William Blair

June 2020

Investment Banking

Chemicals

Chemicals Industry Adapts to Historic Impacts of COVID-19, Oil Price Declines

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Chemicals M&A Activity Chemicals Industry Adapts to Historic Impacts of COVID-19, Oil Price Declines

Global competitive dynamics are rapidly changing as chemicals companies seek to manage through a crisis and position for future growth.

The chemicals industry is being affected in an unprecedented way by the combination of two monumental events: the COVID-19 pandemic and an ongoing price war that has led to a massive decline in the price of oil. These forces are immediately reshaping supply chains and global demand for chemicals, reshuffling global competitive dynamics, and strongly emphasizing the importance of diversifying supply chains and revenue sources.

Chemicals are at the epicenter of many industries that manufacture products for everyday life, including automobiles, construction, consumer staples, pharmaceuticals, and nutraceuticals. But everyday life is facing a significant interruption as a result of the pandemic, leading most chemicals companies to experience significantly weaker demand for their products. These challenges will have a significant impact on financial performance in the near term. We expect to see a continued lag in operating and financial performance well into the third quarter and potentially beyond if prolonged COVID-related shutdowns and high unemployment rates do not show signs of improvement.

In addition to the historic challenges presented by COVID-19, the ongoing battle for oil market share has decimated oil prices globally, providing additional headwinds for many chemicals producers. While oil price declines will provide short-term margin relief for many companies, falling oil prices will lead to steep price cuts for chemicals going forward as manufacturers continue to face weaker demand for their products in a down economy.

The dual disruptions of the pandemic and oil price war are likely to lead to a major reshaping of the chemicals industry. Many companies will look for opportunities to reshape their portfolios, emphasizing capabilities in less cyclical end-markets and diversifying the risk factors that drive performance from both a supply and demand perspective. Companies that are able to emerge from the crisis in a relatively strong position will likely turn to M&A to gain market share or invest in new technologies or formulations to serve niche high-margin applications.

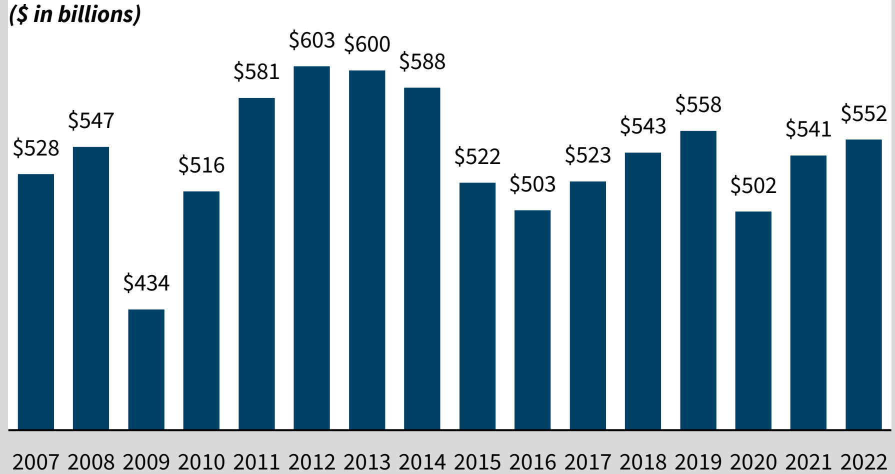
COVID-19's Impact on Global Supply and Demand for Chemicals

The ongoing COVID-19 pandemic has resulted in an abrupt and significant decrease in global demand for chemicals across industries. U.S. chemicals shipments are expected to fall 10.0% in 2020 before rising 7.8% in 2021, according to the American Chemistry Council. Anticipated declines in chemicals shipments values reflect depressed end-use markets and export demand for U.S. chemistry products.

On the positive side, strengthening demand for chemicals used in response to COVID-19 is partly offsetting demand weakness in certain end-markets. Among the chemistry solutions used in the fight against the virus are synthetic materials for personal protective equipment,

Chemicals Shipment Trends

($ in billions)



Source: American Chemistry Council

ingredients for cleaners and disinfectants, and plastics used in medical equipment, such as ventilator machines and IV bags.

