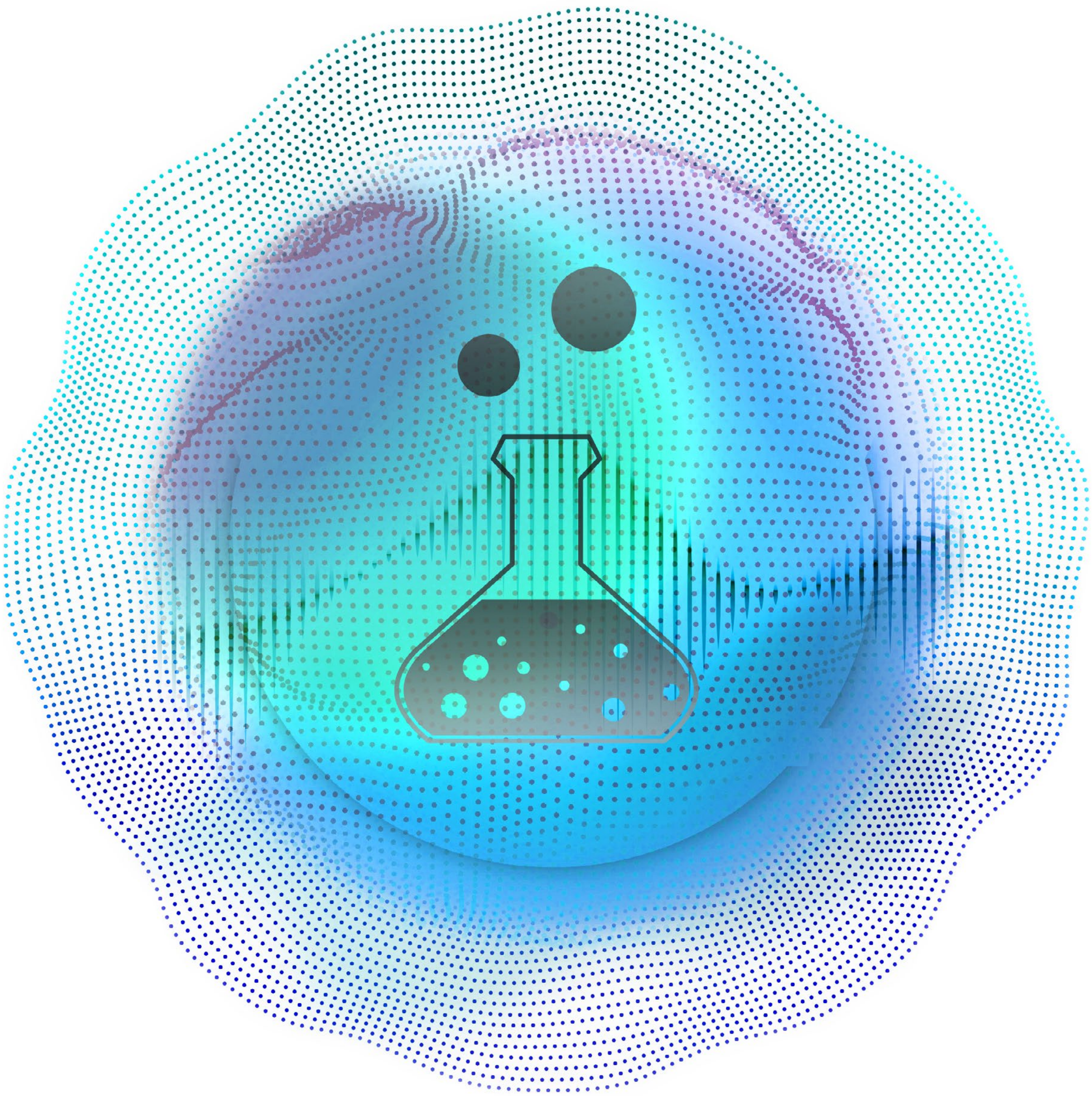


Global chemicals mergers and acquisitions outlook 2022

Optimism abounds

Introduction

What a difference a year makes!

As we predicted in our *2021 Global chemical industry mergers and acquisitions outlook* (2021 Outlook), 2021 was set to break four straight years of global merger and acquisition (M&A) volume declines in the chemicals industry. And, indeed, after global M&A volumes in the industry hit a 10-year low in 2020, the industry did an about-face—reaching a 10-year high in 2021 in both M&A volumes and number of transactions exceeding US$1 billion in value (figure 1). This rebound in M&A activity was largely anticipated by last year's M&A survey of chemical executives, which indicated that nearly 75% of respondents were ***very likely*** to undertake M&A in 2021.

Chemical deal makers made it clear in 2021 that the uncertainty arising from the ongoing COVID-19 pandemic was no match for strong M&A tailwinds, which included unprecedented central bank monetary easing,[1] record dry powder at private equity funds,[2] and chemical companies continuing to realign their portfolios and searching for growth.

Will this strong M&A momentum continue in 2022 or will the pace of M&A in the chemicals industry slow? Does our survey reveal that chemical executives largely filled their M&A appetite in 2021—or are they hungry for more? How will the industry's continued move to sustainability shape its approach to M&A? After a record 85 transactions in 2021, will private equity's deployment of capital in the chemicals industry continue or will it moderate? Will any new sectors or geographies emerge as key M&A markets in 2022?

We explore these and many other questions here, in the *2022 Global chemical industry mergers and acquisitions outlook*.

Figure 1: Global chemical mergers and acquisitions activity (2011 to 2021)

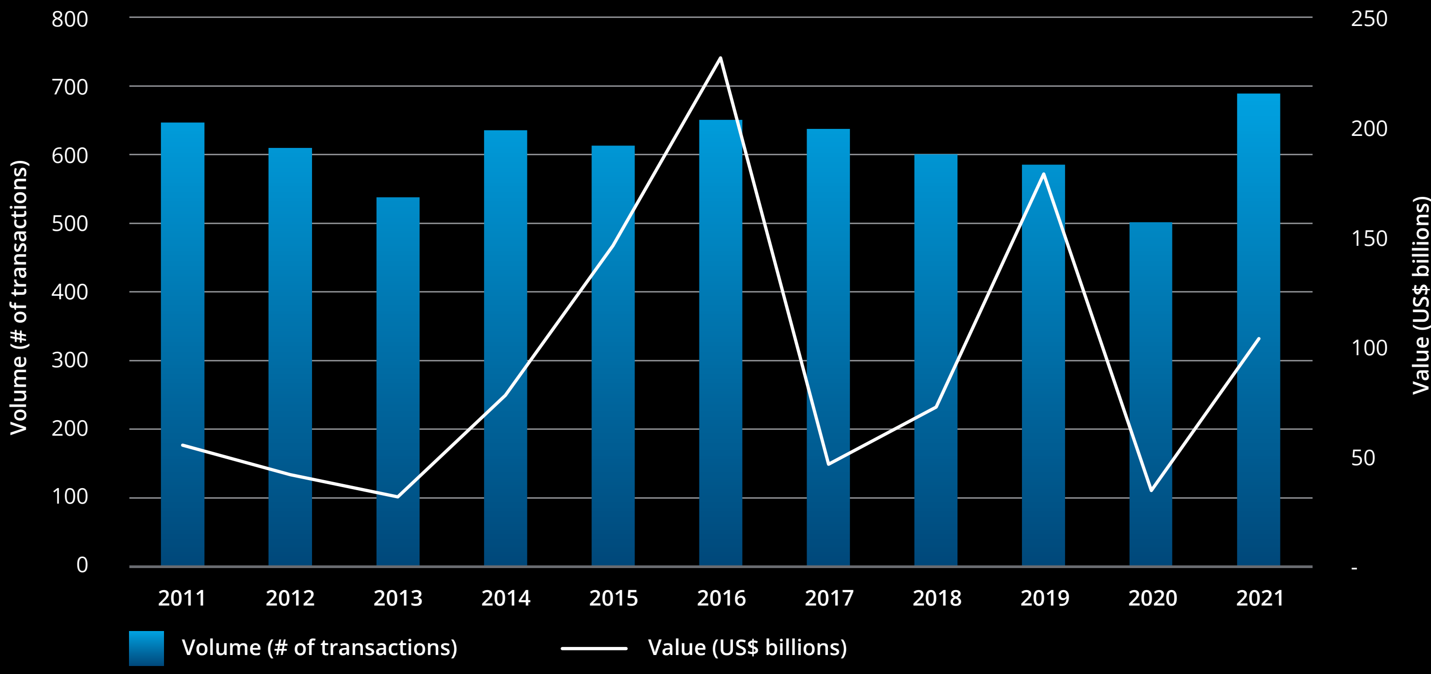


Figure 2: Total activity (2011 to 2021)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Volume (# of transactions)	646	609	537	635	612	650	637	600	585	501	688
Value (US$ billions)	55.1	41.8	31.8	77.8	145.8	231.1	46.4	72.4	178.3	34.6	103.6

Source: Deloitte Development LLC analysis of data from S&P Capital IQ. Data is from January 1, 2011, to December 31, 2021.

