

# **European Chemicals Update**

**Late Spring 2022** 

Market Report

### **Executive Summary**

In this edition of European Chemicals Update from Kroll, we evaluate current trends for key raw materials, prevailing investor sentiment and valuation developments in the featured consumer specialty chemicals sub-sector.

Our top insights are detailed below.

Key raw materials prices in the chemicals sector witnessed an uptick in Q1 2022, driven mainly by the Russia-Ukraine conflict and concerns around supply shortages.

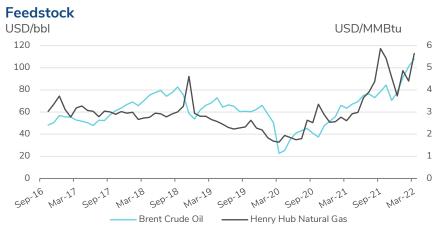
Next, the ifo Business Climate Index for the German chemical industry changed to negative in Q1 2022, with current conditions having a steep fall and expectations moving into the negative territory, mainly as a consequence of the ongoing conflict in Ukraine and supply chains disruption. This indicates the German companies' concern regarding current business activities and tough conditions in the near future.

Finally, in the consumer specialty sub-sector, featured companies showed an increase in market capitalization. Top performers include Croda International and Givaudan SA, which generated approximately 25% and 14% share price gain in the last 12 months, respectively, while the share price of Koninklijke DSM N.V. also had a double-digit growth rate.

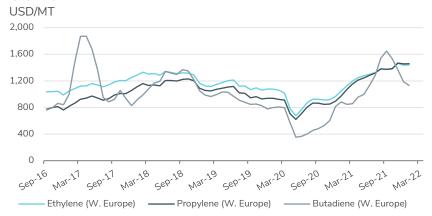


### Key Raw Materials

#### Petrochemicals



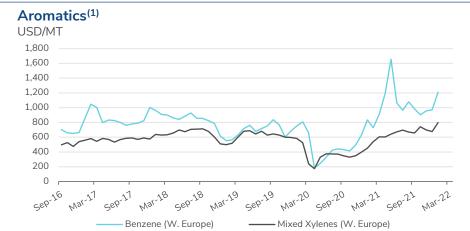
#### Olefins(1)



#### Definitions:

MMBtu: 1 million British thermal units; bbl.: barrels; MT: metric tons Note: (1) Bloomberg as of January 31, 2022

Source: IEA, Chemanalyst, Bloomberg as of March 31, 2022



### **Key Observations**

- Supply concerns mounted as benchmark crude oil prices shot up in early February following the invasion of Ukraine. The prospect of large-scale disruptions to Russian oil production is threatening to create a global oil supply shock.
- Mixed Xylene prices witnessed an uptick in prices because of the robust demand from the downstream manufacturers and high freight costs due to container shortages and disrupted supply chains, which also led to higher prices.
- Butadiene prices are expected to surge on the back of supply shortage and rising demand across the industry.

### Raw Materials Wrap-Up

						Date			Change		
Product	Unit	Туре	Delivery	Source	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	ΔQoQ	ΔΥοΥ
Naphtha	USD/MT	1 Mo. Fwd	CIF NW Europe	Bloomberg	547.4	651.9	707.4	719.0	922.7	28.3%	68.5%
Methanol	EUR/MT	Spot	FOB Rotterdam	Polymerupdate	320.0	309.0	367.0	362.0	385.0	6.4%	20.3%
Acrylic acid	USD/MT	Spot	DDP W Europe	Tecnon Orbichem	1,993.0	2,684.0	2,472.0	2,452.0	2,458.0	0.2%	23.3%
Adipic acid	USD/MT	Contract	DDP W Europe	Tecnon Orbichem	3,094.0	3,679.0	3,649.0	3,729.0	3,985.0	6.9%	28.8%
Caustic soda (liquid)	USD/MT	Spot	DDP W Europe	Tecnon Orbichem	723.0	781.0	850.0	941.0	1,143.0	21.5%	58.1%
Chlorine (liquid)	USD/MT	Spot	DDP W Europe	Tecnon Orbichem	272.0	276.0	269.0	258.0	415.0	60.9%	52.6%
Ammonia	USD/MT	Spot	FOB Black Sea	Green Markets	430.0	530.0	590.0	1,010.0	1,120.0(1)	10.9%	160.5%
Urea (prill)	USD/MT	Spot	FOB Black Sea	Green Markets	338.0	420.0	462.0	930.0	550.0(1)	(40.9%)	62.7%

Definitions:

