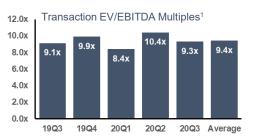
# Industry Insights: Q3 2020 Chemicals

# Table of Contents Quarterly Performance..... Transaction Activity..... Transaction Multiples. Public Company Comparable Analysis..... Active Buyers.... Precedent Transactions Analysis.....

## **Quarterly Performance**







Financial sponsors are slowly reversing their "waitand-see" position as corporates continue to resolve COVID-related operational issues, with recovery appearing to be on the way.

During the third quarter of 2020, there were 41 M&A transactions within the chemicals industry that closed, up 32% compared to the second quarter of 2020 (31). Commodity chemicals led in terms of transaction volume (25), transacting at an average EV/EBITDA multiple of 10.5x. Looking at the LTM performance of the chemicals industry relative to the S&P 500, each sector underperformed the S&P 500 which returned 14%, with commodity chemicals hit the hardest, down roughly 6%.

Global trade disputes and tightening environmental regulations continue to challenge the chemical industry. Market outlook differs significantly between subsectors. Agricultural chemicals, plastics and plastic additives have been less impacted due to their necessity, while CASE has profited from cheaper feedstock. These differences also account for the valuation gap between subsectors. Specialties and CASE are in high demand while basic chemicals are being discontinued with the valuation gap expected to widen as the industry moves further in the cycle. From an M&A perspective, expect activity to increase in agricultural chemicals, plastics processing and paints and coatings, all of which have a high probability of consolidation or takeover. Some subsectors, such as paints and coatings, have decreased profitability and continue to increase debts, with COVID-19 the catalyst for consolidation.

Going forward strategic and financial buyers alike should aggressively pursue opportunities to increase their exposure to non-durable end-use segments, which have faired the best during COVID-19 and expected to growth the fastest thereafter. Subsectors to consider include fertilizers, cosmetics, health supplements and nutrition, soaps, detergents and household chemicals, perfumes and flavors.

The market witnessed two billion-dollar transactions in the third quarter of 2020: the acquisition of Jiangsu Helen Chemical Co., Ltd by Jiangsu Sanfangxiang Industry Co., Ltd (SHSE:600370) for \$1.67 billion and the acquisition of the Color and Additive Masterbatches Business of Clariant AG (SWX:CLN) by Avient Corporation (NYSE:AVNT) for \$1.48 billion. Additionally, a few notable transactions were announced: the acquisition of a Stake in 11 Companies by Nippon Paint Holdings Co., Ltd. (TSE:4612) for \$12.1 billion and the acquisition of the Resins & Functional Materials Business of Koninklijke DSM N.V. (ENXTAM:DSM) by Covestro AG (XTRA:1COV) for \$1.8 billion.

Despite unclear guidance with regards to PPP loan forgiveness, deal activity appears to be recovering. Financial buyers are reversing their "wait-and-see" position, shifting from platforms to add-ons, with the latter increasing as a proportion of financial sponsor transactions due to lower risk and ease of financing. While some corporate buyers crafted M&A strategies around opportunistic and distressed acquisitions in the second quarter, most were in survival mode.

As corporate buyers continue to resolve any COVID-related operational issues strategic M&A picked-up, primarily due to corporate carve-out transactions. Strategic buyers like BASF have continually divested businesses with decreased differentiation potential, divesting ~\$31 billion in sales since 2010, while only acquiring ~10 billion in sales over the same period. Acquisition criteria for strategic buyers is becoming more and more specific and niche as strategics continue to refocus their portfolio towards innovative growth businesses and high-margin specialty products.

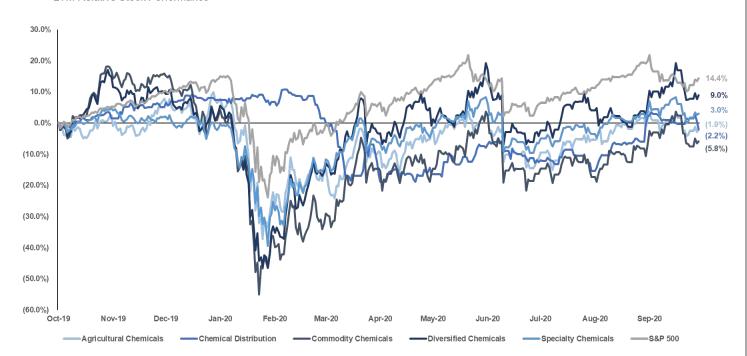
M&A activity will continue to recover for the remainder of the year as both strategic and financial buyers continue to leverage M&A for resilience and growth.



