

TWENTY THREE POINT FIVE INSIGHTS

MARKET PERSPECTIVE

Chemicals & Materials: A Sector in Structural Reset

What operators and investors need to know navigating the trough

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THE BOTTOM LINE UP FRONT

23.5 VIEW

The chemicals sector is not experiencing a routine demand downturn. It is undergoing a multi-factor structural reset — defined by durable overcapacity, widening regional cost-curve divergence, Chinese scale displacement, and a rising constraint stack that extends the time-to-balance. For operators and investors, the question is no longer when the cycle turns. It is whether you are positioned to survive long enough to compound through it.

Three years of compressed margins, declining investor returns, and accelerating capacity rationalization have reshaped the global chemicals sector in ways that will not self-correct through demand recovery alone. This brief synthesizes the structural forces at work, the regional dynamics that define winners and losers, and the operator-level decisions that will determine who is left standing at market recovery.

FOUR FORCES DEFINING THE RESET

1. Overcapacity Has Outrun Demand Growth

- Global capacity additions — particularly in ethylene and polyolefins — have outpaced consumption growth for several years running. Recovery expectations have repeatedly failed to materialize.
- Restoring global ethylene market balance alone would require pausing additions and rationalizing an estimated 20 million metric tons of existing capacity — a process measured in years, not quarters.
- European ethylene spot prices fell €290/mt across 2025. Utilization across EU27 chemicals hovered near 74–75%, roughly nine to ten points below pre-crisis norms.

2. The Regional Cost Curve Has Bifurcated Permanently

- The US Gulf Coast holds a structural feedstock advantage through shale-driven NGL and ethane supply. In 2024, US ethane consumption reached 2.3 million barrels per day and exports hit 492,000 barrels per day — both record levels.
- European producers face a compounding disadvantage: gas prices roughly 3x US levels, a carbon cost overlay, and utilization chronically below breakeven for many basic chemical chains. Cefic estimates European ethylene production cost approximately 3.2x more than the US in 2023.
- The Middle East retains low-cost feedstock advantage and export capacity. China, now nearly 46% of global chemical sales, acts as the global marginal price-setter in key chains — and is still investing.

3. China-Led Scale Expansion Has Reshaped Global Trade Flows

- China has aggressively added capacity across polyethylene, polyurethane, polystyrene, and polyols. This is not export dumping — it is structural displacement driven by scale economics and state-backed capital.
- South Korean naphtha-based producers have been particularly exposed. Government-led restructuring now targets 2.7–3.7 million metric tons of naphtha cracking capacity reduction, with heavy operating losses across LG Chem and Lotte Chemical.
- Europe's import pressure has grown measurably. Chinese market share in EU chemical imports has risen as domestic capacity struggles to compete on cost.

4. A New Constraint Stack Is Raising Hurdle Rates

- Decarbonization capital requirements are real and significant. Chemicals represent roughly 5–6% of global emissions; credible transition pathways are capital-intensive and compete directly with operational investment.
- Circularity mandates (recycled content requirements, extended producer responsibility) create compliance costs and feedstock complexity before they create value.
- Trade friction adds a new layer of volatility. US-China dynamics on ethane licensing and tariffs can move marginal feedstock economics and shift trade flows with limited warning.

REGIONAL SNAPSHOT: WHO SITS WHERE ON THE COST CURVE

Region	Cost-Curve Position & Outlook
US Gulf Coast	Structurally advantaged. Record ethane system metrics. Ethane-linked chains generate positive margins where naphtha-based assets cannot. Net exporter and cost floor-setter for many polyolefin chains.
Middle East	Advantaged feedstock + export orientation. State-backed capital enables counter-cyclical investment. Acts as a floor on global clearing prices in ethylene and PE.
China	Scale-dominant and still investing. Internal overcapacity is real (Sinopec's chemical segment ran an operating loss of RMB 10B in 2024 despite 13.5 mt ethylene production), but state backing and domestic integration sustain volume regardless of margin.
Europe	Stress epicenter. Naphtha exposure + energy disadvantage + carbon cost overlay = structural underperformance. Utilization ~75%, investment shrinking, and closures accelerating. Deindustrialization risk is no longer theoretical.
Northeast Asia	Naphtha-exposed and under restructuring pressure. Korean producers face government-mandated capacity cuts, with the sector broadly targeting

Region	Cost-Curve Position & Outlook
	2.7–3.7 million metric tons of naphtha cracking reductions. The cost disadvantage versus ethane-based competition is durable absent feedstock switching.

WHAT SEPARATES WINNERS IN A PROLONGED TROUGH

In a structurally compressed market, survival and compounding are not the product of sector timing. They are the product of four structural attributes:

- **1. Feedstock advantage.** Cost-curve position by region and feedstock — where you sit on the regional cost curve determines whether you generate cash or consume it at current clearing prices.
- **2. Integration & flexibility.** Integration depth and operational flexibility — asset integration reduces exposure to spot spread volatility; flexibility allows feedstock switching when economics dictate.
- **3. Balance sheet resilience.** Balance sheet and liquidity runway — troughs extend. Companies with investment-grade profiles, strong cash positions, and low refinancing pressure can act; those without cannot.
- **4. Triage discipline.** Management execution on footprint triage — the ability to make permanent rationalization decisions, execute operational excellence programs, and avoid 'corporate theater' in the form of incremental tweaks to structurally broken assets.