CIF: Cost, insurance and freight

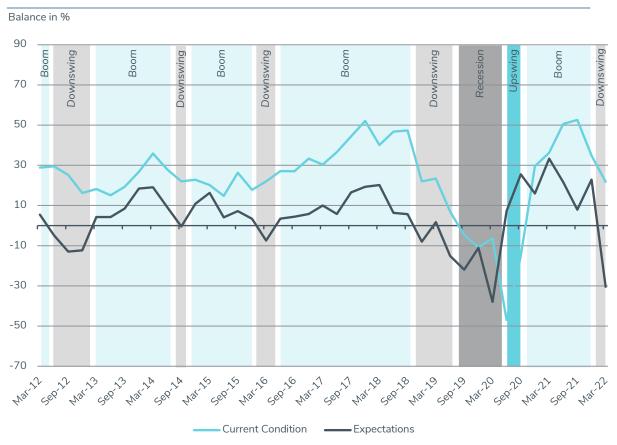
FOB: Free on board

DDP: Delivered duty paid

Note: (1)Ammonia and Urea data as of February 28, 2022

Source: Bloomberg as of March 31, 2022

### ifo Survey German Chemical Industry German Chemical Industry | Business Cycle



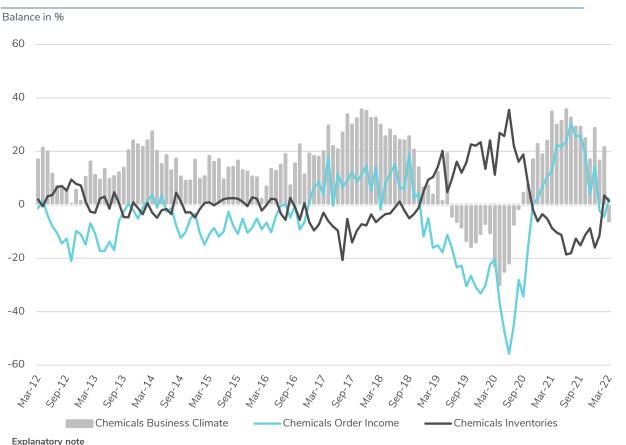
### **Key Observations**

- March 2022 expectations have declined significantly and moved in the negative territory comparable to the level of March 2020.
- · Current conditions remained on a positive trajectory but continue to fall after an all-time high of September 2021.
- The falling expectations indicate the German companies' concern regarding current business activities and tough conditions in the near future. The pessimistic outlook is mainly due to the war in Ukraine and worsening supply chain issues.



Note: Boom: good conditions, expected improvement; Downswing: good conditions, expected deterioration; Recession: bad conditions, expected deterioration; Upswing: bad conditions; expected improvement Source: ifo Institut für Wirtschaftsforschung, Bloomberg as of March 31, 2022

### ifo Survey German Chemical Industry **German Chemical Industry | Business Indicators**



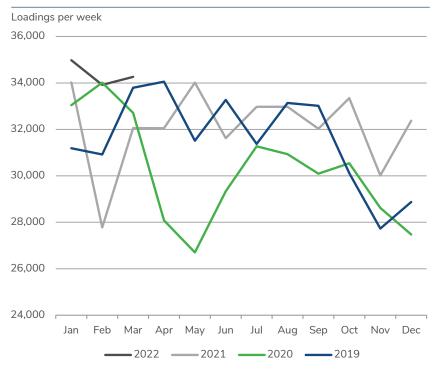
### **Key Observations**

- The chemicals business climate fell guarter-on-guarter from 21.5 in December 2021 to (6.1) in March 2022.
- Order income reversed to remain in the positive territory despite the fall in January and February 2022.
- Inventory levels increased and moved in the positive territory in February 2022 after 15 consecutive months.
- A positive order income level may indicate that chemical customers are steadily placing more orders.

The ifo Business Climate Index is based on ca. 9,000 monthly survey responses from firms in manufacturing, construction, wholesaling and retailing. The firms are asked to give their assessments of the current business situation and their expectations for the next six months. They can characterize their situation as "good," "satisfactory" or "poor" and their business expectations for the next six months as "more favorable," "unchanged" or "more unfavorable." The balance value of the current business situation is the difference between the percentages of the responses "good" and "poor," and the balance value of the expectations is the difference between the percentages of the responses "more favorable" and "more unfavorable." The business climate is a transformed mean of the balances of the business situation and the expectations. For the purpose of calculating the index values, the transformed balances are all normalized to the average of the year 2005.

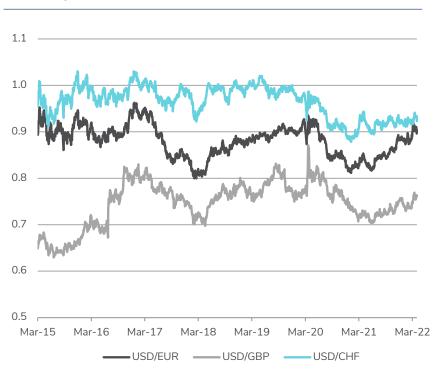


### **Economic Environment U.S.** Weekly Railcar Chemicals Loadings



Source: Association of American Railroads, Bloomberg as of March 31, 2022

### **Currency Trends**



Source: Bloomberg as of March 31, 2022

Rebalanced Stock Development in Europe and the U.S.

**Europe: STOXX 600** 





Oct-21

Dec-21

S&P 500 Chemicals

Feb-22

Apr-22

Source: Bloomberg as of March 31, 2022

Source: Bloomberg as of March 31, 2022

Jun-21

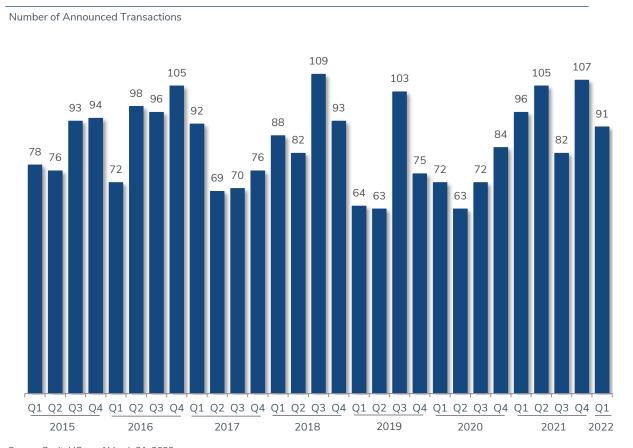
Aug-21

S&P 500

Apr-21

### **Announced Deals**

### **European M&A Quarterly Trend**



### **Key Observations**

- Sixteen out of the 91 transactions announced in Q1 2022 had a disclosed value totaling EUR 2.0 billion (bn).
- The top 10 transactions announced in the last six months, based on reported deal values (see table on next page), have a combined value of EUR 9.2 bn.
- Notable transactions include Compagnie de Saint-Gobain's acquisition of GCP Applied Technologies and Carlyle Group's acquisition of Esmalglass (Altadia Group) in the area of specialty chemicals.