Figure 3: Activity over US$1 billion (2011 to 2021)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Volume (# of transactions)	11	11	8	13	16	12	13	16	14	8	30
Value (US$ billions)	36.7	23.8	13.6	52.6	126.3	205.7	29.2	58.8	158.5	21.7	82.5

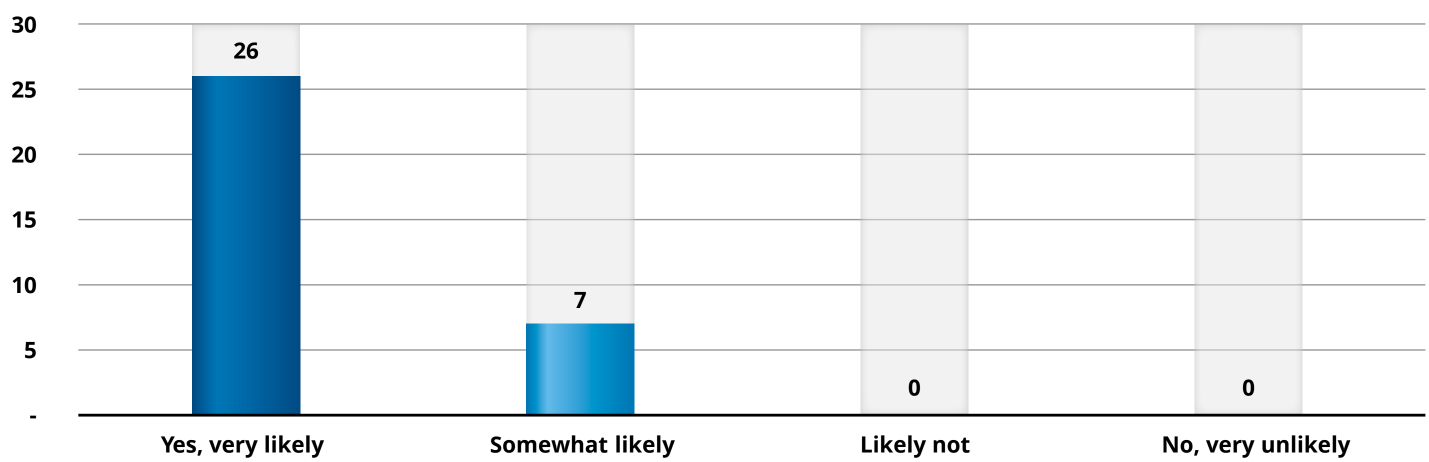
Source: Deloitte Development LLC analysis of data from S&P Capital IQ. Data is from January 1, 2011, to December 31, 2021.

Outcomes of the chemical M&A survey

Our survey polled 33 executives at chemical companies across sectors and geographies between December 15, 2021 and January 14, 2022 to assess current and future M&A plans. For the second year running, chemical executives were nearly unanimous in their positive outlook for M&A heading into 2022. Below is a summary of the results from the survey, and key insights from survey respondents.

Question

Do you anticipate that your company will undertake any mergers or acquisitions over the next 12 months?

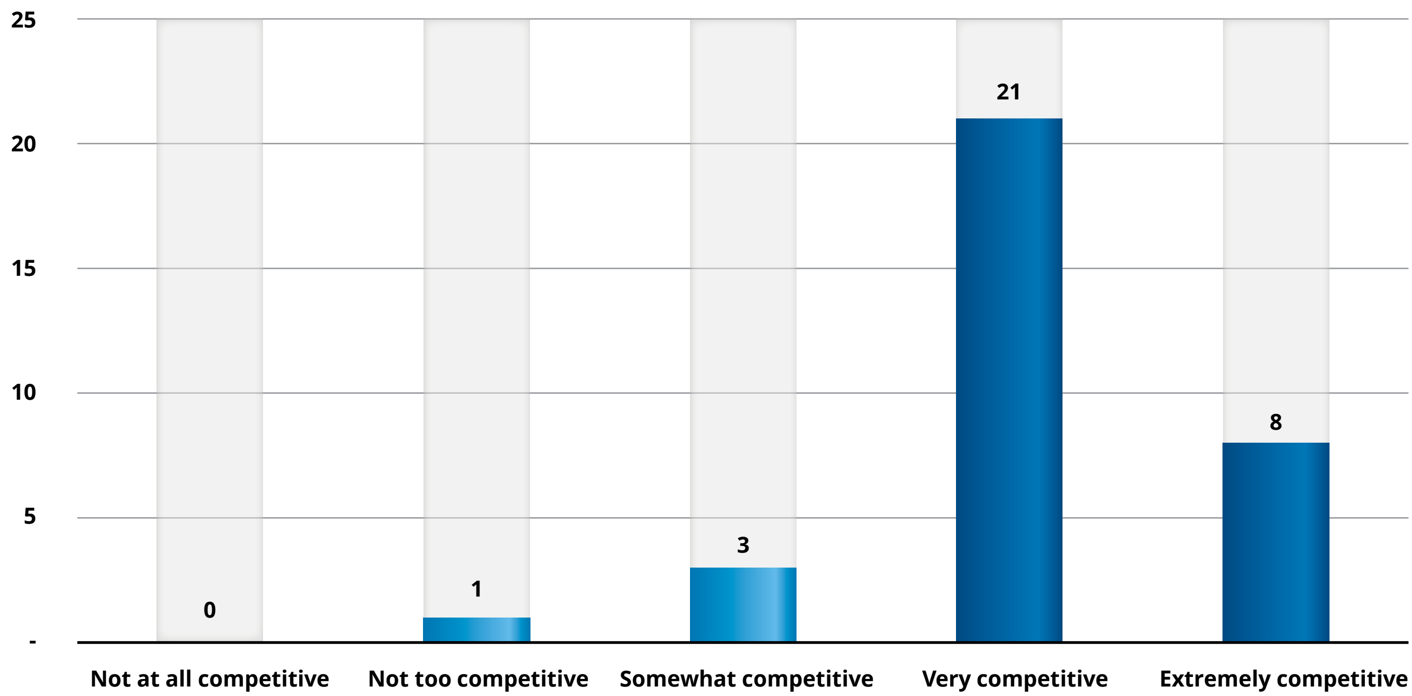


When executives were asked what was driving their company's acquisition strategy, portfolio/technical capability was the most-cited driver for the second year in a row. This was followed by diversification of end-markets that they serve and geographic expansion.

Additionally, for the second straight year, the most attractive end-market for survey respondents was advanced resins/plastics, with eight respondents ranking it as their most attractive end-market and six ranking it second. This was followed by electronic materials, with seven respondents ranking it as their most attractive end-market and three respondents ranking it second. This was a significant move-up from last year's survey, where electronic materials did not rank in the top half of end-market priorities. Other end-markets that garnered top marks this year included construction materials and automotive (including electrification).

Question

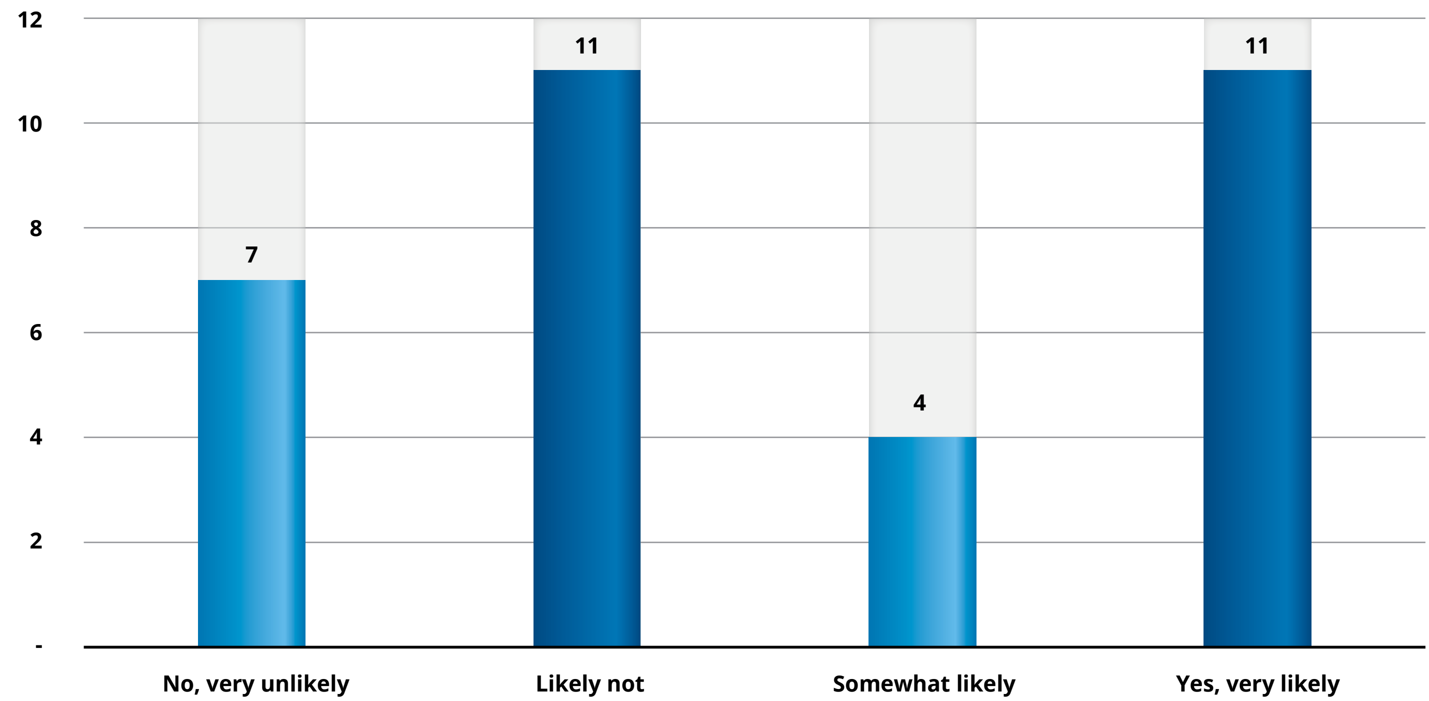
How competitive do you believe the current acquisition climate is?