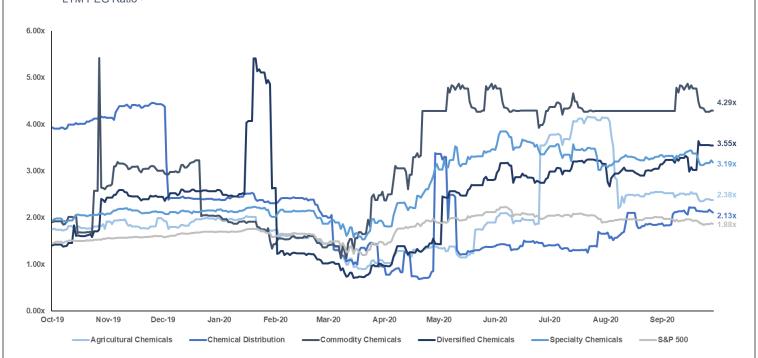
# **Industry Performance**

### Stock Price Performance

LTM Relative Stock Performance<sup>1</sup>



# PEG Ratio LTM PEG Ratio<sup>1,3</sup>

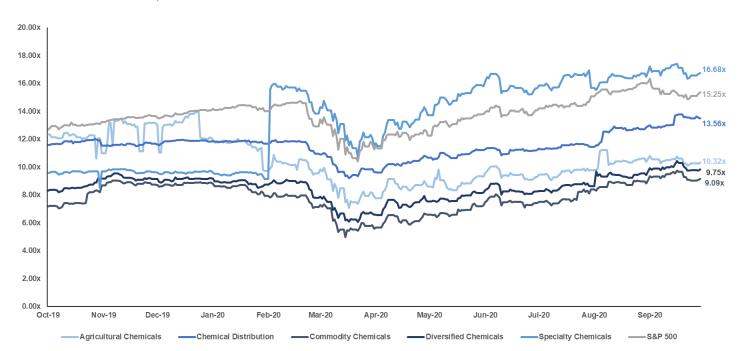




# Industry Multiples

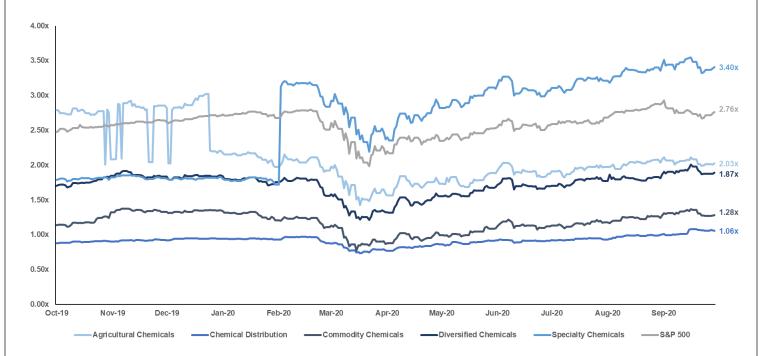
### EV/EBITDA

LTM EV/EBITDA Multiples<sup>1</sup>



### EV/Revenue

LTM EV/Revenue Multiples<sup>1</sup>

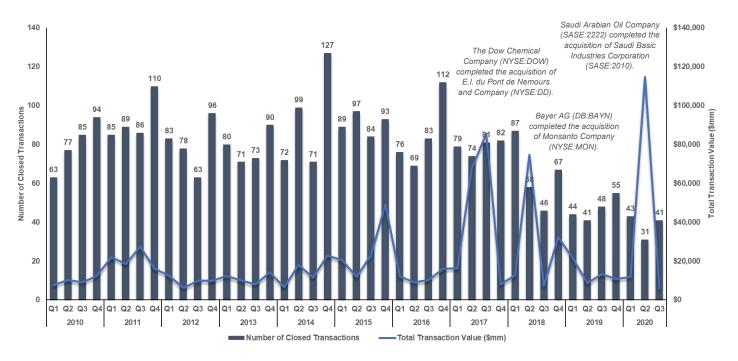




## **Transaction Activity**

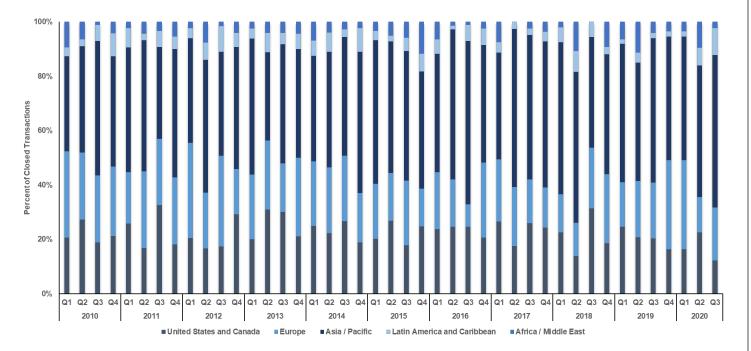
### **Transaction Volume**

Number of Closed Transactions<sup>1,2</sup>



### Transaction Activity by Geographic Region

Number of Closed Transaction by Geographic Region<sup>1</sup>

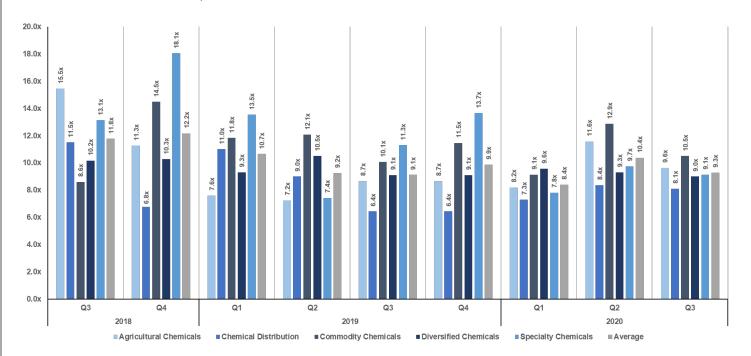




# **Transaction Multiples**

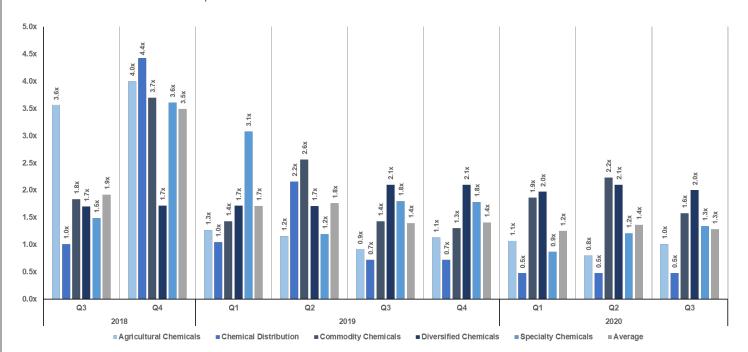
### Transaction EV/EBITDA Multiples

Transaction EV/EBITDA Multiples<sup>1</sup>



### Transaction EV/Revenue Multiples

Transaction EV/Revenue Multiples<sup>1</sup>





# **Public Company Comparable Analysis**

### Agricultural Chemicals

Public Company Comparable Analysis – Agricultural Chemicals (\$mm)<sup>1</sup>

| Company  | Market<br>Capitalization <sup>4</sup> | Enterprise<br>Value | LTM REVENUE | LTM EBITDA | NTM EBITDA | LTM<br>EV/EBITDA | NTM<br>EV/EBITDA |
|--|---------------------------------------|---------------------|-------------|------------|------------|------------------|------------------|
| American Vanguard Corporation (NYSE:AVD)           | \$397                                 | \$558               | \$456       | \$48       | \$53       | 11.6x            | 10.6x            |
| CF Industries Holdings, Inc. (NYSE:CF)             | 6,568                                 | 12,950              | 4,262       | 1,668      | 1,396      | 7.8x             | 9.3x             |
| Corteva, Inc. (NYSE:CTVA)                          | 21,566                                | 21,568              | 14,041      | 2,168      | 2,149      | 9.9x             | 10.0x            |
| FMC Corporation (NYSE:FMC)                         | 13,722                                | 17,125              | 4,617       | 1,237      | 1,356      | 13.8x            | 12.6x            |
| Sociedad Química y Minera de Chile S.A. (NYSE:SQM) | 8,533                                 | 9,470               | 1,796       | 585        | 699        | 16.2x            | 13.5x            |
| The Mosaic Company (NYSE:MOS)                      | 6,926                                 | 11,414              | 8,673       | 1,085      | 1,563      | 10.5x            | 7.3x             |
| Summary Statistics                                 |                                       |                     |             |            |            |                  |                  |