Source: Capital IQ as of March 31, 2022

Note: Screening includes transactions in which the target, buyer or seller is from Europe. Announced transactions include bids made, letters of intent, definitive agreements and registered offerings (definition by Capital IQ).

### Top 10 European Deals Announced During the Last Six Months

EUR in millions

Acquirer	НΟ	Target	НО	Target Rusiness Description	Stake Acquired	Enterprise Value	LTM	LTM EBITDA Margin	•	EV / LTM EBITDA
Compagnie de Saint-Gobain	FR	GCP Applied Technologies	U.S.	GCP Applied Technologies Inc. produces and sells specialty construction chemicals and specialty building materials.	100.0%	2,045.2	835.6	13.5%	2.4x	14.8x
L Carlyle Group	U.S.	Esmalglass (Altadia Group)	ES	Esmalglass manufactures and markets frits, glazes, pigments, inks and ceramic additives.	100.0%	1,900.0	1,219.5	16.4%	1.6x	9.5x
Dulux Group Investments	AU	Cromology SAS	FR	Cromology SAS designs, produces, distributes and sells decorative paints for home and work environments.	100.0%	1,152.0	618.8	10.2%	1.8x	18.0x
Westlake L Olefins Corporation	U.S.	Global Epoxy Business of Hexion	S NL	Global Epoxy Business of Hexion Inc. comprises the manufacture and development of specialty resins, coatings and composites.	100.0%	1,072.0	1,340.0	n/a	0.8x	n/a
Cargill, Incorporated	U.S.	Performance Technologies and Industrial Chemicals	UK	Performance Technologies and Industrial Chemicals Businesses of Croda International Plc comprises industrial chemicals business.	77.0%	1,190.2	594.3	n/a	2.1x	n/a
Synthomer	UK	Adhesive Resins business of Eastman Chemical Company	U.S.	Adhesive Resins business of Eastman Chemical Company comprises adhesive resins manufacturing business.	100.0%	856.1	510.0	16.3%	1.7x	10.3x
Carpenter Co.	U.S.	Engineered Foams business of Recticel SA/NV	NL	Engineered Foams business of Recticel SA/NV comprises engineered foams manufacturing business.	100.0%	656.0	828.7	61.6%	0.8x	10.7x
H.B. Fuller Company	U.S.	Apollo Chemicals Ltd.	UK	Manufactures and distributes liquid adhesives, sealants, coatings and primer products.	100.0%	173.5	35.5	16.3%	4.6x	28.4x
Kerry Group plc	ΙE	c-LEcta GmbH	DE	Industrial biotechnology company that innovates and supplies biotechnological products for food and pharma markets.	92.0%	137.0	n/a	n/a	n/a	n/a
H.B. Fuller Company	U.S.	Fourny NV	BE	Engages in the manufacturing of adhesives and coatings.	100.0%	16.3	8.1	26.2%	2.0x	7.6x
	Saint-Gobain  Carlyle Group  Dulux Group Investments  Westlake Olefins Corporation  Cargill, Incorporated  Synthomer  Carpenter Co.  H.B. Fuller Company  Kerry Group plc  H.B. Fuller	Compagnie de Saint-Gobain FR  Carlyle Group U.S.  Dulux Group Investments AU  Westlake Olefins Corporation U.S.  Cargill, Incorporated U.S.  Synthomer UK  Carpenter Co. U.S.  H.B. Fuller Company U.S.  Kerry Group plc IE  H.B. Fuller U.S.	Compagnie de Saint-Gobain  Carlyle Group  U.S. Esmalglass (Altadia Group)  Dulux Group Investments  Westlake Olefins Corporation  Cargill, Incorporated  Synthomer  UK  Carpenter Co.  Carpenter Co.  U.S. Define	Compagnie de Saint-Gobain FR GCP Applied Technologies U.S.  Carlyle Group U.S. Esmalglass (Altadia ES Group)  Dulux Group Investments AU Cromology SAS FR  Westlake Olefins Corporation U.S. Global Epoxy Business NL of Hexion  Cargill, Incorporated U.S. Performance Technologies and Industrial Chemicals U.S. Adhesive Resins business of Eastman Chemical Company  Carpenter Co. U.S. Engineered Foams business of Recticel SA/NV  H.B. Fuller U.S. Apollo Chemicals Ltd. UK  Kerry Group plc IE c-LEcta GmbH DE	Compagnie de Saint-Gobain FR GCP Applied Technologies U.S. GCP Applied Technologies Inc. produces and sells specialty construction chemicals and specialty building materials.  Carlyle Group U.S. Esmalglass (Altadia Group)  Dulux Group Investments AU Cromology SAS FR Cromology SAS designs, produces, distributes and sells decorative paints for home and work environments.  Westlake Olefins Corporation U.S. Global Epoxy Business NL of Hexion  Cargill, Incorporated Incorporated U.S. Performance Technologies and Industrial Chemicals  Synthomer UK Adhesive Resins business of Eastman Chemical Company  Carpenter Co. U.S. Engineered Foams business of Recticel SA/NV  H.B. Fuller U.S. Apollo Chemicals Ltd. UK Manufactures and distributes and sells decorative paints for home and work environments.  Global Epoxy Business of Hexion Inc. comprises the manufacture and development of specialty resins, coatings and composites.  Performance Technologies and Industrial Chemicals Businesses of Croda International Plc comprises industrial chemicals business.  Adhesive Resins business of Eastman Chemical Company comprises adhesive resins manufacturing business.  Adhesive Resins business of Facticel SA/NV comprises engineered Foams business of Recticel SA/NV comprises engineered foams manufacturing business.  H.B. 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Fuller CompanyU.S.Apollo Chemicals Ltd.UKManufactures and distributes liquid adhesives, sealants, coatings and primer products.100.0%Kerry Group plcIEc-LEcta GmbHDEIndustrial biotechnology company that innovates and supplies biotechnological products for food and pharma markets.100.0%	AcquirerHQTargetHQTarget Business DescriptionAcquiredValueCompagnie de Saint-GobainFRGCP Applied TechnologiesU.S.GCP Applied Technologies Inc. produces and sells specialty building materials.100.0%2,045.2Carlyle GroupU.S.Esmalglass (Altadia Group)ESEsmalglass manufactures and markets frits, glazes, pigments, inks and ceramic additives.100.0%1,900.0Dulux Group InvestmentsAUCromology SASFRCromology SAS designs, produces, distributes and sells decorative paints for home and work environments.100.0%1,152.0Westlake Colefins CorporationU.S.Global Epoxy Business of Hexion Inc. comprises the manufacture and development of specialty resins, coatings and composites.100.0%1,072.0Cargill, CorporatedU.S.Performance Technologies and Industrial Chemicals Dusiness of Eastman Chemical CompanyUKPerformance Technologies and Industrial Chemicals Dusiness.77.0%1,190.2SynthomerUKAdhesive Resins Dusiness of Eastman Chemical Company Chemicals Dusiness of Feating Dusiness of Feating Dusiness.100.0%856.1Carpenter Co.U.S.Engineered Foams Dusiness of Recticel SA/NV comprises adhesive resins manufacturing business.100.0%656.0H.B. 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Source: Capital IQ, Mergermarket and company information