Over 87% of survey respondents said the current acquisition climate is either extremely or very competitive—up from 49% in last year's survey—providing a clear signal of the mounting competitiveness of the deal environment. Despite this trend, survey respondents unanimously said they were somewhat or very likely to undertake a merger or acquisition over the next 12 months.

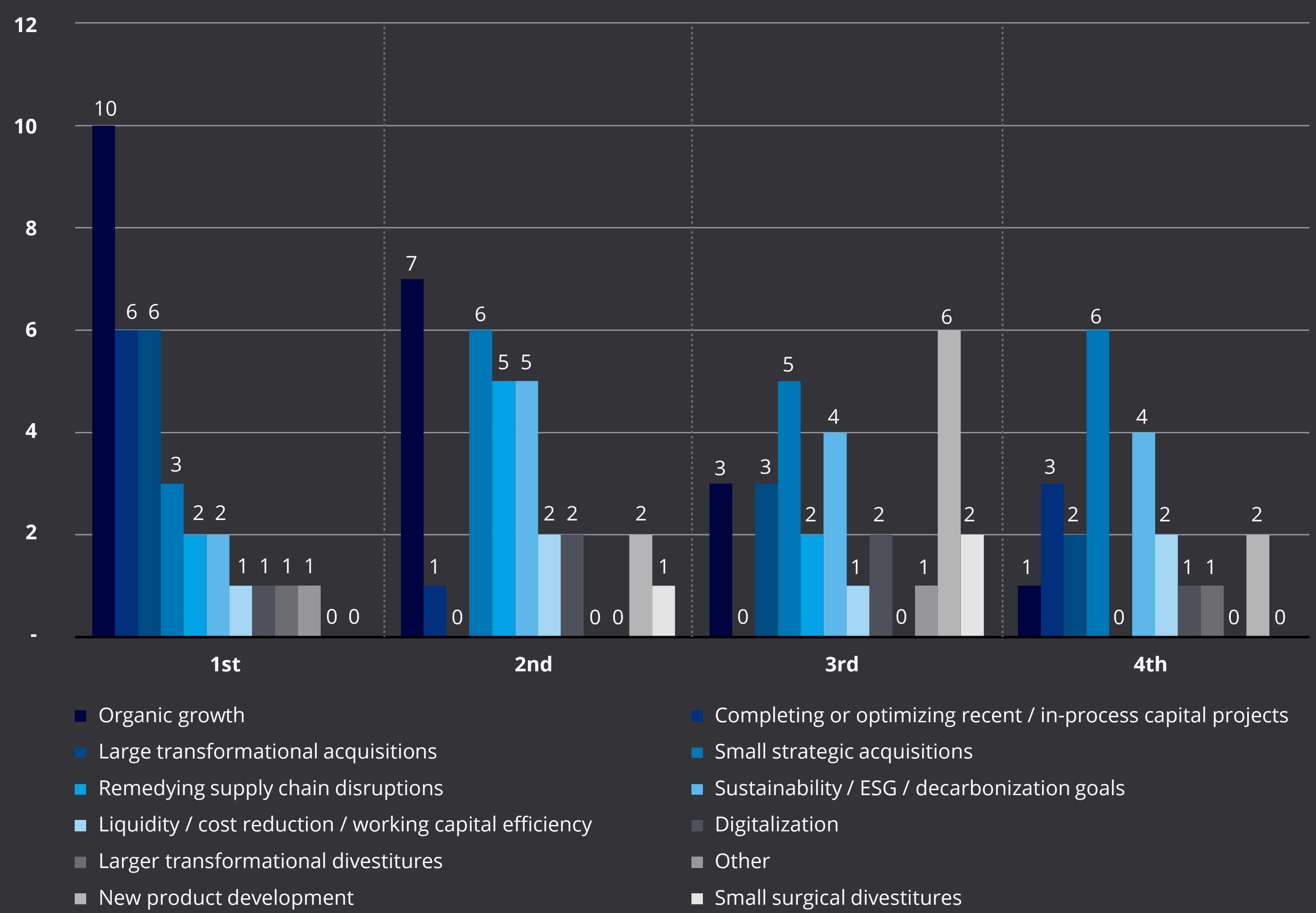
Question

Do you anticipate your company undertaking any divestitures (including spin-offs) over the next 12 months?



For the second consecutive year, chemical executives surveyed were not as bullish on divestitures as they were on a merger or acquisition. In fact, they have become slightly less bullish on divestitures compared to last year, with only 45% saying their company is either very or somewhat likely to undertake a divestiture over the next 12 months, compared to 57% in last year's survey. With the significant portfolio realignment that has already occurred in the industry over the last several years, and with many chemicals at record prices and generating meaningful profits,[3] survey respondents may be signaling that, in 2022, their companies are more willing to hang on to non-core parts of their business rather than divest. Similarly, with the supply issues faced in 2021 and still challenging many chemical companies,[4] several companies have benefited from vertical integration, which is likely driving down their appetite to divest upstream businesses.

Question
What are your company's top priorities over the next 12 months?



For the second year in a row, organic growth was selected as the top focus area over the next 12 months, with 10 respondents ranking it as their top priority and 21 respondents ranking it among their top four priorities for 2022. Large transformational acquisitions and small strategic acquisitions were jointly ranked by nine respondents as their top priority and by 31 respondents in their top four priorities, a marked increase over last year's survey—reinforcing the fact that both big and small acquisitions remain key priorities for chemical companies in 2022.

While many trends persisted over the past two years, several others have changed. For instance, in last year's survey, 25% of respondents ranked liquidity/cost reduction/working capital efficiency as their highest priority areas for 2021, with 40% of respondents ranking it as a top four priority. This year, however, only one survey respondent ranked this as their highest priority, and fewer than 20% said it was a top four priority. This clearly underscores the perceived financial health of the chemical industry as we crest into 2022.

Another area of change—while only one respondent said remedying supply chain distributions was a top four priority last year, 25% of this year's survey respondents ranked it among their top four priorities. This further confirms that supply chain issues persist and are even more top of mind among chemical industry executives.