| Mean   | \$9,619                               | \$12,181            | \$5,641     | \$1,132    | \$1,203    | 11.6x            | 10.6x            |
| Adj. Mean <sup>5</sup>                             | 8,937                                 | 12,740              | 4,837       | 1,144      | 1,254      | 11.5x            | 10.6x            |
| Median   | 7 729                                 | 12 182              | 4 439       | 1 161      | 1.376      | 11 Ox            | 10.3x            |

### **Chemical Distribution**

Public Company Comparable Analysis - Chemical Distribution (\$mm)<sup>1</sup>

| Company                           |                        | Market                      | Enterprise  | LTM REVENUE | LTM EBITDA | NTM EBITDA | LTM       | NTM       |
|-----------------------------------|------------------------|-----------------------------|-------------|-------------|------------|------------|-----------|-----------|
| Company                           |                        | Capitalization <sup>4</sup> | Value       | LIM REVENUE | LIWEDITE   | NIMEDITOA  | EV/EBITDA | EV/EBITDA |
| Brenntag AG (XTRA:BNR)            |                        | \$8,389                     | \$10,418    | \$12,409    | \$889      | \$1,033    | 11.7x     | 10.1x     |
| IMCD N.V. (ENXTAM:IMCD)           |                        | 5,778                       | 6,546       | 2,717       | 233        | 286        | 28.1x     | 22.9x     |
| ITOCHU Corporation (TSE:8001)     |                        | 3,995,148                   | 8,204,102   | 10,644,491  | 791,696    | 800,294    | 10.4x     | 10.3x     |
| Mitsubishi Corporation (TSE:8058) |                        | 3,707,436                   | 10,340,055  | 13,505,857  | 480,579    | 685,850    | 21.5x     | 15.1x     |
| Sumitomo Corporation (TSE:8053)   |                        | 1,572,565                   | 4,748,262   | 5,022,408   | 246,576    | 239,942    | 19.3x     | 19.8x     |
| Univar Solutions Inc. (NYSE:UNVR) |                        | 2,854                       | 5,454       | 8,763       | 579        | 639        | 9.4x      | 8.5x      |
| Summary Statistics                |                        |                             |             |             |            |            |           |           |
|                                   | Mean                   | \$1,548,695                 | \$3,885,806 | \$4,866,107 | \$253,425  | \$288,007  | 16.7x     | 14.4x     |
|                                   | Adj. Mean <sup>5</sup> | 1,323,542                   | 3,242,332   | 3,922,018   | 182,156    | 231,866    | 15.7x     | 13.8x     |
|                                   | Median                 | 790,477                     | 2,379,340   | 2,517,408   | 123,732    | 120,487    | 15.5x     | 12.7x     |