Note: Transactions ordered by value. Includes announcements through March 31, 2022. Figures converted with exchange rate as per the respective announcement date.

Enterprise Value (EV): Market Capitalization + Total Debt + Preferred Equity + Minority Interest - Cash and Short-Term Liabilities EBITDA: Earnings Before Interest, Taxes, Depreciation and Amortization; LTM: Last Twelve Months



### Strategic Alliances and Collaborations

### Clean Hydrogen Collaboration Between Johnson Matthey and 8 Rivers to Accelerate Global Decarbonisation

March 2022

Johnson Matthey and 8 Rivers Capital, two global leaders in sustainable technologies, have entered a Memorandum of Understanding to collaborate toward the commercialization of 8 Rivers' clean hydrogen process (8RH<sub>2</sub>). This collaboration will combine 8 Rivers' carbon capture technology with LCH<sup>TM</sup>, Johnson Matthey's technology for production of blue hydrogen. The collaboration aims to accelerate the rollout of global projects producing clean fuels, incorporating up to nearly 100% carbon capture.

#### AkzoNobel Opens Global R&D Center in the UK

March 2022

A new GBP 10 mn global research and development (R&D) center has been opened by AkzoNobel at its Slough site in the UK. The facility will include 120 specialists and will act as a major hub in the company's worldwide R&D network. It will also help to further advance the company's innovation capabilities, especially in the area of decorative paints.

#### Lanxess Makes Siemens a Global Alliance Partner

February 2022

Lanxess and Siemens have signed a contract to procure technical goods for the global production facilities. From now on, Siemens will supply Lanxess not only with digital control systems and software, but also with motor control centers and fire detection systems, among other things, at globally uniform conditions. The contract will initially run for five years, which covers an order volume in the mid-double-digit million-euro range and can also be extended to other material groups at any time. In addition, the companies will focus on realization of joint innovation projects.

### AskBio and Touchlight Restructure Their Joint Venture February 2022

AskBio, a gene therapy company wholly owned and independently operated as a subsidiary of Bayer AG, and Touchlight, a biotechnology company pioneering enzymatic DNA production, have announced a revised structure to their former joint venture, Touchlight AAV. Both parties will benefit from co-exclusive rights to independently supply the Adeno-Associated Virus market with doggybone DNA (dbDNA<sup>TM</sup>) through their respective independently owned contract development and manufacturing organization along with other arrangements.

# Umicore Signs Renewable Electricity PPAs With ENGIE and Axpo to Power Two of Its Largest Sites Worldwide

February 2022

Umicore has signed two separate long-term power purchase agreements with ENGIE and Axpo to source renewable electricity from offshore and onshore wind turbines in Belgium. These agreements will cover more than half of the electricity demand from Umicore's Belgian sites and help the Group achieve its objective to be carbon neutral by 2035.

# Solvay Announces PVDF Capacity Investment in Europe to Meet Growing EV Battery Demand

February 2022

Solvay is extending its existing leadership position in the global lithiumion battery market by expanding its production capacity of high-performance polymer Solef® polyvinylidene fluoride (PVDF) at its site in Tavaux, France, to 35-KT, creating the largest PVDF production site in Europe. This investment will be completed by December 2023 and reinforces Solvay's global leadership in this field, positioning it to capitalize on the growing demand for electric and hybrid vehicles.

### Strategic Alliances and Collaborations

Lonza, Forbion and BioGeneration Ventures Extend Collaboration to Add Development and Manufacturing Services of Small Molecules January 2022

Joint Venture Partners Forbion and BioGeneration Ventures extend collaboration with Lonza to include services relating to small molecules for the portfolio companies of both entities. The collaboration continues to provide early de-risking, development and manufacturing, and optimization services for small molecules. The extension of the agreement builds upon an existing five-year collaboration supporting development and manufacture of biologics.

