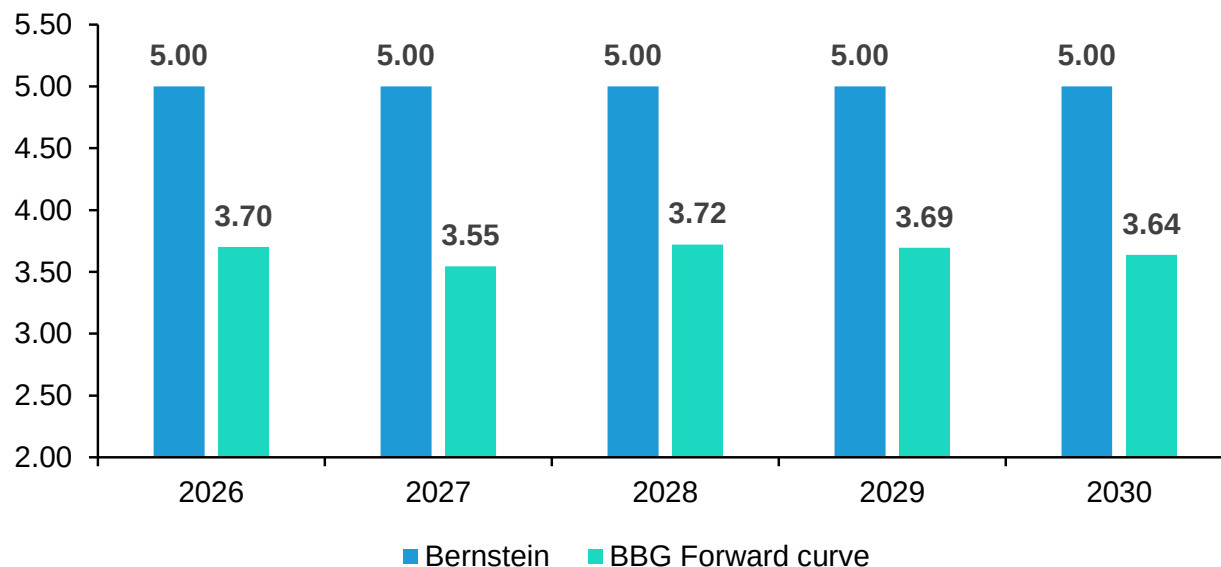


Assumed Iran capacity not destroyed

Source: Wood Mackenzie, Bloomberg, Bernstein analysis and estimates

EXHIBIT 58: **On our house natural gas forecasts, the ethane advantage would disappear. But the on the market's...**

Henry Hub price forecast (\$/mmbtu)



Source: Bloomberg, Bernstein Energy analysis and estimates

STOCK-SPECIFIC CONSIDERATIONS

We expect the Middle East will regain its crown as the most efficient place to make petrochemicals once the logistical issues ease. It is possible that security of supply considerations will mean demand for Middle East upstream chemicals increases slowly in the next couple of years. But as memories of the crisis fade, we expect economics to become the key consideration. For **Borouge**, this makes us more bullish longer-term on their fundamentals. While their feedstock agreement means that higher polyolefin prices lead to higher feedstock prices, we consider the parameters of the contract very supportive for their margins. Especially once transport costs normalise. However, given the short-term uncertainty and higher logistics costs, we remain Market-Perform.

We initiated on **SABIC** at Market-Perform — not because the business is broken, but because it is structurally mispositioned: ROIC has collapsed from 21% in 2005 to ~1% in 2025E as domestic ethane costs nearly doubled from \$1.75 to \$3/mmbtu, eroding the GCC cost advantage from the inside, while 66% of revenues sit in commoditised segments where downside amplifies faster than upside recovers. The underappreciated catalyst flows directly from our report's central conclusion: the global petrochemical cost curve is steepening. Oil-derived feedstocks — naphtha across Europe and Asia — are anchored to crude; as oil stays higher for longer, the marginal cost of the majority of global capacity rises sharply, mechanically widening SABIC's cost gap versus oil-derived competition. The \$5/mmbtu HH gas scenario compounds this further, widening the gap with gas-based marginal producers by \$600–800/ton and compressing high-cost capacity. Aramco's fixed \$3/mmbtu supply — unlikely to be repriced given Saudi Arabia's strategic interest in its downstream sector — means SABIC does not participate in that cost inflation; it benefits from it. This is where Market-Perform becomes a re-rating candidate: not a commodity spike, but a steepening cost curve that turns the feedstock anchor from a margin headwind into the most durable competitive moat in global petrochemicals.