Supply chain disruptions are another major challenge affecting financial and operating performance. The chemicals industry employs nearly 1 million people in the United States alone. The vast majority of these employees are directly involved in the production process, which means that working remotely is generally not feasible. Companies are facing production challenges as they are forced to quickly adjust the way they manage their workforces and operations while dealing with the pandemic. Some plants have been forced to shut down or significantly reduce production, while others are taking measures to allow production to continue, such as reorganizing staff to limit the potential spread of the disease.

For decades, the industry's global supply chain has largely depended on China, which was the first country to be heavily affected by the pandemic and institute wide-ranging countermeasures to combat the virus. When China shut down in early 2020, the impact to the global supply chain was significant. Some of this impact, however, was muted as a result of the recent trade tensions between China and the United States; many Chinese suppliers had moved production out of China to circumvent tariffs, and many international companies had sourced secondary sources of supply outside of China.

China is coming back online, which will benefit the global chemicals supply chain. As a dominant player in the raw material supply for the chemicals industry, an uptick in supply from China will allow downstream manufacturers to eventually increase production—but it will take time for increasing supply from China to work its way through the system.

Sector, Subsector, and Company-Specific Performance Amid COVID-19

The unpredictable nature of the current crisis has emphasized the importance of diversifying revenue streams to dampen the impact of potential crises going forward. Companies serving highly cyclical end-markets are experiencing significant decreases in demand due to global economic uncertainty and capital markets volatility. Particularly challenged end-markets include automotive, residential and commercial real estate, discretionary consumer goods, building products and construction, and aerospace. On the other hand, some sectors of the chemicals industry are showing signs of resilience. Demand is expected to remain strong for chemicals used in end-markets including agriculture, pharmaceutical ingredients (APIs), life sciences, reagents, medical devices and supplies, food and beverage, and intermediates for consumer products (cleaning solutions, sanitizers, and detergents).

From a long-term perspective, the historic challenges caused by the pandemic are expected to present opportunities for well-positioned companies with healthy balance sheets. Cash-rich companies that have been positively affected, such as those serving the consumer staples, food and beverage, and medical end-markets, may be able to seize opportunities to emerge from this crisis even stronger. On the other hand, many financially weak companies with portfolios focused on cyclical end-markets may end up in distressed situations and be unable to survive in their current form.

Oil Price Collapse Reshapes Global Competitive Dynamics

In addition to the COVID-19 pandemic, a sudden and sharp decline in oil prices is reshaping the chemicals industry, causing a major shift in chemicals prices and significantly affecting global competition. U.S. chemicals producers have seen an immediate negative impact, eroding their previous strategic advantage for raw material inputs due to their strong reliance on natural gas, which historically was a much cheaper input relative to oil. U.S. producers that rely on ethane and other natural gas liquids (NGLs) as inputs are vulnerable to low oil prices because their feedstock advantage begins to erode when crude oil prices fall relative to natural gas prices. Oil price declines have been significantly greater than natural gas price declines; oil prices have declined 31.5% since 2019 while natural gas prices are down 24.6%.

European and Asian chemicals companies generally use oil-based derivative products for raw materials. The outsized drop in oil prices greatly benefits international chemicals

Post-Crisis Strategy Insights

As the chemicals industry continues to adjust to this historic environment, companies are reconsidering their long-term strategy and competitive positioning. Below are some strategies that many chemicals companies are considering to strengthen their operations and position themselves for growth on the other side of the pandemic.

Manufacturing Automation	Where possible, adoption of cloud data and automation will optimize manufacturing processes to create significant long-term savings
Re-examine Workforce Management	Rethink internal operations and the optimal ways to organize your workforce. As non-production roles are increasingly conducted remotely, look for ways to reduce costs in areas such as real estate
Invest in Competitive Advantages	Invest in technology and/or proprietary formulations to further scale or advance your competitive advantages. Focus on creating products that allow you to command higher prices by providing niche and differentiated solutions
Support Customers and Suppliers	Look for opportunities to further entrench yourself with customers on both the buy side and pricing side and help customers and suppliers withstand this volatile period
Aggressively Cut Costs	Improve your cost structure to further insulate your company from future demand uncertainty. These efforts include sourcing alternative sources for cheaper inputs, automating processes where possible, and rethinking certain aspects of doing business, such as travel budgets
Improve Resiliency of Supply Chains	The current economic and geoplotical environment has highlighted the importance of having a diversified supply chain. In addition to creating competitive dynamics that can help to drive input prices lower, diversification of suppliers can reduce the risks caused by a pandemic, trade war, or other unforeseen disruption to supply chains