Yara and Linde Engineering Agree to Build a 24 MW Green Hydrogen Plant to Achieve a Significant Carbon Dioxide Reduction in the Production of Fertilizers in Norway

January 2022

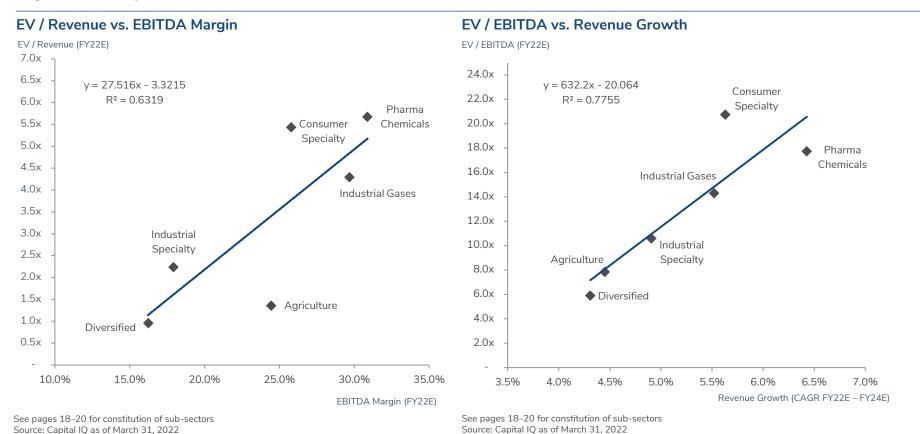
Yara announces the signing of a contract with Linde Engineering for the construction and delivery of a green hydrogen demonstration plant at Yara's ammonia production facility at Herøya Industripark in Porsgrunn, Norway. The project, which is supported by a NOK 283 mn grant from Enova, will demonstrate that ammonia produced using renewable energy can reduce the impact of carbon dioxide in fertilizer production.

Clariant Completes Sale of Its Pigments Business January 2022

Clariant completed the sale of its pigments business to a consortium of Heubach Group and SK Capital Partners. The pigments divestment concludes Clariant's transformation into a high-value specialty chemical company, allowing the company to invest in profitable growth in the core business areas and to address the increasing demand for more sustainable products.

### Sub-Sector Summary

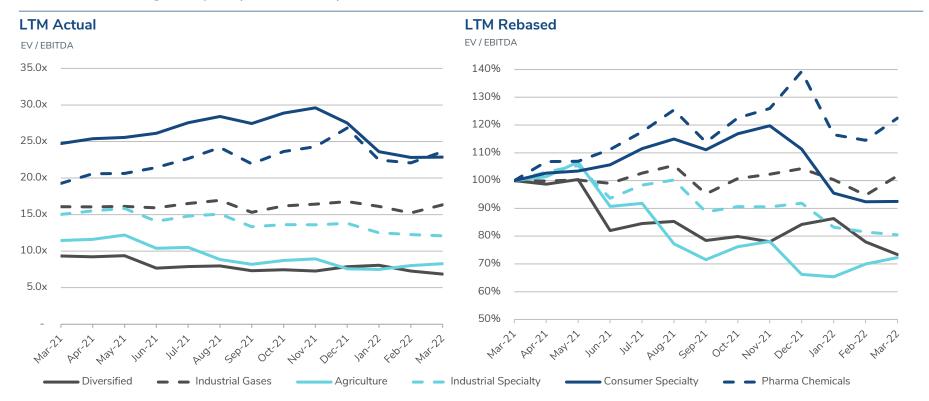
### **Regression Analysis**



Enterprise Value (EV): Market Capitalization + Total Debt + Preferred Equity + Minority Interest - Cash and Short-Term Liabilities EBITDA: Earnings Before Interest, Taxes, Depreciation and Amortization

Sub-Sector Summary

**Sub-Sector Trading Multiples (EV / EBITDA)** 



Source: Capital IQ as of March 31, 2022

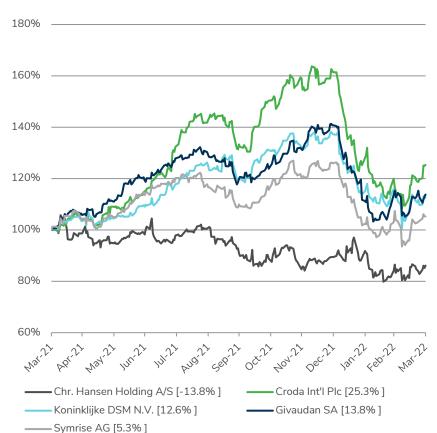
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LTM: Last Twelve Months

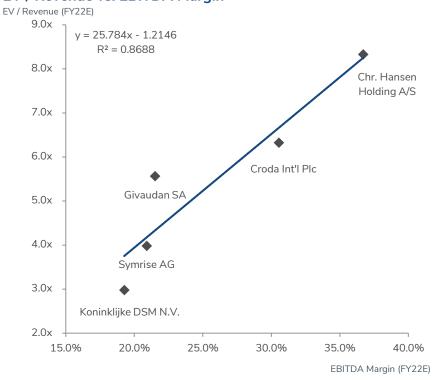
Sub-Sector Focus: Consumer Specialty

**Share Price Development and Regression Analysis** 

### **Share Price Development Rebased**



### EV / Revenue vs. EBITDA Margin



Source: Bloomberg as of March 31, 2022

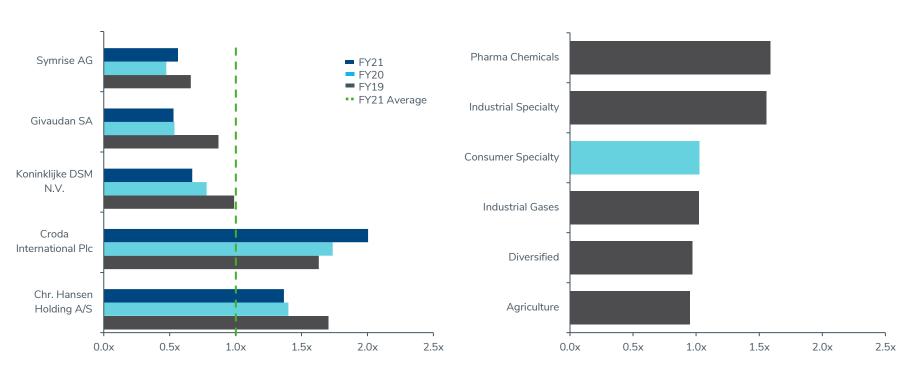
See pages 18-20 for constitution of sub-sectors Source: Capital IQ as of March 31, 2022