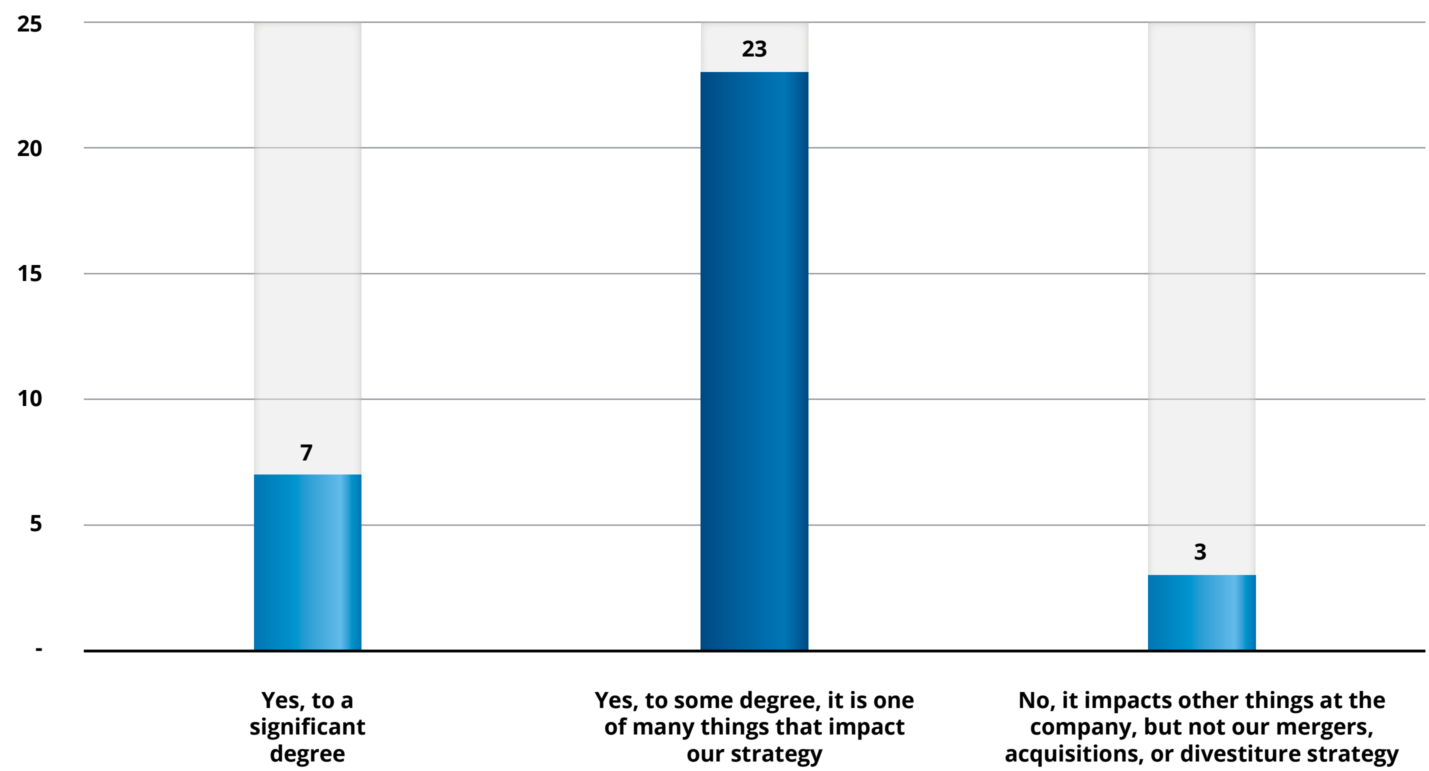
ESG—Deal driver or no big deal?

In our 2021 Outlook, we noted that few traditional acquisitions were being specifically driven by sustainability or other environmental, social, and governance (ESG) topics—a trend that persisted from 2020. Despite this, ESG is increasingly a topic of focus among many analysts as they try to assess a company's approach and longer-term goals. It is an increasing area of strategic focus for chemical executives alike, as this year's chemical M&A survey shows.

The survey polled chemical company executives on how they viewed sustainability and carbon footprint in the context of M&A. Their responses suggest a rising focus. In fact, for some companies, ESG / sustainability represents a key element of their acquisition strategy.

Question

Does your company's ESG / sustainability / carbon strategy impact your company's mergers, acquisitions, or divestiture strategy?



Of the 33 chemical company executives that participated in our survey, nearly 80% said their company assesses a target company's sustainability / carbon footprint profile when looking at a potential acquisition. Of that 80%, nearly half said this assessment is a very important deal consideration. Nearly one-third of the executives surveyed admitted to walking away from a potential acquisition in recent years due to a target company's weak sustainability / carbon footprint / ESG profile.

So how can we reconcile the importance of ESG as part of an M&A strategy with the lack of direct ESG acquisitions in the market? For one, certain technologies underpinning the shift towards carbon neutrality—such as carbon capture, utilization, and storage capacity—have not yet reached the point where they can be monetized.[5] Before we see sustained M&A activity in this space, there may be a ramp-up period of smaller investments and alternative, non-M&A investments required to support the significant capital projects already underway.

Second, and perhaps more critically, ESG deals appear to encompass more than merely direct acquisitions of carbon-reducing or circular economy assets (e.g., mechanical or chemical recycling assets). Rather, many view ESG as also including such areas as chemical industry contributions to reduce (i) the environmental impact of the end markets it supplies and (ii) its own carbon footprint and environmental impact during manufacturing.

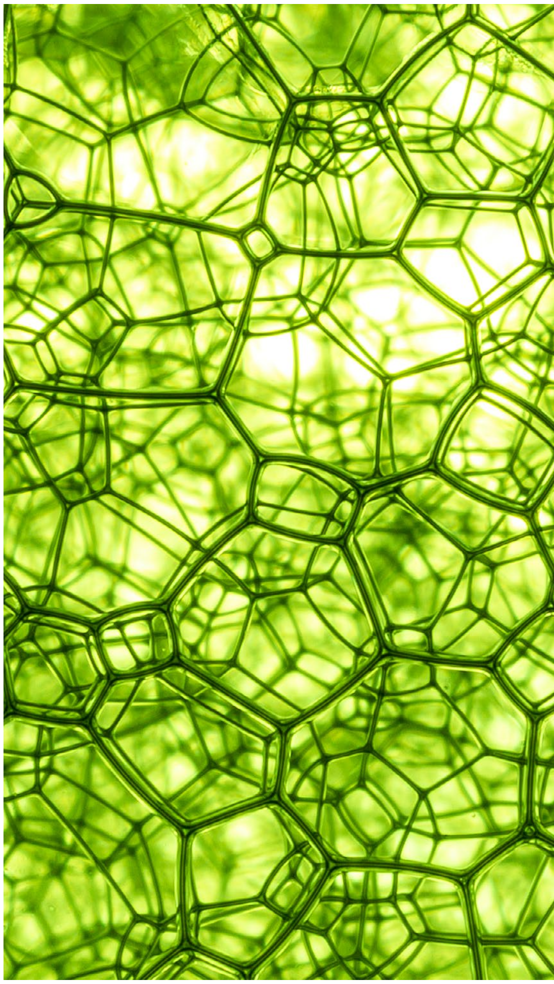
Consider just a few examples of how the industry is reducing its own environmental impact. First, according to the American Chemistry Council, in today's vehicles "plastics make up around 50% of the volume of new cars, but typically only 10% of the weight, helping to make cars lighter and more fuel-efficient."[6] Similarly, many chemical companies have taken steps to increase the durability of coatings to extend product life, resulting in lower emissions over the life of an asset. Also, using water-based solutions in place of solvent-based solutions, or using bio-based alternatives in place of petrochemical-based products, can result in a more environmentally-friendly footprint. These are just a handful of ways in which individual products or technologies appear to advance a company's ESG strategy.

With that broader lens, press releases announcing some of this year's larger transactions put the results of our survey into context. Here are just some of the ways these acquisitions are being communicated to investors:

- Platinum Equity's acquisition of Solenis: "Global demand for ***solutions that save water, use less energy, eliminate waste, and convert everyday products to more sustainable materials is only continuing to grow***".[7]
- Westlake Chemical's acquisition of Hexion's epoxy business: "[Hexion's epoxy business] is an industry leader in the manufacture and development of specialty resins, coatings and composites for a variety of industries, including high-growth and ***sustainability-oriented end-uses, such as wind turbine blades and light-weight automotive structural components***."[8]
- Arkema's acquisition of Ashland's performance adhesives business: "... Ashland Performance Adhesives offers a wide range of adhesives for flexible packaging, ***addressing growing demand for more sustainable products***."[9]
- Cargill's acquisition of Croda's performance technologies and industrial chemicals businesses: "The bio-industrial space is a priority for Cargill, as we strive to support our customers with ***innovative, nature-based solutions that deliver real-world benefits***."[10]

This represents just a small subset of press releases increasingly focused on the sustainability elements of transactions and how they align with a company's sustainability goals or strategies.

Yet, this broader view of ESG also makes it harder to measure how ESG is directly impacting M&A activity and how it will continue to impact such activity in 2022. One might expect that assets that help to reduce a company's environmental impact may be in higher demand and drive activity going forward. However, other factors may inhibit chemical M&A activity—such as higher costs of capital for companies without a defined ESG strategy, assets that do not align with such a strategy, or lower demand for such assets. How these competing factors may drive the M&A market in the medium- to long-term remains to be seen, but, for 2022, activity is expected to continue in line with 2021 as companies target these types of assets.