The fortunes of the petrochemical majors with considerable capacity in ethane-based North America could see their economics structurally improved, if the oil-gas spread holds. Or they could normalise if we get \$5 Henry Hub. We do not cover the possible beneficiaries such as Dow, LyondellBasell or Westlake, but on market natural gas expectations they become structurally more profitable. The economics of some of **BASF's** Verbunds in the Southern US (Geismar, Louisiana and Port Arthur, Texas) are also likely to improve, albeit the Americas is the smallest region for BASF's upstream business.

For oil-based regions, we see the overall impact as a small positive. Here we see conditions as slightly better, but margin improvements are more limited given their mostly oil-based feedstock. However, we see **BASF** as better-positioned than most

in the new environment given that it benefits from the integration advantage (Exhibit 59

CHEMICALS

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38

Source: BASF Antwerp CMD 2022

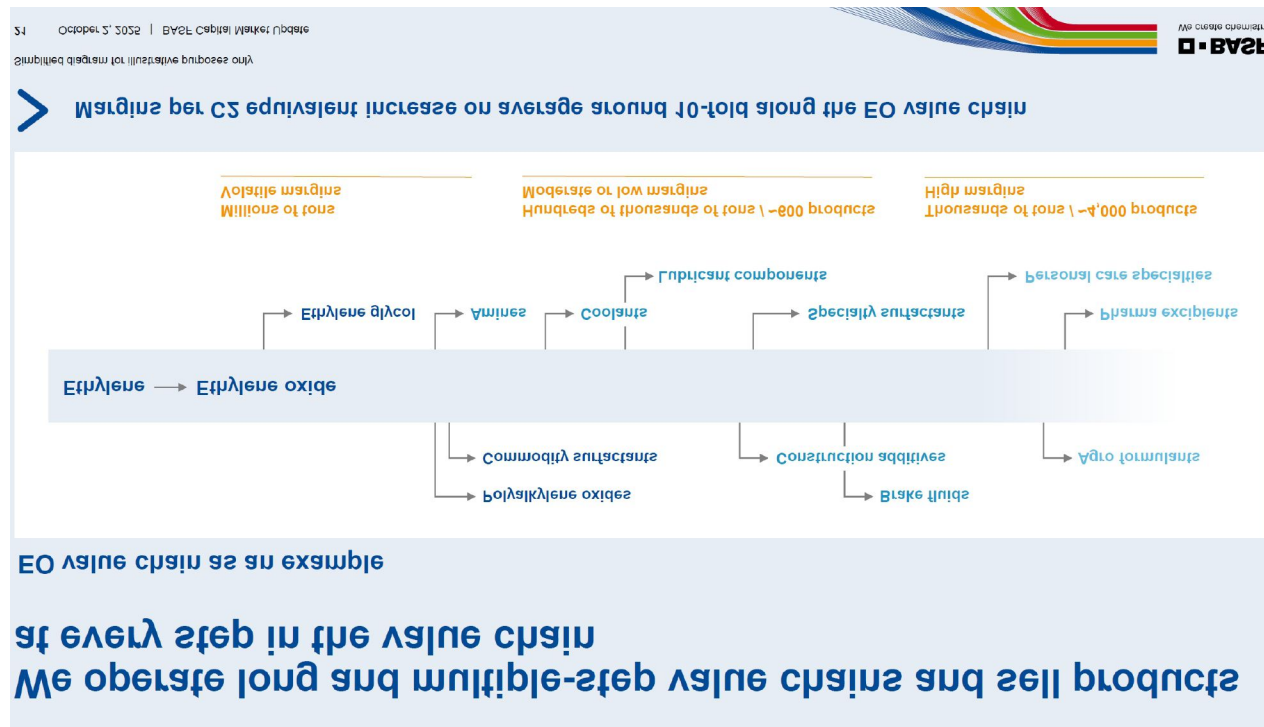


EXHIBIT 28: We see being integrated, like BASF are, as an advantage in a world of higher petchem prices for longer

upstream costs, and some end-uses are more discretionary.

non-integrated diversified names, where some of the chemistry may lack the pricing power to address the higher about Paints & Coatings pricing power, albeit there may be an incoming volume dip. We are more concerned about our & downstream industrials will need to price for their likely higher-for-longer petrochemical input costs. We are less concerned Elsewhere in our coverage, higher-for-longer petchem prices will mean a test of pricing power. Both Paints & Coatings

pricing.

term growth driver. In the shorter-term, higher-for-longer petrochemical and 1 of commodity prices are supportive for plants in North America are more likely to outsource. But reshoring and new capacity is likely years away, so this is a longer-term. The industrial gases would benefit from a rebalancing of capacity to NA over the longer-term, given petrochemical

few years.

trade. We therefore believe that the floor for BASF is now higher than the €40-50 trading range we have seen in the last higher prices, and over the next couple of years we expect greater European domestic demand before memories of the conflict (which we see as more important at

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