### **Commodity Chemicals**

Public Company Comparable Analysis - Commodity Chemicals (\$mm)<sup>1</sup>

| Company  | Market<br>Capitalization <sup>4</sup> | Enterprise<br>Value | LTM REVENUE | LTM EBITDA | NTM EBITDA | LTM<br>EV/EBITDA | NTM<br>EV/EBITDA |
|--|---------------------------------------|---------------------|-------------|------------|------------|------------------|------------------|
| Braskem S.A. (BOVESPA:BRKM5)                           | \$16,466                              | \$65,510            | \$49,821    | \$1,063    | \$8,287    | NM               | 7.9x             |
| Dow Inc. (NYSE:DOW)                                    | 34,870                                | 51,528              | 38,040      | 5,592      | 5,476      | 9.2x             | 9.4x             |
| LyondellBasell Industries N.V. (NYSE:LYB)              | 23,532                                | 36,716              | 29,941      | 3,968      | 4,334      | 9.3x             | 8.5x             |
| Orbia Advance Corporation, S.A.B. de C.V. (BMV:ORBIA*) | 78,131                                | 182,537             | 6,421       | 1,223      | 1,225      | 149.2x           | 149.1x           |
| Olin Corporation (NYSE:OLN)                            | 1,954                                 | 6,169               | 5,630       | 572        | 692        | 10.8x            | 8.9x             |
| Westlake Chemical Corporation (NYSE:WLK)               | 8,072                                 | 11,710              | 7,590       | 1,207      | 1,265      | 9.7x             | 9.3x             |
| Summary Statistics                                     |                                       |                     |             |            |            |                  |                  |
| Mean   | \$27,171                              | \$59,028            | \$22,907    | \$2,271    | \$3,546    | 37.6x            | 32.2x            |
| Adj. Mean <sup>t</sup>                                 | 20,735                                | 41,366              | 20,498      | 1,865      | 3,075      | 9.9x             | 9.0x             |
| Median   | 19.999                                | 44.122              | 18.766      | 1.215      | 2.800      | 9.7x             | 9.1x             |

### **Diversified Chemicals**

Public Company Comparable Analysis - Diversified Chemicals (\$mm)<sup>1</sup>

| Company                             | Market<br>Capitalizati    | Enterprise<br>on <sup>4</sup> Value | LTM REVENU | JE LTM EBITD | NTM EBITDA | LTM<br>EV/EBITDA | NTM<br>EV/EBITDA |
|-------------------------------------|---------------------------|-------------------------------------|------------|--------------|------------|------------------|------------------|
| Arkema S.A. (ENXTPA:AKE)            | \$6,920                   | \$8,105                             | \$8,259    | \$1,168      | \$1,246    | 6.9x             | 6.5x             |
| BASF SE (XTRA:BAS)                  | 47,743                    | 69,032                              | 58,675     | 6,436        | 7,436      | 10.7x            | 9.3x             |
| Eastman Chemical Company (NYSE:EMN) | 10,570                    | 16,246                              | 8,695      | 1,671        | 1,803      | 9.7x             | 9.0x             |
| Huntsman Corporation (NYSE:HUN)     | 4,900                     | 6,412                               | 6,184      | 465          | 686        | 13.8x            | 9.4x             |
| Solvay SA (ENXTBR:SOLB)             | 7,597                     | 10,550                              | 10,514     | 1,923        | 1,957      | 5.5x             | 5.4x             |
| The Chemours Company (NYSE:CC)      | 3,434                     | 7,041                               | 5,140      | 278          | 889        | 25.3x            | 7.9x             |
| Summary Statistics                  |                           |                                     |            |              |            |                  |                  |
|                                     | Mean \$13,527             | \$19,564                            | \$16,245   | \$1,990      | \$2,336    | 12.0x            | 7.9x             |
| Adj                                 | . Mean <sup>5</sup> 7,496 | 10,485                              | 8,413      | 1,307        | 1,474      | 10.3x            | 8.2x             |
|                                     | Median 7,258              | 9,327                               | 8,477      | 1,420        | 1,525      | 10.2x            | 8.5x             |

### **Specialty Chemicals**

Public Company Comparable Analysis – Specialty Chemicals (\$mm)<sup>1</sup>

| Company                           |                        | Market<br>Capitalization <sup>4</sup> | Enterprise<br>Value | LTM REVENUE | LTM EBITDA | NTM EBITDA | LTM<br>EV/EBITDA | NTM<br>EV/EBITDA |
|-----------------------------------|------------------------|---------------------------------------|---------------------|-------------|------------|------------|------------------|------------------|
| Akzo Nobel N.V. (ENXTAM: AKZA)    |                        | \$16,703                              | \$18,594            | \$8,563     | \$1,175    | \$1,447    | 15.8x            | 12.9x            |
| Clariant AG (SWX:CLN)             |                        | 5,981                                 | 7,514               | 4,115       | 473        | 680        | 15.9x            | 11.0x            |
| DuPont de Nemours, Inc. (NYSE:DD) |                        | 40,713                                | 57,294              | 20,679      | 5,043      | 4,872      | 11.4x            | 11.8x            |
| Ferro Corporation (NYSE:FOE)      |                        | 1,020                                 | 1,842               | 951         | 123        | 160        | 14.9x            | 11.5x            |
| H.B. Fuller Company (NYSE:FUL)    |                        | 2,368                                 | 4,227               | 2,752       | 362        | 438        | 11.7x            | 9.6x             |
| RPM International Inc. (NYSE:RPM) |                        | 10,767                                | 13,353              | 5,641       | 803        | 883        | 16.6x            | 15.1x            |
| Summary Statistics                |                        |                                       |                     |             |            |            |                  |                  |
|                                   | Mean                   | \$12,925                              | \$17,137            | \$7,117     | \$1,330    | \$1,413    | 14.4x            | 12.0x            |
|                                   | Adj. Mean <sup>5</sup> | 8,955                                 | 10,922              | 5,268       | 703        | 862        | 14.6x            | 11.8x            |
|                                   | Median                 | 8,374                                 | 10,434              | 4,878       | 638        | 782        | 15.4x            | 11.6x            |



<sup>4</sup> Market Capitalization as of 09/30/20



<sup>5</sup> Adj. mean excludes high and low values.