Sub-Sector Focus: Consumer Specialty

**Capital Expenditure / Depreciation** 

### **Consumer Specialty**

### **Chemicals Sub-Sector Average (FY21)**

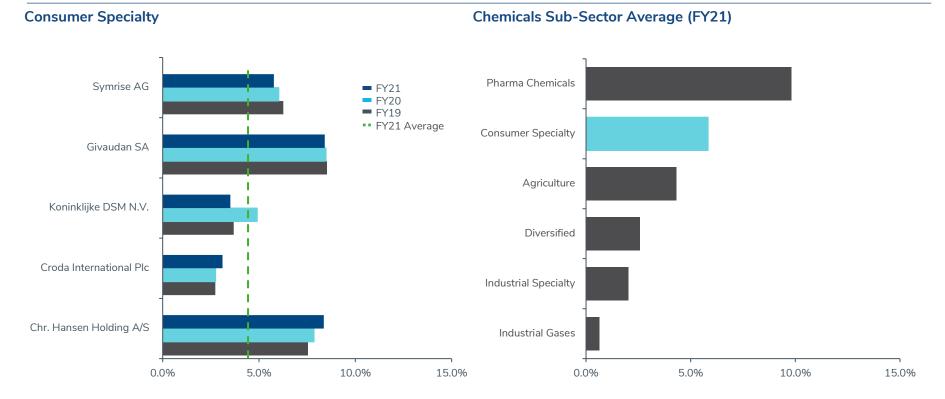


Source: Capital IQ, Bloomberg as of March 31, 2022

Source: Capital IQ as of March 31, 2022

Sub-Sector Focus: Consumer Specialty

Research and Development Expenditures in % of Sales



Source: Capital IQ, Bloomberg as of March 31, 2022

Source: Capital IQ as of March 31, 2022

### Company Trading Statistics

EUR in millions	Share Price	52-Week Share Price (in EUR)				Enterprise	Revenues		EBITDA					
(except for share price)	(in EUR)				Market			EBITDA		Margin	EV/EBITDA			
Company Name	31-Mar-22	Low	High	% of High	Cap	Value	LTM	LTM	FY2022	LTM	LTM	FY2022		
Diversified														
Arkema SA	108.8	92.1	135.0	81%	8,041.2	8,565.2	9,519.0	1,629.0	1,621.1	17.1%	5.3x	5.3x		
BASF SE	51.8	47.2	72.9	71%	46,862.8	62,901.8	78,598.0	11,110.0	10,460.6	14.1%	5.7x	6.0x		
Clariant AG	15.7	13.6	20.2	78%	5,183.4	6,556.8	3,602.4	582.0	777.9	16.2%	10.5x	8.4x		
Evonik Industries AG	25.2	22.4	31.0	81%	11,733.9	14,656.9	14,955.0	2,149.0	2,540.6	14.4%	6.8x	5.8x		
Lanxess AG	39.9	33.5	65.9	61%	3,440.9	5,716.9	7,557.0	934.0	1,148.3	12.4%	6.1x	5.0x		
Solvay SA	89.5	78.0	118.7	75%	9,228.5	11,519.5	11,434.0	1,933.0	2,341.3	16.9%	6.0x	4.9x		
Average										15.2%	6.7x	5.9x		

#### Agriculture

_												
Israel Chemicals Ltd.	10.8	5.5	11.2	96%	13,846.2	16,181.2	6,115.5	1,391.9	2,451.8	22.8%	11.4x	6.6x
K+S AG	27.5	8.2	30.1	91%	5,253.9	5,984.6	3,213.1	969.1	1,914.9	30.2%	6.2x	3.1x
KWS Saat SE	65.7	55.4	80.9	81%	2,163.6	2,807.3	1,415.8	222.2	250.5	15.7%	12.6x	11.2x
Tessenderlo Group NV	32.8	30.2	38.9	84%	1,415.5	1,491.6	2,081.5	353.0	331.7	17.0%	4.2x	4.5x
Yara International ASA	45.4	39.6	51.2	89%	11,573.1	15,146.5	14,610.4	2,257.2	3,141.5	15.4%	6.5x	4.3x
Average										20.2%	8.2x	6.0x

Source: Capital IQ as of March 31, 2022; includes the most actively traded European chemical companies for respective covered sectors