Source: William Blair Research

manufacturers that can now buy oil at significantly cheaper prices that are comparable to natural gas prices in the United States. For example, China, which does not have a large supply of natural gas and instead buys oil through Europe, the Middle East, and other parts of Asia, stands to benefit as its raw material throughput will be more competitive than it has been for decades. But lower input prices will be offset by lower output prices as customers begin to request price concessions to be commensurate with raw materials prices, limiting potential benefits for Asian companies. Europe, on the other hand, will benefit from lower chemical feedstock prices and from its greater focus on specialty chemicals that are less sensitive to the price of oil.

Sector and Subsector Impacts of the Oil Price Shock

Oil price declines will affect certain companies and end-markets more strongly than others. Specialty chemicals companies generally are better insulated from slumping oil prices, although they will also experience a significant slowdown due to global demand weakness. Specialty companies that focus on coatings, consumer care, high-performance polymers, and lubricants will benefit from lower oil prices from a raw materials perspective, but such benefits will unlikely be enough to offset the drop in global demand due to the ongoing coronavirus pandemic.

Companies that make products that compete directly with oil-based products, as well as those that make chemicals used in oil and gas production, will continue to see challenges. In particular, companies that supply the oil and gas industry with additives, surfactants for fracking fluid, and drag reducers for pipelines will continue to face headwinds for the near term.

M&A Outlook for Chemicals Industry

While the macroeconomic environment is presenting significant and largely unprecedented challenges for the chemicals industry, a downturn also provides opportunities for companies to rethink their portfolios and position for future growth. While major M&A activity will likely remain muted until some uncertainty has abated, lower asset valuations and a pressing need for consolidation could drive a swathe of industry M&A activity in the coming months.

When M&A activity restarts in the chemicals industry, we anticipate a few major themes to define the dealmaking environment. Megamergers are a strong possibility as companies seek to diversify the risk factors that drive their performance as well as to benefit from scale. Non-cyclical assets are also likely to attract premium valuations as we emerge from the crisis.

Diversification will be a key factor guiding M&A activity. Businesses will likely focus on expanding into less cyclical end-markets and consider selling assets that are more closely tied to GDP. Conversely, other companies focused on cyclical end-markets may see this as an opportunity to double-down on their current strategy and seek opportunities to consolidate cyclical end-markets and generate value through synergies. Lastly, if the recession is long and asset prices become depressed, private equity sponsors and their portfolio companies could become more active in larger-scale transactions and divestitures.

To learn more about these and other trends shaping dealmaking activity in the chemicals industry, please do not hesitate to contact us.

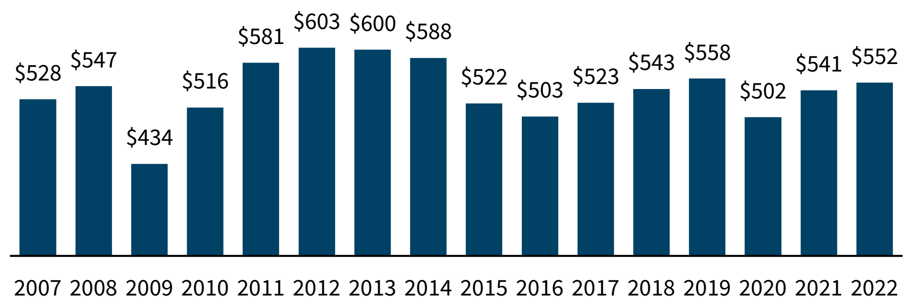
Chemicals Market Analysis

We look behind the numbers to examine the market dynamics that are driving trends in the dealmaking landscape in the chemicals industry.

Chemicals Shipments Trends

The ongoing COVID-19 pandemic has resulted in an abrupt and significant decrease in global demand for chemicals across industries. U.S. chemicals shipments are expected to fall 10.0% in 2020 before rising 7.8% in 2021, according to the American Chemistry Council. Anticipated declines in chemicals shipments reflect depressed end-use markets and export demand for U.S. chemistry products.