# **Active Industry Buyers**

Strategic Buyers
Active Strategic Buyers - Chemicals<sup>1</sup>

| Acquiring Company              | Announced | Closed  | Target   |
|--------------------------------|-----------|---------|--|
| Stepan Company                 | Jul-20    | Sep-20  | Anionic Surfactant Business of Clariant (Mexico) S.A. de C.V.      |
| Stepan Company                 | Mar-20    | Mar-20  | NatSurFact Business of Logos Technologies LLC                      |
|                                | Sep-20    | Sep-20  | Seller Ink Industria e Comércio de Tintas e Vernizes Ltda.         |
| Sun Chemical Corporation       | Jun-20    | Jul-20  | Sensient Imaging Technologies S.A.                                 |
| Sun Chemical Corporation       | Jul-18    | Jul-18  | High-Purity Oxides Business of Cathay Industries                   |
|                                | Mar-18    | Mar-18  | Metal Deco Ink Business of PPG Industries, Inc.                    |
|                                | Sep-20    | Sep-20  | Performance Pow der Coatings Activities of Stahl Holdings B.V.     |
| Akzo Nobel N.V.                | Dec-19    | Apr-20  | Mauvilac Industries Ltd  |
| ARZO NODELN.V.                 | Mar-20    | Mar-20  | Akzo Nobel Boya Sanayi Ve Ticaret Anonim Sirketi                   |
|                                | Nov-18    | Nov-18  | Colourland Paints Sdn Bhd/Colourland Paint (Marketing) Sdn.Bhd.    |
| Gow an Crop Protection Limited | Sep-20    | Sep-20  | Spirodiclofen of Bayer Aktiengesellschaft                          |
| Gow an Crop Protection Limited | Sep-18    | May-19  | Cross Link Consultoria e Comércio Ltda                             |
| Borealis AG                    | Oct-18    | Aug-20  | DYM Solution Co. Ltd.  |
| Doleans AG                     | Jan-20    | Apr-20  | Bayport Polymers LLC   |
| Bostik SA                      | Jul-20    | Aug-20  | Fixatti AG   |
| BOSTIK OA                      | Jul-19    | Oct-19  | Prochimir S.A.S  |
| HEXPOL AB                      | Aug-20    | Aug-20  | MESGO S.p.A.   |
| TIEXFOL AB                     | Jul-19    | Jul-19  | Preferred Compounding Corporation                                  |
| BASF SE                        | Aug-20    | Aug-20  | Sinopec Shanghai Petrochemical Company Limited                     |
| BASE SE                        | Sep-17    | Jan-20  | Polyamide Business of Solvay SA                                    |
| Avient Corporation             | Dec-19    | Jul-20  | Color and Additive Masterbatches Business of Clariant              |
| Avient Corporation             | Jan-19    | Jan-19  | Fiber-Line Inc.  |
| Henkel A.G. & Co. K.GaA        | Aug-20    | Pending | Consumer Sealants Business of Momentive Performance Materials Inc. |
| I IGINGI AG & CO. NGAA         | May-19    | May-19  | Molecule Corp.   |

### **Financial Buyers**

Active Financial Buyers - Chemicals<sup>1</sup>

| Acquiring Company               | Announced | Closed  | Target  |
|---------------------------------|-----------|---------|---|
|                                 | Aug-20    | Pending | Venator Materials PLC   |
| SK Capital Partners             | Jul-20    | Pending | NuCera Solutions  |
| SK Capital Partners             | Jul-20    | Jul-20  | Techmer PM, LLC   |
|                                 | Aug-19    | Oct-19  | GEON Performance Solutions  |
| Akova Capital II C              | Jul-20    | Pending | Donnelly Custom Manufacturing Company                             |
| Akoya Capital, LLC              | Apr-19    | Apr-19  | TTG, Inc.   |
|                                 | Jul-20    | Jul-20  | E-Chem, LLC   |
| Meridian Adhesives Group LLC    | Aug-19    | Aug-19  | Epoxies, Etc.   |
| Meridian Adriesives Group LLC   | Jul-19    | Jul-19  | PolyCom Industries, LLC/Eco Dispersions, LLC                      |
|                                 | Sep-18    | Sep-18  | W.F. Taylor, LLC  |
| Maroon Group, LLC               | Jul-20    | Jul-20  | Holland Chemicals   |
| Maroon Group, LLC               | May-18    | May-18  | J. Tech Sales, L.L.C.   |
| Solenis International LLC       | Mar-20    | Jun-20  | Paper Business of ChemSystems Pty Ltd                             |
| (Clayton, Dubilier & Rice, LLC) | May-18    | Jan-19  | Paper and water chemicals business of BASF SE                     |
|                                 | Jun-20    | Jun-20  | Exlon Extrusion, Inc.   |
| Pexco LLC                       | Jan-20    | Jan-20  | NDM Marking Systems, Inc.   |
| (AUA Investors LP)              | Aug-19    | Aug-19  | HPE Extrusion Solutions   |
|                                 | Aug-19    | Aug-19  | American Extruded Plastics, Inc./American Injection Molding, Inc. |
| Tank Holdings Corp.             | Apr-20    | Apr-20  | Meese, Inc.   |
| (Olympus Partners)              | Feb-20    | Jan-20  | Canadian Plant Location of Acrylon Plastics Inc.                  |
| Marco Group International, Inc. | Mar-20    | Mar-20  | Abrasive Products & Equipment, LLC                                |
| (The CapStreet Group, LLC)      | Feb-19    | Feb-20  | Global Plastics LP  |
| Gabriel Performance Products    | Jan-20    | Jan-20  | Deltech Resin (Remainder of Select Portfolio of Alkyd Resins)     |
| (Audax Management Company)      | Oct-19    | Oct-19  | Deltech Resin (Select Portfolio of Alkyd Resins)                  |



