

DC Discusses: Sustainability, geopolitics and AI combine to drive M&A activity in the global Chemicals & Materials sector

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The Chemicals & Materials sector ranks among the largest industries worldwideⁱ and is essential for sustaining the global economy, having pioneered solutions to some of the most critical global issues, including climate change and food security. It is currently being impacted by a number of economic, technological, and geopolitical factors that we believe will be significant drivers of future growth and M&A activity.

DC Advisory's global team explore the themes and trends impacting the Chemicals & Materials sector, and what they mean for future deal flow, including:

- The energy transition and circular economy
- Geopolitical dynamics and supply chain adjustments
- New technologies and Al
- Market dynamics and competition
- Constantly evolving industry set for increased M&A activity in 2024

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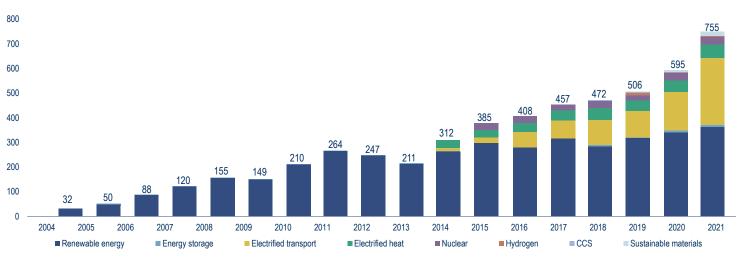
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Energy transition and circular economy driving growth

The push towards energy transition is accelerating a surge in manufacturing activities reliant on advanced materials and chemicalsⁱⁱ. The shift from traditional energy sources to renewable alternatives is spurring demand for innovative chemical solutions that can support new technologies, energy generation and energy storage systems. Within energy generation, the global market value of specialty materials used in manufacturing wind turbines surpassed \$3.93 billion in 2021, whilst the average annual growth

There is a growing realization among chemical leaders rate for the segment is projected to be 6.5% from 2022 to about the benefits of adopting circular economy principles^{vii}. 2027ⁱⁱⁱ. Chemical companies making major investments into We believe pressure from consumers and regulators new technologies supporting the energy transition include to reduce carbon emissions and enhance sustainability Dow's \$ 6.5 billion net zero ethylene and polythene carbon will grow and push companies to explore new ways cracker^{iv}. to incorporate circular economy principles into their business models. For example, using recycling and bio-In February 2024, DC Advisory advised CBPE Capital, on based materials in production processes or investing in its sale of SAFECHEM, a provider of services and products technologies enabling low-carbon fuels and chemicals for the safe and sustainable use of solvents for cleaning production from waste. This shift is not only a response to heavily machined metal components^v. The acquiror, environmental concerns but can also be seen as a strategic Itelyum, a leading European circular economy player move to differentiate brands and build consumer trust specialized in the treatment and recycling of hazardous through increased transparency and collaboration. waste and is controlled by Stirling Square Capital Partners. SAFECHEM is one such company providing innovative





Source: https://www.allianzgi.com/en/insights/outlook-and-commentary/investing-in-the-energy-transition

To discuss any of the themes and trends explored in this article in more detail, please contact the members of the global Chemical & Advanced Materials team >

solutions enabling circular economy concepts and is directly driving sustainability in the chemicals sector. In 2022, we advised Evonik Industries, one of the world's leading specialty chemicals companies, on the sale of its US betaine business to Kensing, owned by One Rock Capital Partners with the divestiture representing a key step for Evonik to increase its emphasis on sustainability as a central driver of innovation^{vi}. We believe chemicals and materials companies that do not incorporate sustainability into their business models will not find buyers and may even struggle to survive, whilst those driving the change to a cleaner future will be in high demand from both private equity and strategic buyers.

Geopolitical dynamics and supply chain adjustments

In recent years, the competitive landscape in the chemicals and materials industry has seen the relocation of manufacturing supply chains closer to consumer markets, particularly away from China towards regions including the U.S., helped by policy interventions such as the Inflation Reduction Act (IRA), CHIPS Act, and Bipartisan Infrastructure Law^{viii}. We believe these major shifts are part of a broader strategy to enhance manufacturing resilience and reduce dependency on geopolitically sensitive regions.

Geopolitical tensions, particularly involving major players like China, the U.S., and the EU, can be a risk to the chemicals industry, impacting everything from raw material access to market stability, whilst ongoing conflicts and their disruptive impact on supply chains can add to further uncertainty. Reshoring, near shoring and friendshoring of manufacturing and procurement is a trend we are seeing across industries^{ix} in response to increasing geopolitical tensions globally. This represents an area that can spur M&A activity in the chemicals industry for companies looking to reposition their manufacturing closer to home or to diversify their supply chains.