($ in billions)



Source: American Chemistry Council

Impact of Revenue Change to EBITDA for Chemcials Companies (Illustrative Model)

This model shows the historical correlations between revenue and EBITDA for various segments of the chemicals industry from 2006 through Q1-2020. Lower value-add segments such as commodity chemicals and fertilizers & agricultural chemicals have significantly greater EBITDA sensitivity to revenue changes than other segments.

% EBITDA Change	% Revenue Change								
	(20.0%)	**(15.0%)**	**(10.0%)**	**(5.0%)**	**0.0%**	**5.0%**	**10.0%**	**15.0%**	**20.0%**
Adhesives, Sealants & Coatings	(20.2%)	(15.2%)	(10.1%)	(5.0%)	0.0%	5.1%	10.1%	15.2%	20.3%
Advanced Materials, Polymers & Additives	(4.0%)	(3.0%)	(2.0%)	(1.0%)	0.1%	1.1%	2.1%	3.1%	4.1%
Commodity Chemicals	(36.2%)	(27.2%)	(18.1%)	(9.0%)	0.1%	9.1%	18.2%	27.3%	36.3%
Diversified Chemicals	(14.7%)	(11.0%)	(7.3%)	(3.6%)	0.0%	3.7%	7.4%	11.1%	14.7%
Fine Chemicals	(15.8%)	(11.9%)	(7.9%)	(3.9%)	0.0%	4.0%	8.0%	11.9%	15.9%
Fertilizers & Agricultural Chemicals	(39.3%)	(29.5%)	(19.7%)	(9.8%)	(0.0%)	9.8%	19.7%	29.5%	39.3%
Industrial Gases	(11.4%)	(8.5%)	(5.7%)	(2.8%)	0.0%	2.9%	5.8%	8.6%	11.5%
Overall	(17.8%)	(13.3%)	(8.9%)	(4.4%)	0.0%	4.5%	8.9%	13.4%	17.8%

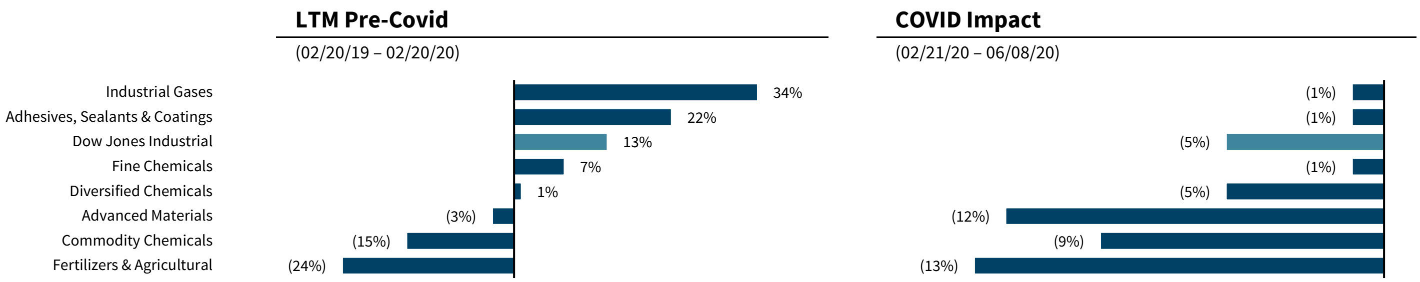
	Regr. Coeff	**Constant**	**Correlation**	**R^2**
Adhesives, Sealants & Coatings	1.0	0.02	0.80	0.63
Advanced Materials, Polymers & Additives	0.2	0.05	0.31	0.10
Commodity Chemicals	1.8	0.06	0.74	0.54
Diversified Chemicals	0.7	0.04	0.56	0.31
Fine Chemicals	0.8	0.02	0.75	0.56
Fertilizers & Agricultural Chemicals	2.0	0.00	0.97	0.94
Industrial Gases	0.6	0.05	0.71	0.50
Overall	0.9	0.03	0.78	0.61