# **Precedent Transactions Analysis**

Transaction Activity
Recently Closed Transaction - Chemicals<sup>1</sup>

|                | Socially Globba Transaction   |   |  | _                    |                   |                  |
|----------------|---|---|--|----------------------|-------------------|------------------|
| Date<br>Closed | Target  | Target Description  | Acquiring Company  | Transaction<br>Value | LTM<br>EV/Revenue | LTM<br>EV/EBITDA |
| Announced      | Nitta Gelatin Inc.<br>(Adhesive Manufacturing<br>Business)            | Comprises adhesive manufacturing assets located in Japan  | Bostik-Nitta Co.,Ltd.                                    | \$6                  | N/A               | N/A              |
| Announced      | Vietnam Fumigation Joint<br>Stock Company                             | Processes, packages, and distributes agrochemical products  | The PAN Group Joint Stock Company                        | 25                   | 1.0x              | 9.6x             |
| Announced      | Rimoni Industries Ltd.  | Designs and manufactures precise injection molds  | First Israel Mezzanine Investors Ltd.                    | 44                   | 2.6x              | 9.0x             |
| Announced      | Tredegar Corporation<br>(Personal Care Films<br>Business)             | Comprises polyethylene (PE) plastic<br>and polyester film manufacturing<br>operations   | Fitesa S.A.  | 45                   | 0.3x              | N/A              |
| Announced      | Chongqing Minfeng Chemical Co., Ltd.                                  | Manufactures chromium salt and chemicals  | Hubei Zhenhua Chemical<br>Co.,Ltd.                       | 75                   | 0.4x              | N/A              |
| Announced      | Venator Materials PLC   | Manufactures and markets chemical products  | SK Capital Partners                                      | 100                  | 0.5x              | 7.3x             |
| Announced      | Anhui Jiangnan Chemical Industry Co., Ltd.                            | Researches, produces, and sells explosives  | North Special Energy Group Co., Ltd                      | 186                  | 3.4x              | 9.7x             |
| Announced      | Momentive Performance<br>Materials<br>(Consumer Sealants<br>Business) | Comprises sealant manufacturing assets located in the United States   | Henkel AG & Co. KGaA                                     | 204                  | 1.8x              | N/A              |
| Announced      | Porocel Corporation   | Manufactures activated alumina, inert bed supports, and specialty adsorbents  | Evonik Industries AG                                     | 210                  | 2.1x              | 9.1x             |
| Announced      | LANXESS Aktiengesellschaft<br>(Leather Chemicals Business)            | Comprises organic leather chemical manufacturing assets located in Germany  | TFL Ledertechnik GmbH                                    | 231                  | N/A               | N/A              |
| Announced      | Hexion PSR  | Produces phenolic specialty resins, compounds and merchant formaldehyde   | InvestIndustrial;<br>Black Diamond Capital<br>Management | 425                  | N/A               | N/A              |
| Announced      | Chr. Hansen Holding A/S (Natural Colors Business)                     | Comprises food color manufacturing assets located in Denmark  | EQT Partners AB  | 929                  | N/A               | N/A              |
| Announced      | Koninklijke DSM N.V.<br>(Resins and Functional<br>Materials Business) | Comprises resin manufacturing assets located in the Netherlands   | Covestro AG  | 1,891                | 1.5x              | 11.7x            |
| Announced      | Stake in 11 Companies   | The Stake in 11 Companies represents the combined operations of Neave Limited, NIPPON PAINT (India) Company Limited, Nippon Paint (Malaysia) Sdn Bhd, Nippon Paint (Sabah) Sdn. Bhd., Nippon Paint (Thailand) Co., Ltd., Nippon Paint Coating (Taiw an) Co., Ltd., Nippon Paint Singapore Co. Pte Ltd, Nipsea Chemical Korea Co., Ltd., Nipsea Pte. Ltd., Nipsea Technologies Pte Ltd, and Paint Marketing Company (M) Sdn. Bhd. comprising paint manufacturing assets located in India, Thailand, Malaysia, Taiw an, Hong Kong and Singapore | Nippon Paint Holdings Co.,<br>Ltd.                       | 12,136               | N/A               | N/A              |
| Announced      | Samsung Corning Advanced<br>Glass<br>(Ceramic Target Business)        | Comprises oxide manufacturings assets located in South Korea  | Vital Materials Co., Limited                             | N/A                  | N/A               | N/A              |
| Announced      | DiaPlus Film, Inc.<br>(Vinyl Chloride Business)                       | Comprises soft vinyl chloride resin and film manufacturing assets located in Japan  | HIROSHIMA KASEI, Ltd.                                    | N/A                  | N/A               | N/A              |
|                |   |   |  |                      |                   |                  |