### Company Trading Statistics

EUR in millions	Share Price	52-Week Share Price								EBITDA		
(except for share price)	(in EUR)		(in EUR)		Market	Enterprise Value	Revenues	EBI	TDA	Margin	EV/EE	BITDA
Company Name	31-Mar-22	Low	High	% of High	Cap		LTM	LTM	FY2022	LTM	LTM	FY2022
Industrial Specialty												
AkzoNobel NV	78.2	69.6	108.5	72%	14,006.8	16,557.8	9,587.0	1,346.0	1,623.3	14.0%	12.3x	10.2x
Covestro AG	45.8	39.5	60.2	76%	8,830.3	10,712.3	15,903.0	3,005.0	2,657.6	18.9%	3.6x	4.0x
EMS-Chemie Holding AG	881.2	780.6	1,022.5	86%	20,611.5	20,550.3	2,201.8	666.8	762.7	30.3%	30.4x	26.9x
Johnson Matthey Plc	22.2	19.5	39.8	56%	4,097.5	4,943.6	20,129.9	930.8	872.8	4.6%	5.2x	5.7x
Kemira Oyj	11.9	10.4	14.7	81%	1,820.2	2,683.9	2,676.7	336.5	421.1	12.6%	8.0x	6.4x
Lenzing AG	92.2	82.0	134.2	69%	2,447.9	3,596.1	2,194.6	340.4	481.2	15.5%	10.6x	7.5x
Sika AG	300.5	254.2	377.0	80%	46,012.4	48,496.3	8,924.4	1,604.6	2,005.0	18.0%	29.8x	24.2x
Synthomer Plc	3.6	2.9	6.8	54%	1,690.0	1,892.8	2,773.6	552.6	442.1	19.9%	3.4x	4.3x
Umicore SA	39.4	31.7	60.1	66%	9,448.4	10,463.3	24,065.7	1,154.4	1,112.0	4.8%	9.1x	9.4x
Victrex Plc	21.7	20.5	32.2	67%	1,881.2	1,770.0	356.8	122.5	140.2	34.3%	14.2x	12.6x
Wacker Chemie AG	154.8	116.7	174.8	89%	7,687.7	7,541.1	6,207.5	1,407.4	1,420.8	22.7%	5.4x	5.3x
Average										17.8%	12.0x	10.6x
Industrial Gases												
Air Liquide SA	158.9	136.0	161.3	99%	75,345.0	87,598.2	23,334.8	5,820.8	6,882.5	24.9%	15.0x	12.7x
Linde Plc <sup>(2)</sup>	287.6	240.8	317.0	91%	144,765.4	157,187.3	27,076.3	8,912.6	9,897.9	32.9%	17.2x	15.9x
Average	p									28.9%	16.1x	14.3x

Frankfurt Stock Exchange (XETRA:LIN) and New York Stock Exchange (NYSE:LIN). In accordance, our coverage for Linde AG has been replaced by Linde Plc.

### **Company Trading Statistics**

EUR in millions	Share Price	52-	Week Share	Price				EBITDA						
(except for share price) (in E		(in EUR)			Market	Enterprise	Revenues	EBITDA		Margin	EV/EBITDA			
Company Name	31-Mar-22	Low	Low High		Cap	Value	LTM	LTM	FY2022	LTM	LTM	FY2022		
Consumer Specialty														
Chr. Hansen Holding A/S	66.7	60.9	83.0	80%	8,785.9	9,752.4	1,145.7	407.9	429.8	35.6%	23.9x	22.7x		
Croda International Plc	93.2	75.0	124.3	75%	12,906.4	13,897.0	2,249.8	598.3	671.4	26.6%	23.4x	20.7x		
Koninklijke DSM NV	162.5	143.0	200.5	81%	28,019.1	29,142.1	9,204.0	1,618.0	1,885.4	17.6%	18.0x	15.5x		
Givaudan SA	3,741.0	3,376.4	4,761.6	79%	34,495.7	38,798.8	6,447.1	1,350.4	1,500.7	20.9%	28.4x	25.9x		
Symrise AG	108.9	94.6	132.7	82%	15,214.2	16,625.5	3,825.7	812.1	872.9	21.2%	20.5x	19.0x		
Average										24.4%	22.8x	20.7x		

#### **Pharma Chemicals**

Bayer AG	62.1	43.9	62.7	99%	61,008.5	94,289.5	44,081.0	8,423.0	12,253.6	19.1%	11.2x	7.7x
Lonza Group Ltd.	657.1	519.5	767.8	86%	48,749.5	48,408.3	5,217.3	1,169.0	1,885.6	22.4%	30.7x	25.7x
Novozymes A/S	62.2	51.0	73.3	85%	17,227.4	17,980.2	2,010.8	686.9	765.8	34.2%	26.2x	23.5x
Merck KGaA	189.9	134.5	231.5	82%	82,542.6	91,410.6	19,687.0	5,830.0	6,486.2	29.6%	15.7x	14.1x
Average										26.3%	20.9x	17.7x

Source: Capital IQ as of March 31, 2022; includes the most actively traded European chemical companies for respective covered sectors

Enterprise Value (EV): Market Capitalization + Total Debt + Preferred Equity + Minority Interest - Cash and Short-Term Liabilities EBITDA: Earnings Before Interest, Taxes, Depreciation and Amortization

LTM: Last Twelve Months

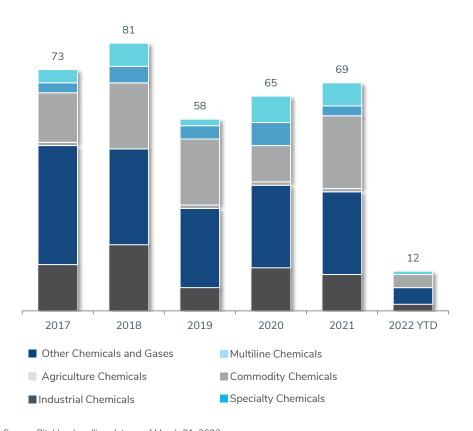
### **Venture Capital Activity Review**

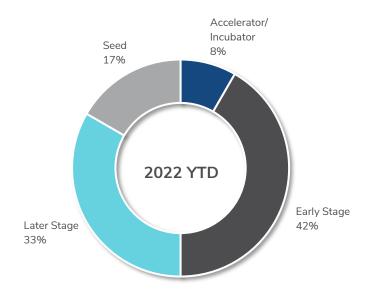
Announced Funding Rounds

**European Venture Capital (VC) Funding Trend** 

**Number of Announced VC Funding Rounds** 

**VC Stage Split** 





Source: Pitchbook, rolling data as of March 31, 2022

### **Venture Capital Activity Review**

### **Announced Funding Rounds**

### Selected Startups That Received VC Funding

# Colorifix Raised EUR 20.6 mn Funding From The Mills Fabrica and Other Undisclosed Investors

March 2022



Funding raised to date approx. EUR 32.0 mn Founded in 2016, Colorifix is a developer of organic dyeing technology designed to make fabrics biodegradable that are ethical, are non-toxic and can reduce pollution. The company's technology helps to convert commodity agricultural byproducts such as sugar molasses into pigments and beautifully dyed textiles, enabling textile manufacturers to use safe, naturally processed dyes while manufacturing cloth. The funds will be used to boost its growth.