Private Equity—Still playing a meaningful role in chemical M&A

Figure 4: Global chemical M&A activity - Private equity buyers (2011 to 2021)

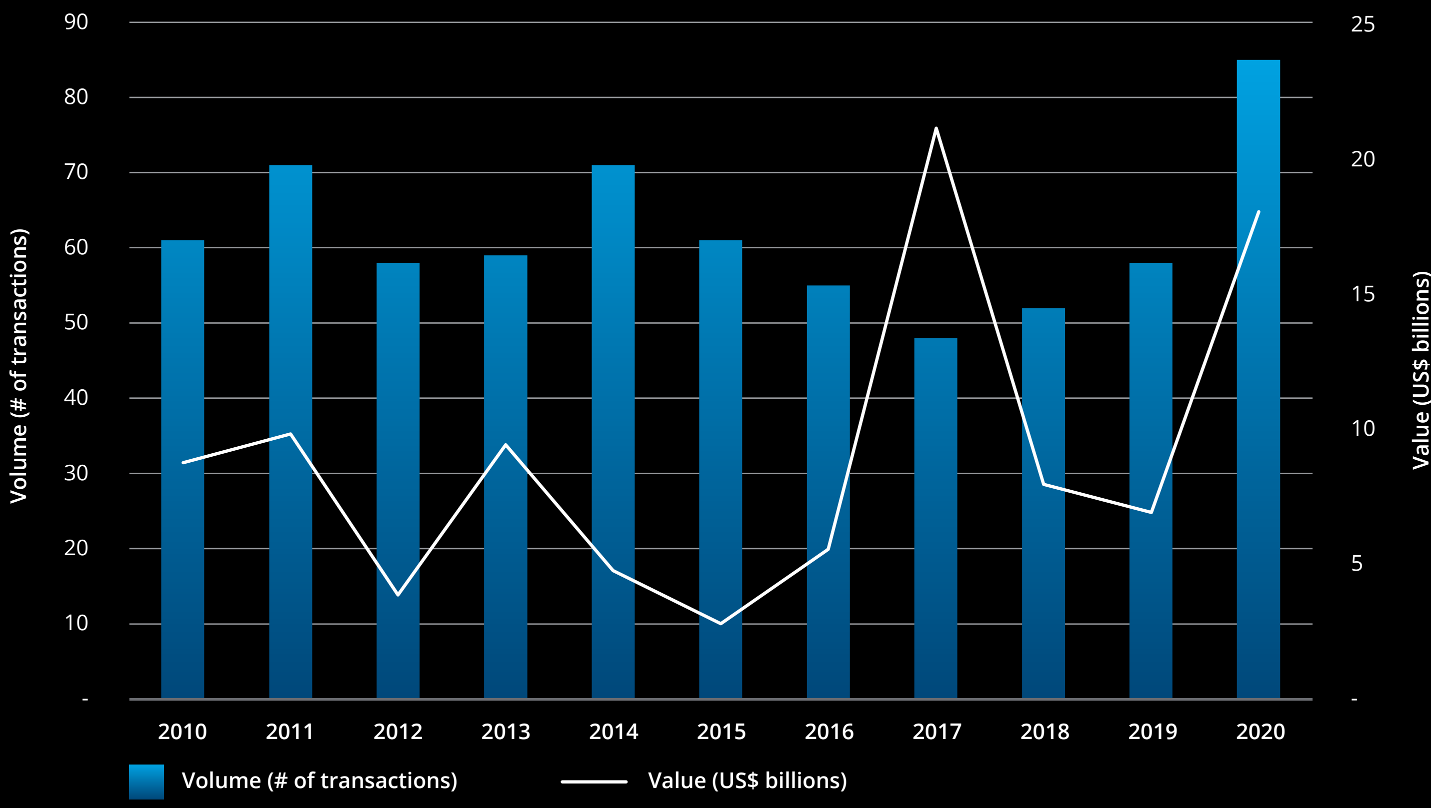


Figure 5: Global Chemical M&A - Private Equity Buyers

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Volume (# of transactions)	61	71	58	59	71	61	55	48	52	58	85
Value (US$ billions)	8.7	9.8	3.8	9.4	4.8	2.8	5.5	21.1	7.9	6.9	18.0

Source: Deloitte Development LLC analysis of data from S&P Capital IQ. Data is from January 1, 2011, to December 31, 2021.

Last year, private equity buyers were less dissuaded from deal making during the uncertainty caused by the pandemic than corporate buyers. In fact, 2021 continued the trend of increased activity from financial sponsors, which reached the highest volume of the last 10 years (see Figure 4). This represented a 47% growth in M&A volume from 2020.

While M&A volumes driven by corporate buyers declined in each of the four years since their 2016 high-water mark, private equity's presence has grown during that same time period—and is now taking a greater share of the chemical M&A deal market. In addition to a higher proportion of deals, these investors are also engaging in bigger deals. While 2018 was a high point in value, which was driven by a single significant transaction (see the ***2019 Outlook***). Conversely, 2021 saw six private equity deals with values of more than US$1 billion and another five deals with values between US$500 million and US$1 billion[11].

This speaks to the growing comfort of private equity buyers to operate in an industry once considered daunting to the uninitiated—particularly those who lacked an existing synergistic platform company and an in-place executive team to manage the operating units that are frequently carved-out from larger companies.

The volume of assets being shed by corporate sellers in a bid to focus on core competencies, or otherwise divest non-strategic businesses, provides additional opportunity to generate value, even when there may be a lack of synergies from an existing platform.

While the data presented here focus on private equity firms as buyers, one factor driving activity among private equity and corporate buyers alike is the assets being sold by private equity investors. With buyers flush with cash and rich market valuations, many private equity investors are achieving desired return on investment in a shorter duration.

Notable private equity exits during the year include the combined stake of Clayton, Dubilier & Rice and BASF in Solenis,[12] American Securities' sale of Emerald Kalama Chemical,[13] Lone Star Funds' announced sale of Altadia Group,[14] and SK Capital's sales of both Niacet[15] and Perimeter Solutions.[16] Buyers of these range from corporates (Emerald and Niacet) to private equity (Solenis) to special purpose acquisition companies (Perimeter Solutions). The size of these exits and diversity of buyers show that private equity has not resigned itself to playing on the margins of this industry; instead, it has become a key M&A participant.

As noted in previous years, the available dry powder and favorable debt markets continue to fuel activity in this sector. Inflationary pressures may cause central banks to raise interest rates, potentially dampening demand from private equity buyers in 2022. However, with strong demand and competitive sales processes currently in the market, or rumored to be in the market shortly, a significant pull-back is not expected.

Merger and acquisition activity by chemical sector

Figure 6: Global chemical mergers and acquisitions by target sector (2011 to 2021)

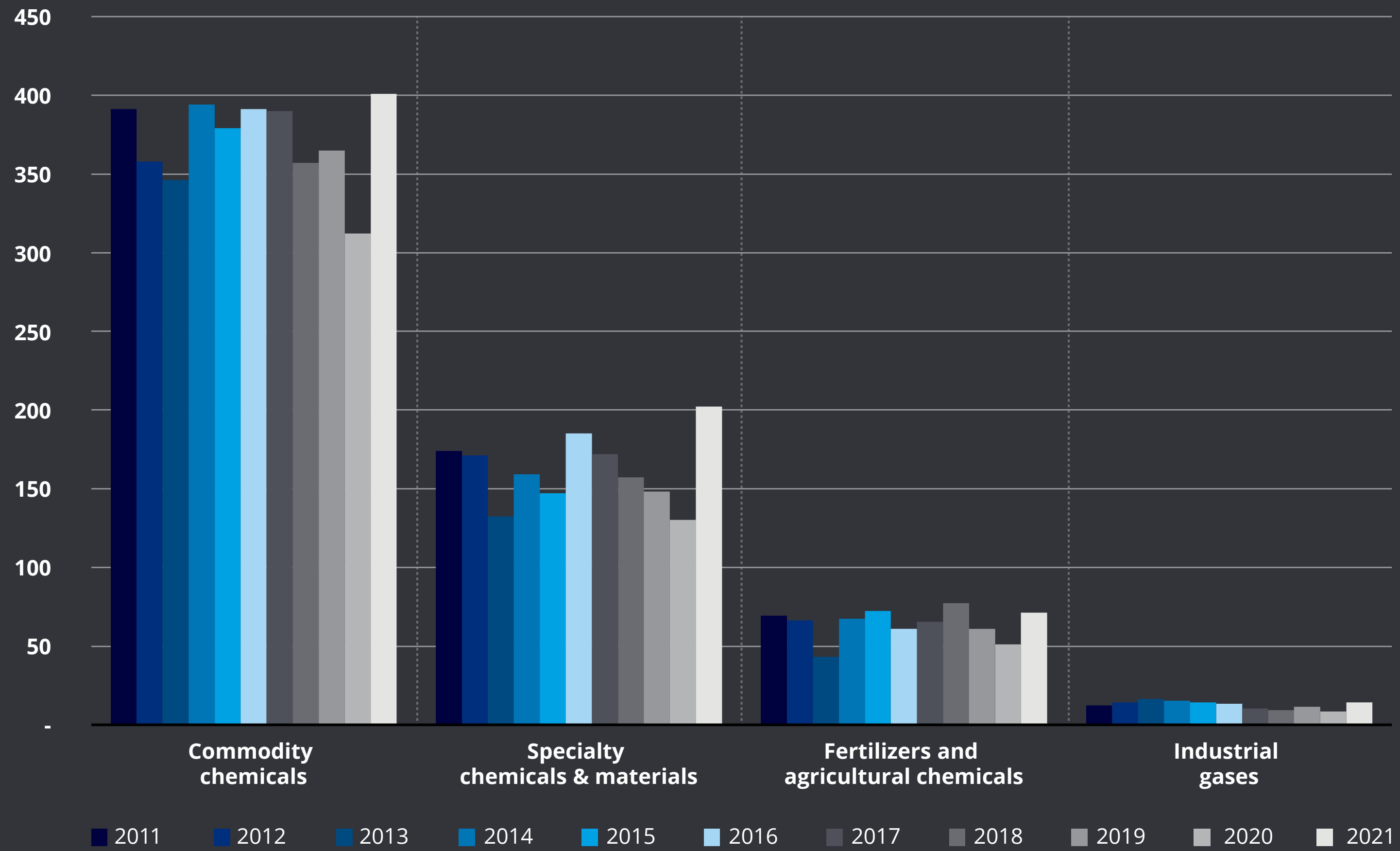


Figure 7: Global chemical mergers and acquisitions by target sector (2011 to 2021)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Commodity chemicals	391	358	346	394	379	391	390	357	365	312	401
Specialty chemicals & materials	174	171	132	159	147	185	172	157	148	130	202
Fertilizers and agricultural chemicals	69	66	43	67	72	61	65	77	61	51	71
Industrial gases	12	14	16	15	14	13	10	9	11	8	14
Total	**646**	**609**	**537**	**635**	**612**	**650**	**637**	**600**	**585**	**501**	**688**