# **Precedent Transactions Analysis (Cont.)**

Transaction Activity
Recently Closed Transaction - Chemicals<sup>1</sup>

| Date<br>Closed | Target   | Target Description  | Acquiring Company  | Transaction<br>Value | LTM<br>EV/Revenue | LTM<br>EV/EBITDA |
|----------------|--|---|--|----------------------|-------------------|------------------|
|                | Flint Hills Resources<br>(Expandable Polystyrene<br>Business)          | Comprises expandable polystyrene manufacturing assets located in Peru               | Balmoral Funds LLC   | N/A                  | N/A               | N/A              |
| Announced      | Mitsubishi Chemical<br>Corporation<br>(Acrylic Resin Business)         | Comprises hair cosmetic acrylic resin manufacturing assets located in Japan         | Osaka Organic Chemical Industry Ltd.   | N/A                  | N/A               | N/A              |
|                | Polyplastics Co., Ltd.   | Manufactures and sells various types of engineering plastics and polymers           | Daicel Corporation   | 1,571                | 2.8x              | N/A              |
| Announced      | NuCera Solutions   | Manufactures specialty polymers   | SK Capital Partners  | N/A                  | N/A               | N/A              |
| announcea      | Ashland Global Holdings Inc<br>(Maleic Anhydride Business)             | Comprises the business divisions that manufactures industrial coatings              | AOC Materials, LLC   | 100                  | N/A               | N/A              |
| •              | Tintas Hidracor S.A.   | Manufactures and supplies paints  | Tintas Iquine Ltda   | 25                   | N/A               | N/A              |
| Sep-20         | 100BIO INC. Avon Polymer Products                                      | Manufactures biodegradable foam  Manufactures and markets rubber and                | Byzen Digital Inc.   | N/A                  | N/A               | N/A              |
| Sep-20         | Limited  | polymer products  | DeLaval Holding B.V.   | 225                  | 3.5x              | 17.1x            |
| Sep-zu         | Woodbridge GSK High Polymer Technology Co., Ltd. Cafe Brasil Industria | Manufactures polyurethane foam  | Woodbridge Foam<br>Corporation   | N/A                  | N/A               | N/A              |
| Sep-20         | Comercio Importacao e<br>Exportacao LTDA                               | Manufactures and sells fertilizers  | GEF Capital Partners, LLC  | 17                   | N/A               | N/A              |
| Sep-20         | Clariant (Mexico) S.A. de C.V.<br>(Anionic Surfactant<br>Business)     | Comprises surfactant manufacturing assets and sulfation equipment located in Mexico | Stepan Company   | N/A                  | N/A               | N/A              |
| Sep-20         | UNICAT Catalyst<br>Technologies, Inc                                   | Provides catalyst products  | White Deer Management LLC  | N/A                  | N/A               | N/A              |
| Sep-20         | DuPont de Nemours, Inc.<br>(Trichlorosilane Business)                  | Comprises trichlorosilane<br>manufacturing assets located in the<br>United States   | Hemlock Semiconductor,<br>L.L.C.   | 475                  | N/A               | N/A              |
| Sep-20         | WinCup, Inc.   | Manufactures and distributes disposable polystyrene products                        | Atar Capital LLC   | N/A                  | N/A               | N/A              |
| San_7/11       | Chem (Yueyang) Waterborne Additive Co., Ltd.                           | Manufactures eco-friendly additives   | Suzhou Sunmun Technology Co., Ltd.   | 10                   | 1.0x              | N/A              |
| Sep-20         | Stahl Holdings B.V.<br>(Performance Pow der<br>Coatings Business)      | Comprises UV and curing coatings manufacturing assets located in the Netherlands    | Akzo Nobel N.V.  | N/A                  | N/A               | N/A              |
| Sep-20         | Stahl Performance Pow der Coatings                                     | Manufactures and supplies pow der coatings  | Akzo Nobel Pow der Coatings B.V.   | N/A                  | N/A               | N/A              |
| Sep-20         | Orrion Chemicals Orgaform  | Manufactures specialty chemicals products   | Crédit Agricole Régions<br>Investissement SAS;<br>Centre Loire Expansion SAS | N/A                  | N/A               | N/A              |
| Sep-20         | Seller Ink Industria e<br>Comércio de Tintas e<br>Vernizes Ltda.       | Manufactures and supplies specialty inks, paints, and coatings                      | Sun Chemical Corporation   | N/A                  | N/A               | N/A              |
| Sep-20         | MAST Technologies Inc  | Manufactures radio frequency (RF) absorbing materials                               | Integrated Polymer Solutions<br>Group  | N/A                  | N/A               | N/A              |
| Sep-20         | GW Plastics, Inc.  | Provides thermoplastic and silicone contract manufacturing services                 | Nolato AB  | 230                  | 1.1x              | N/A              |
| Ū              | Techmould Ltd  | Manufactures rubber moldings  | DKL Technical Rubber<br>Products Ltd   | N/A                  | N/A               | N/A              |
| Aug-20         | DYM Solution Co. Ltd.  | Manufactures industrial chemicals   | Borealis AG  | N/A                  | N/A               | N/A              |
| Aug-20         | Controlled Polymers A/S  | Develops, manufactures, and supplies technical plastic products and polymers        | Americhem, Inc.  | 32                   | N/A               | N/A              |