# Biorizon Biotech Raised EUR 10.0 mn Funding From Moira Capital Partners

December 2021



Funding raised to date approx.
EUR 10.0 mn

Source: Company information, Pitchbook

Founded in 2010, Biorizon Biotech is an operator of a biotechnology company providing biostimulants and biopesticides based on microalgae. The company has developed unique techniques and processes to improve the growth and protection of plants and fruits through different uses of microalgae. The funds will be used to boost its growth. The company will continue to promote its internationalization in southern Europe, Latin America and Asia.

# Lhyfe Raised EUR 17.0 mn From Ovive, Andera Partners and Société Financière Lorient Développement

February 2022



Funding raised to date approx.
EUR 78.0 mn

Founded in 2017, the company engages in the production of hydrogen from water and wind through its in-house technology producing hydrogen from renewable sources of energy at low emissions, enabling communities and industries to transition to a clean source of energy. The funds will be used to support Lhyfe's strategy for the deployment of renewable hydrogen production sites in Europe, to double its sales, technical and R&D teams, and for its technological and geographical expansion.

# Umincorp Raised EUR 15.0 mn From Energietransitiefonds Rotterdam and Invest-NL (Investment Company)

December 2021



Funding raised to date approx. EUR 15.0 mn Founded in 2012, Umincorp develops magnetic density separation-based waste management technology designed to convert waste into a source of valuable raw materials. The company's technology uses ferromagnetic fluid and engineered magnets to recover post-consumer mixed plastics at higher yields and polymer purities than existing sorting technologies, enabling companies to optimize processes for fine material separation. The funds will be mainly used for the construction of a new rPET factory in Rotterdam.

Note: Includes startups with the highest VC activities in the past 12 months based on Pitchbook as of March 31, 2022. All trademarks, trade names or logos referred to herein are the property of their owners.



### **Upcoming Events**

#### Q3 2022 to Q2 2023



#### H3i Italy

06/07/2022 to 06/08/2022 | Milan, Italy https://www.h3i.it/it/

The H3i Italy exhibition provides a business platform for exhibitors and visitors from all over the world to network. The visitors include leading HI&I ingredients suppliers, equipment manufacturers and service providers. The event is a combination of technical seminars, supplier presentations and an exhibition.

#### Focal topics include

- Raw materials
- Ingredients and formulation of household, industrial and institutional cleaning products

# Note: Please refer to the web pages for updates on events. All trademarks, trade names or logos referred to herein are the property of their owners.

#### **Events Ticker**

#### **ACI's Biopesticides Europe 2022**

06/08/2022 to 06/09/2022 | Brussels, Belgium https://www.wplgroup.com/aci/event/biopesticides-europe/

### ChemCon Europe 2022

06/20/2022 to 06/24/2022 | London, UK https://chemcon.net/upcoming2022uk.shtml

#### Analytica 2022

06/21/2022 to 06/24/2022 | Munich, Germany https://analytica.de/en/

#### 13th Global Drug Delivery & Formulation Summit

06/27/2022 to 06/29/2022 | Berlin, Germany https://ddfevent.com/

#### **CPhI** Worldwide

11/01/2022 to 11/03/2022 | Frankfurt, Germany https://www.cphi.com/europe/en/home.html

#### Adhesives & Bonding Expo

11/08/2022 to 11/10/2022 | Stuttgart, Germany https://www.adhesivesandbondingexpo.eu/



#### Contacts

#### Germany

Andreas Stoecklin, Frankfurt Head of EMEA Corporate Finance +49 (0) 69 7191 8466 andreas.stoecklin@kroll.com

Philipp Bose, Munich
Director, M&A
+49 (0) 89 388 884 280
philipp.bose@kroll.com

#### UK

Dafydd Evans, London Managing Director, M&A +44 (0) 20 7089 4850 dafydd.evans@kroll.com

Paul Teuten, London Managing Director, M&A +44 (0) 20 7089 4840 paul.teuten@kroll.com

#### Spain

Javier Zoido, Madrid Head of Iberia Valuation Services +34 910 389 010 javier.zoido@kroll.com

#### France

Jacques Giard, Paris
Country Head France, Transaction Advisory
Services
+33 (0) 1 40 06 40 70
jacques.giard@kroll.com

#### Netherlands

Jochem Quaak, Amsterdam Managing Director, Valuation Services +31 (0) 20 851 5159 jochem.quaak@kroll.com

#### North America

David Althoff, Chicago Managing Director, M&A +1 312 697 4625 david.althoff@kroll.com

Steve Burt, Chicago Global Head of M&A Advisory +1 312 697 4620 steve.burt@kroll.com

Howard Johnson, Toronto Canada Leader, M&A +1 416 597 4500 howard.johnson@kroll.com

#### China

David Lu, Shanghai
Head of Asia Pacific Corporate Finance,
M&A
+86 21 6032 0608
david.lu@kroll.com

#### Japan

Katsumi Asai, Tokyo Managing Director, Valuation Services +81 (0) 33 593 0183 katsumi.asai@kroll.com

#### India

Varun Gupta, Mumbai Asia Pacific Leader, Valuation Services +91 22 6623 1001 varun.gupta@kroll.com

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