Source: Deloitte Development LLC analysis of data from S&P Capital IQ. Data is from January 1, 2011, to December 31, 2021.

Commodity chemicals

After commodity chemical deal volumes saw their sharpest decrease in the last decade in 2020 (figure 6), the sector experienced nearly a 30% increase in M&A volumes in 2021, marking the largest increase in the last 10 years.

Despite many commodity chemical companies dealing with supply chain issues—and focusing on asset optimization during 2021, as many dealt with Winter Storm Uri and Hurricane Ida for their US Gulf Coast-based assets—they still found time to fit in some meaningful M&A. Commodity chemical companies continued to focus their portfolios through divestitures of non-core businesses: examples in 2021 included The Chemours Company sale of its Mining Solutions business for US$520M[17] and Trinseo's sale of its synthetic rubber business for US$491M.[18] Many commodity chemical companies also continued to grow their value-added downstream businesses through M&A: examples in 2021 included Westlake's acquisition of Hexion's global epoxy business for US$1.2 billion[19] and Celanese's acquisition of ExxonMobil's Santoprene TPV elastomers business for US$1.15 billion.[20]

With a favorable pricing environment providing many commodity chemical companies with robust earnings and cash flow,[21] and continued strong demand tailwinds coming from automotive and housing/construction,[22] we expect to see strong M&A activity from commodity chemical companies in 2022.

Specialty chemicals & materials

Continuing the trend, the specialty chemicals and materials sector also had the largest increase in M&A volumes in more than a decade in 2021, growing over 50%. This strong demand for acquisitions drove deal multiples to record highs in the sector.

While nearly all specialty chemical and material subsectors saw record M&A volumes, a few subsectors warrant particular attention. For instance, the electronic materials end-market moved up meaningfully, finishing as the second highest most attractive end-market in this year's survey, after barely registering in last year's survey. This doesn't come as a huge surprise after seeing all the M&A activity in the subsector in 2021, including DuPont's announced US$5.2 billion acquisition of Rogers Corporation,[23] Entegris's announced acquisition of CMC Materials,[24] and Materion's US$380 million acquisition H.C. Starck's electronic materials business[25].

As predicted in last year's outlook, coatings, adhesives, sealants, and elastomers (CASE) remained a very active subsector in 2021. Deals in the sector included Axalta's US$590M acquisition of U-POL,[26] PTTGC's acquisition of Allnex,[27] and Hempel's acquisition of Farrow & Ball.[28] With continued consolidation opportunities in CASE and strong end-market demand coming from housing/construction, automotive, and others, we expect 2022 to be another busy year of M&A in the subsector.

Fertilizers and agricultural chemicals

The fertilizers and agricultural chemicals sector also caught the M&A fever of 2021, seeing an increase in deal volume of nearly 40%. However, with much of the consolidation in the sector in the rearview mirror, 2021 saw smaller and more strategic transactions, with none exceeding the US$1 billion threshold. Notable transactions in the sector included two divestitures from Compass Minerals—including its South American specialty plant nutrition business to ICL Brasil Ltda for approximately US$418 million,[29] and its North American micronutrient assets to Koch Agronomic Services for approximately US$60 million.[30] Acquisitions included Galileo Otto S.à r.l.'s acquisition of SICIT Group S.p.A. for approximately €360 million (approximately US$407 million)[31] and Albaugh's pending acquisition of Rotam Global AgroSciences Limited for approximately US$197.5 million.[32]

High agricultural commodity prices driving strong demand for yield-increasing products will likely result in strong earnings and cash flows for many fertilizer and agricultural chemical companies—good news for continued strong M&A in the sector in 2022.

Industrial gases

Keeping pace with other sectors, the industrial gases sector had strong M&A volumes in 2021. The largest transaction was South Korea's conglomerate SK Group's merger transaction with of SK Materials Co—yet another deal with electronic materials as an end-market focus.[33] Canadian assets tied to helium were especially active in 2021. We also saw sustainability focused investments in the sector, including Air Liquide's acquisition of H2V Normandy for the production of renewable hydrogen in France[34].

With the sector largely consolidated following significant M&A transactions and regulatory-driven divestitures of past years, 2022 looks to continue the trend of smaller tuck-in asset acquisitions.

Merger and acquisitions activity by geography

Figure 8: Global chemical mergers and acquisitions by target country (2011 to 2021)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
United States	197	204	160	206	186	201	196	180	180	169	232
China	50	50	48	70	78	72	89	82	82	66	70
United Kingdom	29	37	27	35	33	41	33	29	30	28	42
Germany	28	44	37	44	37	38	41	28	40	23	45
India	27	10	20	17	23	28	15	28	21	10	27
Netherlands	10	14	6	9	11	19	8	21	9	13	11
Japan	20	15	14	15	20	12	11	15	14	10	22
Brazil	18	23	15	12	10	24	14	16	4	8	11
France	28	25	28	29	25	26	40	27	21	16	30
Other	239	187	182	198	189	189	190	174	184	158	198
Total	**646**	**609**	**537**	**635**	**612**	**650**	**637**	**600**	**585**	**501**	**688**

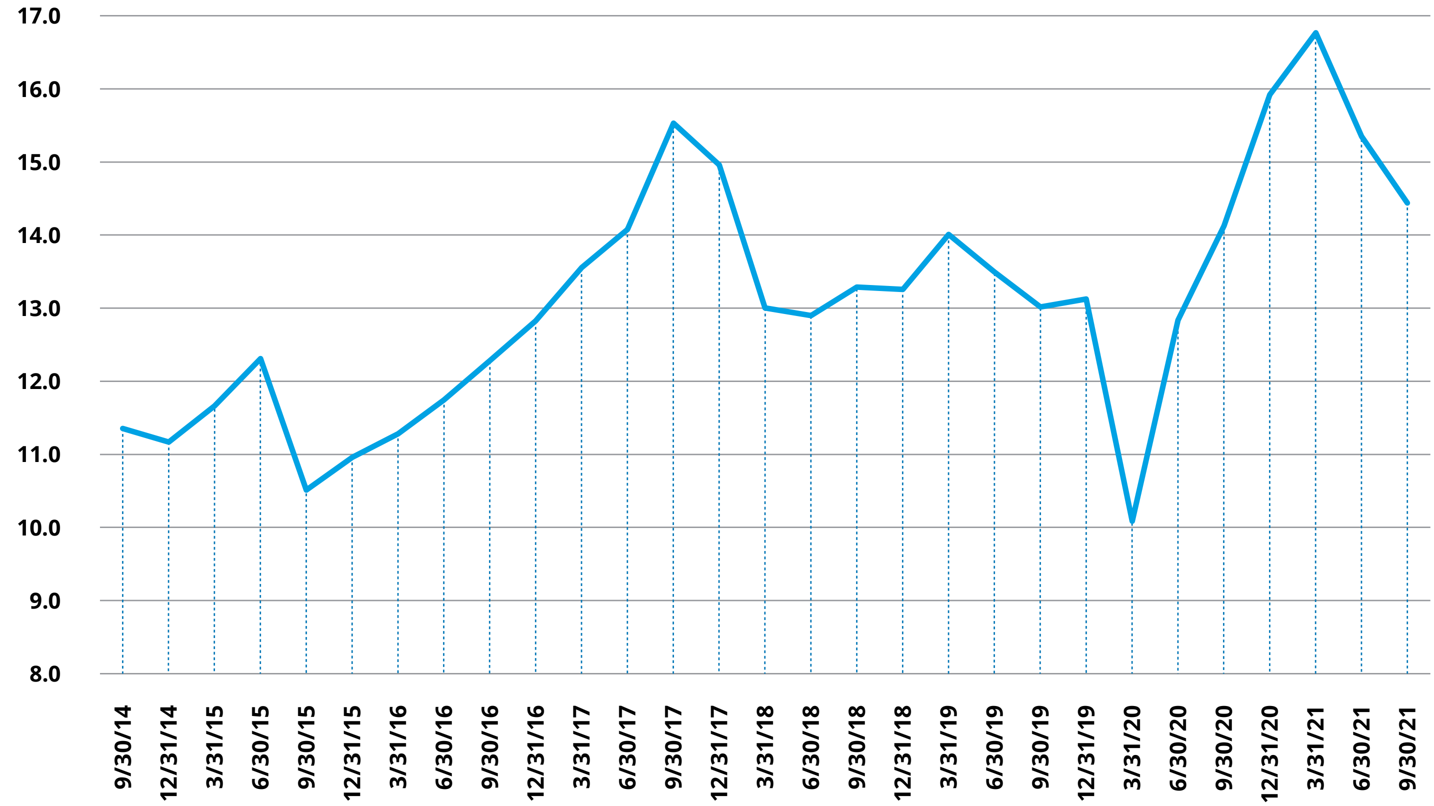
Source: Deloitte Development LLC analysis of data from S&P Capital IQ. Data is from January 1, 2011, to December 31, 2021.