# **Precedent Transactions Analysis (Cont.)**

Transaction Activity
Recently Closed Transaction - Chemicals<sup>1</sup>

| Date<br>Closed | Target   | Target Description  | Acquiring Company                         | Transaction<br>Value | LTM<br>EV/Revenue | LTM<br>EV/EBITDA |
|----------------|--|---|---|----------------------|-------------------|------------------|
| Aug-20         | Rotation Dynamics<br>Corporation   | Manufactures rubber   | Ace Elastomer Corporation                 | N/A                  | N/A               | N/A              |
| Aug-20         | Evonik Goldschmidt UK Ltd.   | Manufactures cosmetic and cleaning agents   | 2M Holdings Limited                       | N/A                  | N/A               | N/A              |
| Aug-20         | QolorTech B.V.   | Manufactures masterbatches for color and additive preparations  | Chemische Fabrik Budenheim<br>KG          | N/A                  | N/A               | N/A              |
| Aug-20         | Wilken Plastics Energy GmbH<br>& Co. KG  | Engages in the shredding, washing, and drying of recyclable plastics  | Otto Graf Gmbh<br>Kunststofferzeugnisse   | N/A                  | N/A               | N/A              |
| Aug-20         | Nyquist, Inc.  | Manufactures and distributes paints   | Painters Supply & Equipment Co.           | N/A                  | N/A               | N/A              |
| Aug-20         | Sinopec Shanghai<br>Petrochemical Company  | Manufactures and sells petrochemical products   | BASF SE                                   | N/A                  | N/A               | N/A              |
| Aug-20         | MESGO S.p.A.   | Manufactures and distributes compounding solutions  | HEXPOL AB                                 | 47                   | N/A               | N/A              |
| Jul-20         | Suffolk Solutions, Inc.<br>(Caustic Soda Distribution<br>Business)                   | Comprises distribution assets located in the United States  | Brenntag North America, Inc.              | N/A                  | N/A               | N/A              |
| Jul-20         | Guzmán Polymers, S.L.U.  | Distributes polymers  | Hromatka Group Management<br>AG           | N/A                  | N/A               | N/A              |
| Jul-20         | Fertilizantes Tocantins S.A.   | Engages in the trading and distribution of fertilizers  | EuroChem Group AG                         | 230                  | N/A               | N/A              |
| Jul-20         | Finproject S.p.A.  | Manufactures custom foam injection molding products   | Versalis SpA                              | N/A                  | N/A               | N/A              |
| Jul-20         | Aetna Plastics Corporation   | Distributes and sells industrial plastics materials   | Harrington Industrial Plastics<br>LLC     | N/A                  | N/A               | N/A              |
| Jul-20         | Techmer PM, LLC  | Produces colors and additives   | SK Capital Partners                       | N/A                  | N/A               | N/A              |
| Jul-20         | Ashok Surfactants Private<br>Limited   | Manufactures and supplies commodity chemicals   | Indo Amines Limited                       | N/A                  | N/A               | N/A              |
| Jul-20         | Optics Balzers AG  | Produces and supplies optical thin-film components and coatings   | Materion Corporation                      | 136                  | 2.4x              | 12.0x            |
| Jul-20         | SI Group, Inc.<br>(Global Industrial Resin and<br>Brazilian Specialty<br>Businesses) | Comprises industrial resin manufacturing assets located in Brazil   | ASK Chemicals GmbH                        | N/A                  | N/A               | N/A              |
| Jul-20         | Modenplast Medical Srl   | Manufactures and distributes PVC based compounds  | Benvic Europe SAS                         | N/A                  | N/A               | N/A              |
| Jul-20         | Rex Materials, Inc.  | Manufactures ceramic fiber and fused silica material  | Unifrax ILLC                              | N/A                  | N/A               | N/A              |
| Jul-20         | E-Chem, LLC  | Manufactures and distributes epoxy polymer products   | Meridian Adhesives Group<br>LLC           | N/A                  | N/A               | N/A              |
| Jul-20         | Holland Chemicals  | Distributes specialty chemicals and ingredients   | Maroon Group, LLC                         | N/A                  | N/A               | N/A              |
| Jul-20         | Sensient Imaging<br>Technologies S.A.  | Manufactures inks   | Sun Chemical Corporation                  | N/A                  | N/A               | N/A              |
| Jul-20         | Eurofoam GmbH  | Manufactures, converts, and processes flexible polyurethane foam products   | Greiner AG                                | N/A                  | N/A               | N/A              |
| Jul-20         | Clariant Chemicals India<br>Limited<br>(Masterbatch Business)                        | Comprises colors and additives manufacturing assets located in India  | PolyOne Polymers India<br>Private Limited | 60                   | 1.5x              | N/A              |
| Jul-20         | Clariant AG<br>(Color & Additive<br>Masterbatches Business)                          | Comprises color and additive<br>concentrates and performance solution<br>manufacturing assets located in<br>Switzerland | Avient Corporation                        | 1,481                | 1.2x              | N/A              |
|                |  |   | S   | ummary Statis        | tics              |                  |

| Summary Statistics |           |       |      |       |  |  |  |  |
|--------------------|-----------|-------|------|-------|--|--|--|--|
|                    | Mean      | \$755 | 1.7x | 10.7x |  |  |  |  |
| Ac                 | lj. Mean⁵ | 346   | 1.7x | 10.2x |  |  |  |  |
|                    | Median    | 161   | 1.5x | 9.7x  |  |  |  |  |

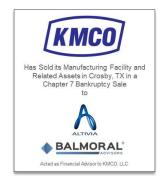




### **About Balmoral Advisors**

### Recent Transactions

Select Recent Transaction - Chemicals<sup>1</sup>









### Industries Served







**Business** Services





Beverage



Industrials



**Packaging** 

Balmoral Advisors is an independent, specialty investment bank dedicated to providing mergers & acquisitions, corporate finance, and financial restructuring advisory services for clients worldwide. We work with business owners, corporations and financial investors involving emerging growth companies, mature businesses, corporate divestitures, distressed and turnaround transactions.

We bring a powerful combination of deep experience, industry expertise, and broad market reach to every client engagement. Our senior professionals have decades of experience and collectively have advised on more than \$35 billion of transactions.

Our practice is global, but the culture of our firm reflects our Midwestern roots in terms of values, work ethic, and focus on developing long-term relationships. We evaluate each client's unique needs and develop a customized approach based on decades of experience.

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