SECTOR POSITIONING: WHO WINS, WHO DOESN'T

Not all chemicals businesses face this trough the same way. Position on the cost curve — by region, feedstock, and integration depth — is the primary determinant of who survives with options intact and who is forced into reactive decisions.

Highest Resilience: The Advantaged Platform

Companies with net-cash or very low leverage, ethane-based feedstock positions, and the balance sheet to build counter-cyclically are compounding advantage right now. They are not waiting for recovery — they are commissioning new low-cost capacity timed to arrive at market inflection. The playbook: strong balance sheet + advantaged feedstock + disciplined growth capex = the right to consolidate when weaker players crack.

Mixed Position: Advantage in Some Chains, Structural Drag in Others

The most common archetype in this sector is a global integrator with strong positions in advantaged geographies offset by legacy European or naphtha-linked assets that are structurally underwater. For these companies, the trough is a forced decision point — not a strategic choice. Those executing real footprint rationalization (permanent closures, not mothballs) and protecting liquidity will emerge leaner. Those running 'strategic reviews' without action will face worse decisions at worse prices later.

Most Challenged: Structurally Exposed Without a Clear Escape

Europe-heavy commodity producers without a credible path to cost-curve improvement, highly leveraged players funding megaprojects in a compressed margin environment, and naphtha-based Northeast Asian producers facing both Chinese displacement and government-mandated restructuring — these are the stress

cases. The common thread is not bad management. It is structural position: wrong feedstock, wrong geography, wrong capital structure for the duration of this trough.

THE OPERATOR'S PLAYBOOK: 6 / 18 / 36 MONTHS

Horizon	Priorities
6 Months (Stabilize)	Lock reliability discipline. In a trough, unplanned downtime is unrecoverable margin loss and a leading indicator of structural distress. Aggressively manage working capital — inventory bloat drives negative operating cash even when EBITDA is positive. Build a chain-by-chain market-clearing view across your footprint to identify which assets are marginal in which regional context.
18 Months (Reshape)	Execute permanent rationalization where structural disadvantage is durable — not mothballing, not 'strategic review', not deferrals. The template is simple: defined economics, defined timing, defined EBITDA uplift. Gate growth capex behind downside-protected offtake or advantaged feedstock agreements. Use partnership structures to share capital burden while preserving customer relationships.
36 Months (Compound)	In a prolonged trough, the strong consolidate. Pursue cost-driven M&A only where balance sheet is unquestionable. Scale circularity and decarbonization investments where they generate a profit pool — not where they are compliance taxes. Re-anchor incentive systems to ROIC, cash conversion, and uptime rather than volume growth.

WHAT BOARDS SHOULD BE TRACKING MONTHLY

The KPI architecture for a structural trough is deliberately simple. Complexity is a symptom of corporate theater. Five categories matter:

- **Safety.** TRIR and process safety events — the leading indicator for reliability and license to operate.
- **Reliability.** Utilization vs. plan; unplanned downtime days; maintenance schedule adherence.
- **Variable cost.** Energy intensity (GJ/ton), feedstock differential capture, yield and co-product credits.
- **Cash.** Working capital days, cash conversion vs. EBITDA, maintenance capex adherence, liquidity headroom.
- **Spread exposure.** Chain-level spread trend (cracker margin, polymer integrated margin), passing-through vs. absorbing feedstock moves.

SIGNPOSTS: WHEN DOES THE TROUGH END?

The following indicators, tracked consistently, will signal inflection before earnings reports do:

- EU27 chemical capacity utilization recovering into the high-70s and trending toward 80%+ on a sustained basis.
- European ethylene spot price directionality reversing — spreading stabilizing and spreading recovering toward historical averages.

- Rationalization velocity accelerating — permanent closures (not mothballs) removing announced capacity on schedule or faster.
- China's domestic chemical margin environment stabilizing — the world's largest producer returning to chemical segment profitability would signal a meaningful shift in the global supply-demand picture.
- Ethane feedstock trade flows normalizing — US ethane export trajectory and resolution of licensing or tariff friction affecting Asia's ethane access.
- Capex deferrals ending — major projects receiving final investment decisions at market pricing (not distressed book value) signal confidence in forward-curve recovery.

23.5 STRATEGIES PERSPECTIVE

Industrial businesses in structural troughs do not need more analysis. They need clarity on where they actually sit on the cost curve, the discipline to stop protecting assets that cannot compete, and the operational rigor to maximize cash from the assets that can.

23.5 Strategies works with operators, owners, and investors navigating exactly this kind of environment — not as consultants delivering decks, but as experienced operators who have run these businesses through cycles and understand where value is trapped and where it is permanently impaired.

If this perspective is relevant to a situation you are navigating — whether a portfolio review, an asset rationalization decision, an operational turnaround, or a transaction — we welcome the conversation.

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