United States: Four-decade highs in GDP accompanied by four-decade highs in inflation lead to favorable, though murky, outlook for 2022

Chemical M&A activity in the United States hit an all-time high in 2021, marking a 36% increase over 2020 and an 11% increase over the previous high in 2012. Favorable economic conditions, such as low interest rates and a reopening of the economy, resulted in a very attractive deal market for buyers and sellers alike. The risk that rising capital gains tax rates[35] would be made retroactive to a date in 2021 provided extra motivation for sellers to close on transactions before the end of the year. While this didn't materialize, it undoubtedly had an impact as deals raced toward the finish line ahead of the new year.

Sellers in the US enjoyed a very competitive market. As a result, transaction multiples at or near recent highs were applied to FY21 or FY22 forecasts—despite the fact that many of these forecasts hinged on potentially temporary margin capture driven by the sales of lower cost inventories for higher prices as inflationary pressures set in. EV/EBITDA multiples for the S&P 500 Chemical Index (figure 9) provide a case in point. While not a direct indicator of transaction multiples, Figure 9 can be helpful to put into context those observed in the M&A market. The decline seen in the second half of 2021 from a high-point on March 31 was driven more by strong earnings growth than by the aggregate 1.7% drop in enterprise values.

Figure 9: S&P 500 Chemical Index - EV / TTM EBITDA



Source: Deloitte Development LLC analysis of data from S&P Capital IQ. Data is from September 30, 2014, to September 30, 2021.

Activity was stronger in nearly all sectors, but particularly in the specialty chemicals space which saw 13 of the 17 US deals valued at US$1B or more—comprising US$42 billion of the US$49 billion of total deal value. Multiples on the deals where trailing 12-month EBITDA was disclosed ranged from 9.4x for the Performance Chemicals business of PQ Group Holdings (now Ecovyst)[36] to 20x for Arkema's acquisition of the Performance Adhesives business of Ashland LLC,[37] with most in the low- to mid-double digits.

As we peer into trends for 2022, favorable conditions will likely contribute to a continued robust deal environment: debt markets remain liquid, access to capital is still cheap by historical standards, private equity is sitting on record levels of dry powder, and consumers are flush with cash. That said, there are headwinds that may temper activity. Notably, inflation rose to 7% in December 2021, its highest level since 1982.[38] In response, the US Federal Reserve may raise interest rates in March, which will lead to higher borrowing costs for acquirors—although the targeted rate remains uncertain.[39] While we may not achieve similar deal volumes or value in 2022, the conditions remain for another strong market for M&A activity.

China: In 2021, COVID-19 impacted M&A activity, but chemical industry integration continues

In 2021, M&A activity in China's chemical industry did not recover to pre-pandemic levels. Despite the volume of deals rising by 11%, total deal value declined by 40% for the year—pushing deal value to its lowest level in five years[40].

Corporations and industry players comprised the majority of acquirers in 2021. For instance, 67% of deals were led by chemical companies pursuing integration and expansion opportunities. Acquirers in other transactions were largely downstream players involved in sectors such as electronic components, packaged food, and textiles, with greater vertical integration as the key objective. This trend of integration within the chemical industry, and along the industry value chain, is expected to continue in 2022. Private equity investment and acquisition activity by financial buyers are not currently visible features of the industry's M&A landscape.

Interestingly, foreign investment in China's chemical industry rebounded in 2021 and comprised 14% of overall deal volume. In 2022, with the global economy expected to steadily recover from the effects of the COVID-19 pandemic, foreign investors might play a more active role as acquirers in China's chemical industry.

Additionally, as part of China's 14th Five-Year Plan for the chemical industry, chemicals used in electronics, specialty/high-end materials, and pharmaceutical chemicals are listed as encouraged segments.[41] This partly explains why pharmaceutical and electronic buyers were active in the market in 2021, and why M&A activity was observed in high-end materials such as specialty fertilizers and high-end plastic films. Given the conducive policy environment, M&A activity in these encouraged segments is likely to pick up speed in 2022.

At the same time, the ***Action Plan for Carbon Dioxide Peaking Before 2030*** promulgated by the State Council of China in 2021 is focusing more attention on environmental, social, and governance (ESG)[42]. This has boosted the research spend on clean energy and environmental materials, while promoting greater joint venture/cooperation with foreign companies. This is expected to create additional M&A opportunities in areas such as new energy (battery-related materials), environmentally friendly materials, and other ESG-related sectors.

Continental Europe: Strategic investors focus on select businesses while private equity appetite grows

The European chemicals market has recovered faster than many expected from its low in 2020. Chemical companies are entering 2022 after challenging market conditions in 2020 and 2021, with the COVID-19 pandemic adding volatility to an already volatile decade. In 2022, strong demand for both commodity and specialty chemicals could keep prices resilient throughout the year. However, the industry may come under margin pressure given commodity cost inflation, along with rising energy and freight costs.

M&A activity in the chemical sector picked up speed again in 2021 after the pandemic-fueled restraint of 2020. Most transactions came from specialty chemicals and acquisitions by private equity investors. In fact, private equity is increasingly active on the buy and sell side, with interest focused on carve-outs of large corporates and large to medium-sized companies.

Notably, transaction values from both strategic and private equity buyers are increasing in many different sub-sectors of the European chemical industry beyond specialty chemicals.

Sustainability, decarbonization, and supply chain are also major issues playing out in European chemical company strategies. With consumers demanding ESG-friendly products, the chemical industry is working to change feedstock and production processes. For instance, some industry players are using alternative energy sources and raw materials, such as green methanol, to enable a renewable feedstock. Chemical companies are also reviewing their production structures to optimize processes and taking steps to reduce their environmental footprints by divesting of sites that are struggling to meet environmentally friendly production standards.

In response to these trends, European chemical companies are actively analyzing their portfolios. High company valuations (even for troubled assets), combined with strong private equity interest, will likely fuel M&A activity in 2022. Furthermore, chemical companies are poised to use M&A to hedge access to "green" technology and safeguard non-carbon feedstock supply.

UK: M&A activity rebounds in 2021

In Q4 2020, the UK saw an uptick in M&A activity, which continued into 2021, with deal volumes hitting a 10-year high. Whereas specialty chemicals dominated the space in 2020, commodity chemicals proved the most active in 2021, with a particular focus on companies serving the plastics and packaging sector. International interest in UK companies remained strong, with investors from the US particularly active. In just one example, Croda International Plc sold its Performance Technologies and Industrial Chemicals (PTIC) businesses to Cargill Inc. for US$1 billion[43].

As in 2020, corporates made up the majority of acquirers of UK chemical companies, despite an active global private equity market driven by continued record levels of dry powder.[44] Compared to the year previous, private equity exits of UK companies rose as investors looked to take advantage of a buoyant M&A market and high valuations.[45]

Yet the most prevalent M&A theme in 2021 for both financial and corporate investors was sustainability / the ESG agenda.[46] In fact, this focus underpinned the rationale for many of the plastics and packaging disposals in the UK chemicals sector this past year.

With the industry rebounding from a period of uncertainty in 2020 due to COVID-19 and BREXIT, similar continued demand for M&A is expected in the UK moving into 2022. In fact, with the wall of committed capital from private equity holding strong, appetite for quality assets is expected to stay strong across all industrial sectors. The focus on ESG is forecast to continue in 2022, with investors targeting specific sub-sectors within chemicals.