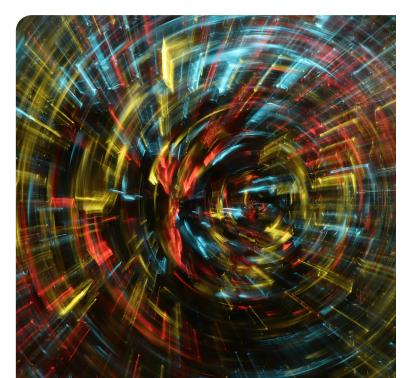
Indian chemical companies have emerged as prominent acquirers of global assets, including UPL's acquisition of Arysta for over \$4 billion in 2019^x. In 2022, we advised Aurelius on its sale of Briar Chemicals, the UK's largest agrochemical CDMO solutions provider, to Safex, the Indian headquartered agrochemical multinational company^{xi}. Large global funds such as CVC through its investment in Sajjan,xii and Bain with its investment in Porus Labs, both leading Indian chemicals manufacturers, have created speciality chemicals platforms with an Indian company as the anchor asset from which they can acquire global businesses. We also believe the China Plus One Strategy, set up to minimize supply chain dependencies on China by diversifying the countries they source from, will drive growth in the Indian chemicals industry and prompt further M&A in the sector. With the Indian public markets recently valuing the speciality chemicals sector at a lifetime peakxiii, we expect Indian companies in the sector will be eager to utilize available cash and if required raise further equity to do global acquisitions.

In May 2024, we advised Guzman Minerals, a subsidiary of Spain's Guzman Global, a global supplier of industrial

raw materials with operations in 53 countries, on its acquisition of Zircosil Malaysia, a producer of zircon raw materials^{xiv}. The acquisition provides Guzman, which operates in an important ceramic cluster worldwide from Spain, with a production plant in South-East Asia. As the clients of chemicals and materials companies globalize, they can increasingly require services local to the regions in which they operate. We believe companies repositioning manufacturing closer to the consumer will continue to drive M&A activity in 2024 and beyond.

New technologies and AI

The integration of digital technologies and artificial intelligence (AI) is becoming increasingly crucial in the chemicals sector. Al and big data are enhancing operational efficiencies and becoming central to innovation. Chemical companies are now utilizing data analytics to optimize processes and develop new products, effectively turning data into a critical input for innovation, with the potential to address a growing demand for new materials and sustainable practices. In 2023, Mitsui Chemicals and IBM announced they had joined forces to improve agility and accuracy in discovering new applications using machine learning and generative Alxv. For instance, SandboxAQ, a spin-off from Alphabet, acquired the quantum chemistry simulation firm Good Chemistry in January 2024, to add computational chemistry and AI simulation capabilities for drug discovery and materials design^{xvi}. Both of these transactions further highlight AI as a significant driver of M&A in the chemicals and materials industry.

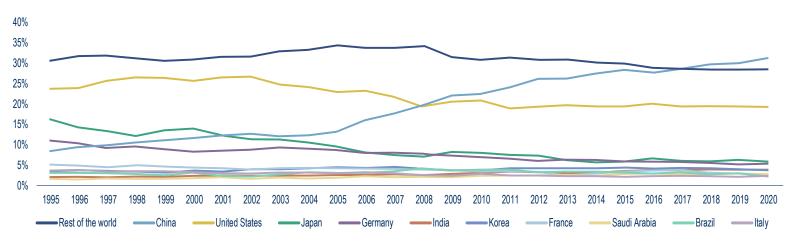


Increased competition from other industry sectors and China

As pressure from stakeholders and government policies further competitive tension. In 2020, China led the world drive investment in the energy transition and circular with regards to sector output, producing 29.1% of global economy, we believe it is also causing increased value-added output, up from 3.8% in 1995xix. competition in the chemicals and materials sector due to the integration of industries involved in the shift. Some oil In 2019, Zhejiang Petroleum and Chemical (ZPC) and gas companies are branching into critical minerals inaugurated a facility on Dayushan Island, situated near mining, agriculture, and chemicals to bolster their clean the Chinese ports of Shanghai and Ningbo^{xx}. This complex energy supply chains, whilst some mining companies are had the capability to refine 20 million metric tons of oil acquiring recycling businesses to help procure recycled annually^{xxi}. ZPC managed to double its output within just materials. In August 2022, we were exclusively engaged 3 years, elevating the refinery to one of the largest in the by JX Nippon Mining & Metals Corporation (JX), a global world.xxii metals company, to advise on their acquisition of eCycle Solutions, a Canadian electronic waste recycling solutions Japanese chemical companies exporting petrochemical products to China and have been greatly affected by this impact, in our view, leading to a decline in facility utilization rates. Just under a third of Japan's petrochemical product output is sold internationally, with China accounting for about half of all exports in 2022xxiiii. Japanese production of ethylene has dropped to its lowest in 35 years, due to China's fast-growing capacity.xxiv As a result, Japanese diversified chemical companies such as Mitsubishi Chemical, Mitsui Chemicals and Resonac Holdings have recently announced strategies to restructure their petrochemical businesses, such as divestingxxv, collaborating with other companies and considering

provider^{xvii}. The transaction enabled JX to collect and process more recyclable materials, in support of its sustainable global economic development mission, whilst providing procurement of recycled materials in North America over the long-term. This would allow JX to support the circular economy and strengthen its relationships with manufacturers of electronic devices in utilizing recycled materials. We believe that whilst new opportunities are emerging for chemical companies, they can also face increasing competition from other sectors. Aramco and other oil and gas companies are shifting their focus from using crude pursuing an IPO.xxvi oil primarily for fuels to a shift into chemicals production