Source: Capital IQ and S&P 500

Benchmarking Share Price Performance of Chemicals Indices

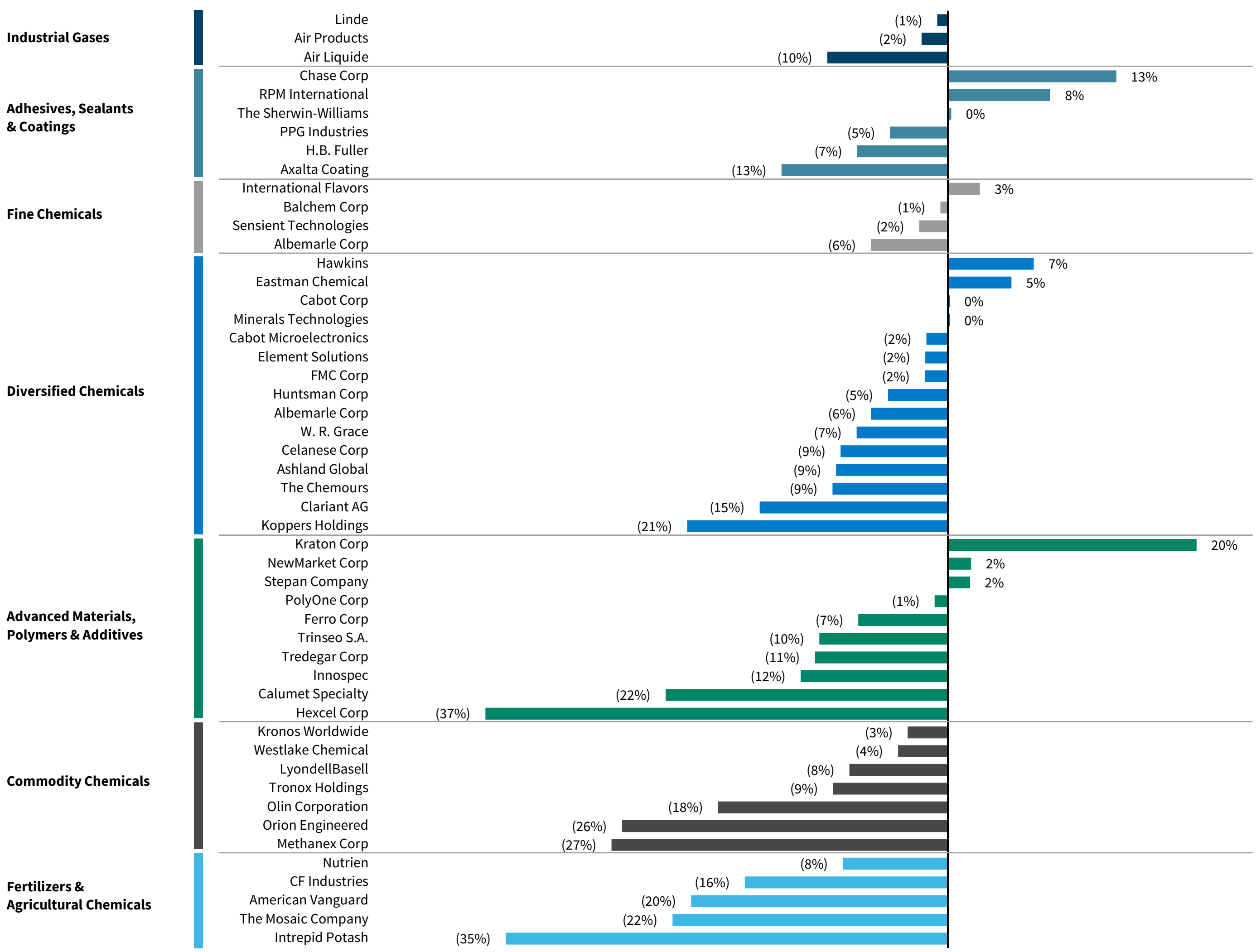
The unpredictable nature of the current crisis has emphasized the importance of diversifying revenue streams to dampen the impact of future potential economic or geopolitical disruptions. Companies with significant exposure to “non-essential” end markets have seen a significant impact to their market value.