India: Accelerated momentum for chemical M&A due to high GDP growth, strong macroeconomics, and positive industrial climate

India witnessed an aggressive rebound in 2021, posting a growth rate of 9%, with the IMF projecting an additional 9% GDP growth during 2022—making India one of the fastest growing economies in the world.[47] The Indian chemical industry ranks sixth in the world, with a current market size of US$178 billion, and a forecast market size of US$300 billion by 2025.[48] Up to 100% foreign direct investment (FDI) in the chemical sector is permitted, attracting FDI inflows of US$18.48 billion throughout 2020-21.[49] Additionally, the Reserve Bank of India has consistently maintained the repo rates at 4% since May 2020 in keeping with the objective of achieving the medium-term target for consumer price index inflation of 4%.[50]

Taken together, this positions the chemical industry in India for strong growth across sub-sectors. Specifically, petrochemicals is expected to grow at 7.5% CAGR, agrochemicals at 8%, and specialty chemicals at 12%[51] due to the rise in demand from end-user industries such as food processing, personal care, and home care. Conducive government policies for innovation and production-linked incentives are also benefitting the sector, attracting significant FDI and M&A opportunities.

In fact, M&A activity in the chemical industry grew substantially in the second half of 2021 and is expected to accelerate further during 2022 amid high GDP growth, strong macroeconomic factors, and a positive industrial climate.

Brazil: M&A activity slows amid inflation and higher interest rates, despite GDP recovery

In 2021, Brazil's GDP slowly recovered to pre-pandemic levels. However due to the highest inflation rate in the last five years and a devalued Brazilian Real, the Brazilian Central Bank raised the country's interest rate from 2% to 9.25%.[52]

The market forecast for the Brazilian economy in 2022[53] projects a GDP increase of 0.3%, with inflation forecasted at 5.4%. The expectation of further exchange rate depreciation and higher interest rates (forecast at 11.75%) by the end of the year are bound to increase local capital costs as well.

Despite this, demand for chemical products reached the highest level on record in 2021, growing by 20.5% above 2020, and driving higher raw material imports—which pushed up prices.[54] While M&A activity did not reach all-time highs as in other geographies, there was a slight increase in the number of transactions in the sector for the year (11 transactions compared to eight in 2020), which were together valued at more than US$1.8 billion.

As 2022 is an election year, uncertainty over the election's results may impact economic policies, potentially hampering M&A activity. On the other hand, the local increase in demand for chemical products, as well as the depreciated exchange rate, could still create an attractive environment for cross-border M&A transactions in 2022.

Japan: Appetite for large M&A remains subdued, but conditions are ripe for further reorganizations/consolidations

In Japan, the M&A market for 2021 was characterized by the continuation of pandemic-related business and economic concerns. As a result, Japanese chemical firms remained largely cautious and did not pursue significant transactions outside the country. Conversely, domestic deal activity rebounded from a 10-year low in 2020.

Last year, we predicted that "defensive M&A"—such as divestitures/reorganizations, rather than acquisitions—would accelerate amid continued business uncertainty. The combined effects of decarbonization and those of COVID-19 saw this prediction come true. For example, JSR Corporation sold its elastomers business for US$1 billion (JPY 115 billion) to ENEOS Corporation,[55] which attracted attention as one of the first times a Japanese company sold a portion of its original business representing 30% of consolidated sales. In addition, Japan's biggest chemical company, Mitsubishi Chemical Holdings Corporation, announced plans to restructure its petrochemical and carbon-based chemical businesses, foreshadowing further industry consolidation.[56] During 2022, similar to last year, expect Japanese chemical companies to boldly restructure their portfolios, while cautiously monitoring the effects of COVID-19.

Summary outlook for 2022 mergers and acquisitions activity

M&A was at or near all-time highs in many industries in 2021 and the chemicals industry was no exception. The favorable environment for strong M&A activity in the chemicals industry continues as we start 2022—with a push towards building more focused portfolios, abundant dry powder from private equity funds, a favorable economic backdrop in many global economies, and chemical companies in search for growth. The energy transition, and the move toward decarbonization and a more circular economy, are also bound to rise in focus as chemical companies shape their M&A strategies for 2022 and beyond.

More than half of the chemical executives in this year's survey said they are modestly or significantly more optimistic regarding merger, acquisition, and divestiture activity in the chemical industry over the next 12 months compared to the start of calendar 2021. Plus, none of the survey respondents said they were less optimistic. 2022 will likely prove to be another busy year of transactions in the chemical industry. However, with the mismatch between the supply of high-quality opportunities and the M&A appetite from both private equity and chemical companies, we would expect competition and valuations to remain high.

As 2022 plays out, chemical companies will need to critically think through their M&A strategies to effectively compete and be successful in this uber competitive M&A environment.

It would also be remiss to omit the potential impact of the global geopolitical events unfolding (at the time of publishing) and the broad impacts this may have on business and the economy, but more importantly, humanity.

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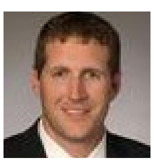

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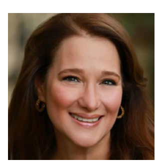

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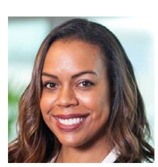

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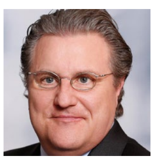

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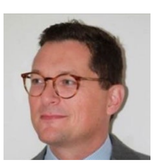

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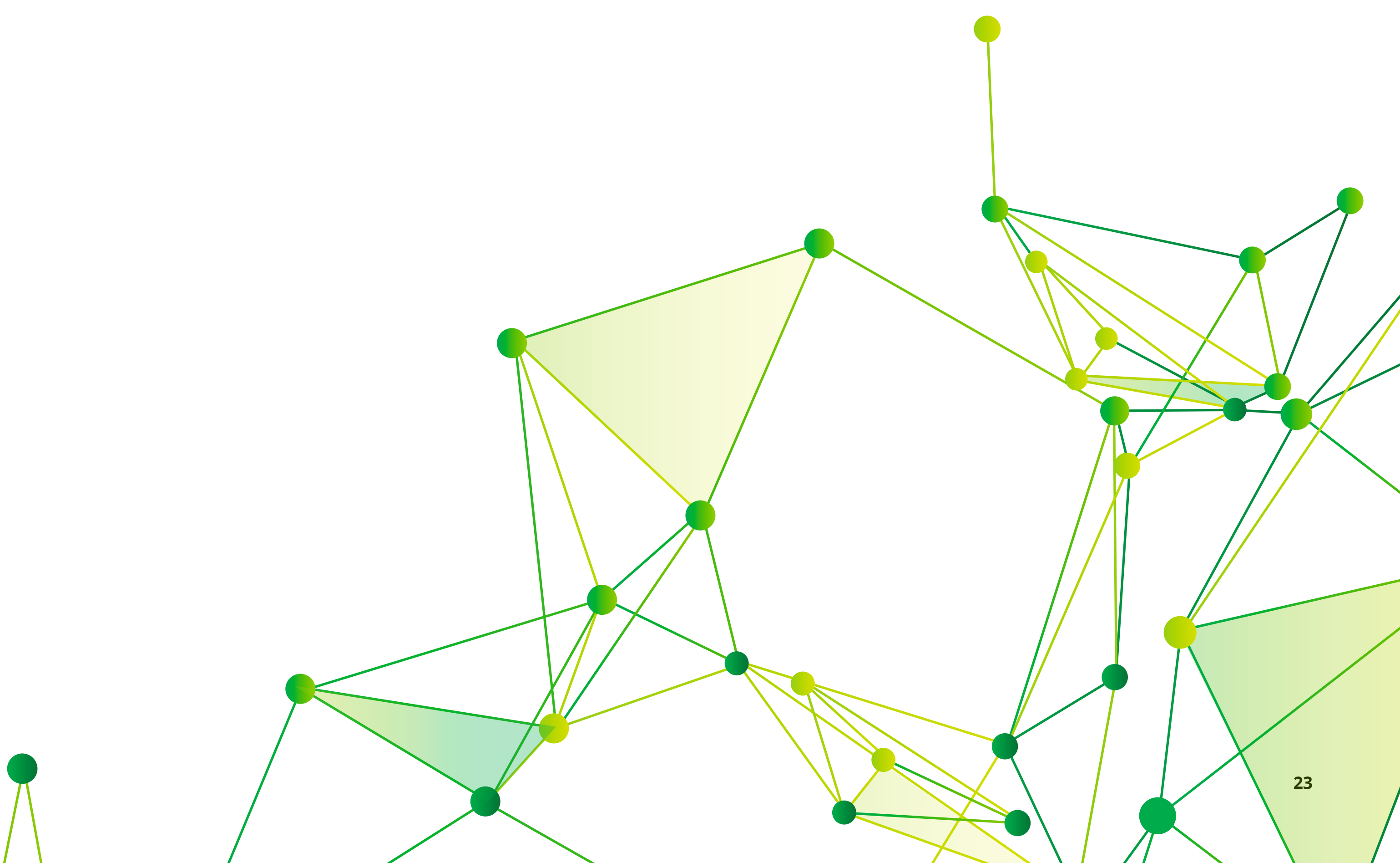

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