Top 10 producers' historical shares of global value-added output in chemicals



Source: https://itif.org/publications/2024/04/15/how-innovative-is-china-in-the-chemicals-industry/

(Crude Oil To Chemicals, also known as COTC), with Aramco publicly stating their goal to transform up to 70-80% of each oil barrel into chemical products.xviii

The increase in capacity by Chinese enterprises can add

Constantly evolving industry set for increased M&A activity in 2024

Following a history of outperforming, the chemicals sector has underperformed the global stock market index for the past two years.xxvii Chemical industry M&A has been hit even harder by the challenges that have depressed global deal activity: persistent inflation, high interest rates, historically high valuations and geopolitical tensions, resulting in a 30% lower deal value in both 2022 and 2023 than the average during the eight years prior^{xxviii}. In 2023, M&A deal activity was also impacted by low levels of revenue growth and earnings performance experienced by a large proportion of the industry^{xxixi}. In 2024, we are seeing increased levels of M&A activity as companies reevaluate their portfolios and seek strategic opportunities to drive growth, whilst navigating a constantly evolving landscape that is currently marked by technological advancements. shifting geopolitical alliances, and an increasing emphasis on sustainability. We expect the portfolio re-evaluation of Japanese chemical companies to accelerate and continue to spur future M&A activity. Earlier in 2024, we advised Shin-Etsu Chemical Co. on its tender offer for Mimasu Semiconductor Industry,^{xxx} and in 2023 we represented Sumitomo Bakelite on its acquisition of Asahi Kasei Pax's film business^{xxxi}. We believe that such trends will continue

to accelerate in the future. We believe further drivers of global M&A activity include:

- Chemicals and materials companies have, in our view, increased visibility on earnings for 2024 and beyond
- Many companies are streamlining their portfolios away from large, diversified portfolios towards smaller, growing subsectors where they can build leadership positions and improve profitability
- Consolidation trends in selected segments like adhesives, agricultural chemicals, pigments and coatings and flavors and fragrance ingredients
- Continuing interest by private equity groups as they can understand that materials deals are able to be part of the drive for sustainability, rather than environmentally harmful
- Growing importance of Indian buyers in the sector, as industry revenues have risen by over 6% year-on-year since 2012.xxxii and are being further driven by supply chain diversification, solidifying the Indian chemical industry's influence on the global market. We believe Indian buyers will be consolidators for global assets in agrochemicals, active pharmaceutical ingredients, and speciality chemicals CDMO segments

In addition, the anticipated easing of monetary policies by major central banks^{xxxiii} could further accelerate M&A activity by improving the lending environment and enhancing capital market access.



DC Advisory's Chemicals & Materials Practice

Overview & Areas of Focus

- We are a globally recognized strategic advisor to chemical and materials companies
- Unparalleled breadth and depth of industry knowledge, relationships and execution experience
- and circular economy
- Collaborative effort across disciplines and geographies with multi-local teams
- solutions, services and distribution, among others
- capitalization corporations to private equity-owned and family-owned companies

Focused Chemicals & Materials Coverage Petrochemicals. olefins. Inorganic & organic acids (e.g., sulphuric acid, aceitic aromatics (e.g., ethylene, MTBE, butadiene, benzene, acid) Complex (hetero) aromatics Basic polymers / plastics Alcohols, aldehydes & esters (e.g., PE, nylon, synthetic Acrylics, epoxies, amines, thiols isocyanates, polyols Advanced polymers (e.g., PU. PTFE) Individual chemicals & Paintings & coatings Adhesives & sealants chemical groups APIs & pharma additives Agrochemicals & fertilizer **Biotech chemicals** Chemicals Food Ingredients & feed additives Functiona

applications

segments

- Consumer care chemicals
- Cleaning products & chemicals
- Polymer & polymer additives
- Oil field chemicals

aniline)

rubber, PVC)

- Lubricants & lubricant additives
- Construction chemicals
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Our expertise encompasses the convergence of chemicals, materials, digital technology, innovations, green chemicals

Broad coverage ranging from individual chemicals and chemical groups to functional and applications segments to

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- Amino acids, peptides and other biopolymers
- Metalorganics (e.g., for catalysts)
- Inorganics (e.g., ammonia, chlorine, cyanides, palladium)
- Gases (e.g., hydrogen)



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