Sector Indices Performance[1]



COVID Impact on Select Chemicals Players

(Share price performance from 02/21/20 – 06/08/20)



Source: Capital IQ as of June 8 2020

Comps include; Adhesives, Sealants & Coatings – AXTA, CCF, FUL, PPG, RPM, SHW; Advanced Materials – CLMT, FOE, HXL, IOSP, KRA, NEU, POL, SCL, TG, TSE; Commodity Chemicals – KRO, LYB, MX, OLN, OEC, TROX, WLK; Diversified Chemicals – ALB, ASH, CCMP, CBT, CE, CC, CLN, EMN, FMC, HWKN, HUN, KOP, MTX, ESI, GRA; Fine Chemicals – ALB, BCPC, IFF, SXT; Fertilizers & Agricultural – AVD, CF, MOS, IPI, NTR; Industrial Gases – SIVC, APD, LIN

(1) Indices are weighted by market capitalization

Benchmarking Valuation Impact on Chemicals Indices

Because of the resiliency and growth prospects of the fine chemicals and adhesives & sealants sectors, publicly traded companies focused on these markets continue to command a premium value relative to other chemicals sectors. Multiples across the board have generally returned to pre-COVID levels due to sharp declines in EBITDA combined with the relative rapid bounce-back of equity values.

EV / NTM EBITDA[(1)]

	As of 02/20/20	As of 06/08/20	Change in EV / NTM EBITDA Multiple: Δ since 2/20/20 to 06/08/20	
Fine Chemicals	14.8x	16.4x	1.6x	10.6%
Industrial Gases	14.7x	15.4x	0.6x	4.4%
Adhesives, Sealants & Coatings	12.2x	15.4x	3.2x	26.6%
Diversified Chemicals	9.3x	11.9x	2.6x	28.0%
Fertilizers & Agricultural Chemicals	8.7x	9.1x	0.4x	4.5%
Advanced Materials, Polymers & Additives	8.6x	10.2x	1.6x	18.9%
Commodity Chemicals	7.0x	9.6x	2.6x	37.3%

Source: Capital IQ as of June 8, 2020

Comps include; Adhesives, Sealants & Coatings – AXTA, CCF, FUL, PPG, RPM, SHW; Advanced Materials – CLMT, FOE, HXL, IOSP, KRA, NEU, POL, SCL, TG, TSE; Commodity Chemicals – KRO, LYB, MX, OLN, OEC, TROX, WLK; Diversified Chemicals – ALB, ASH, CCMP, CBT, CE, CC, CLN, EMN, FMC, HWKN, HUN, KOP, MTX, ESI, GRA; Fine Chemicals – ALB, BCPC, IFF, SXT; Fertilizers & Agricultural – AVD, CF, MOS, IPI, NTR; Industrial Gases – SIVC, APD, LIN;

(1) Indices represent median valuations

Drawing on our deep sector expertise and the strength of our relationships with buyers around the world, William Blair has built a leading chemicals banking franchise. Business owners turn to us for outstanding execution for their M&A and capital raising objectives.

Recent transactions include:

Not Disclosed
OSTEND BASIC CHEMICALS
has been acquired by
The Management Team
January 2020

Not Disclosed
3M
Advanced Ballistic Protection Business
has been acquired by
AVON
Avon Rubber p.l.c.
January 2020

Not Disclosed
PSG POLYMER SOLUTIONS GROUP
has been acquired by
THE JORDAN COMPANY
November 2019

Not Disclosed
Isobionics
Innovative creators of flavors and fragrances
has been acquired by
BASF
September 2019

Not Disclosed
LOPAREX
has been acquired by
PAMPLONA
CAPITAL MANAGEMENT
August 2019

Not Disclosed
ARSENAL
CAPITAL PARTNERS
has acquired
SEALFORLIFE
Industries
a division of Berry Global
July 2019

Not Disclosed
TACONIC
Finding a better way
Asian Business & Global ADD Assets
has been acquired by
AGC
June 2019

Not Disclosed
CARUS
has received a strategic investment from
Seidler
Equity Partners
July 2019

Not Disclosed
VanDeMark
Phosgene Chemistry - Custom Chemicals
has been acquired by
COMVEST
PARTNERS
April 2019

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About William Blair Investment Banking

William Blair's investment banking group enables corporations, financial sponsors, and owner/entrepreneurs around the world to achieve their growth, liquidity, and financing objectives.

Drawing on the collective intellectual capital and deep sector expertise of a global team that reaches 20 cities on four continents, the investment banking group brings a rigorous and innovative approach to corporate board advisory projects, mergers and acquisitions, and equity and debt financing. From 2015 to 2019, the team advised on more than $365 billion in completed transaction volume.