PIPER | SANDLER

ISSUE 20
July 2023

Chemicals M&A Review

Contents

SOLENIS
a portfolio company of
Platinum Equity
has acquired
Diversey
majority controlled by
BainCapital
Financial Advisor
July 2023

ADARE PHARMA SOLUTIONS
has sold
ADARE BIOME
to
DSM
Financial Advisor
June 2023

synthomer
has sold
its Laminates, Films and Coated Fabrics businesses to
SURTECO
Financial Advisor
February 2023

TotalEnergies
is selling certain Cray Valley businesses to
PACIFIC AVENUE CAPITAL
Financial Advisor
July 2023

Highlights

- **Chemicals M&A has slowed in 2023 with transactions focused on high-end specialties and lower-end intermediates**
- **Valuations stabilising at 10-year average of c. 10-11x EV/EBITDA with profits across specialties stable on a quarter-by-quarter basis but commodities and intermediates underperform and remain volatile**
- **Activity in more mid-tier specialty chemicals expected to pick up in late 2023 or more likely 2024 with a large backlog of deals coming to market next year**
- **Piper Sandler hosts its seventh annual Chemicals M&A Conference in Düsseldorf on October 12th, 2023**

Chemical Company Profits

At the beginning of the year, many chemical companies, financial sponsors and investment banks were forecasting a pick-up in M&A activity in the second half of 2023. Very few expected the interest rate raising cycle to still be continuing, and inflation to remain at such high levels at this point of the year. Coupled with weak economic conditions and limited visibility of when the overall cycle of interest rate rises and GDP growth will turn, it is unsurprising that chemicals M&A activity remains at low levels.

Of course, as in almost every down cycle, the reality of the situation is not quite as bad as the news headlines often portray, especially when viewed through the lens of chemical company profits. No doubt, profits in Q1 2023 finally started to come off the relative highs of 2021 and even 2022, but much of this decline was centered on the upstream or intermediates part of the value chain. Already in Q3 and Q4 of last year, profits in the commodity and diversified parts of the chemicals value chain had declined up to 50% or more for some companies. As shown in Figure 1, profits have remained remarkably robust in 2022 for the specialty chemicals part of the value chain. This trend has continued in Q1 this year as shown in Figure 2, with commodities and intermediates continuing to suffer from both margin compression and volume decline.

Figure 1: 2022 Quarterly Chemical Company Profits by Sector

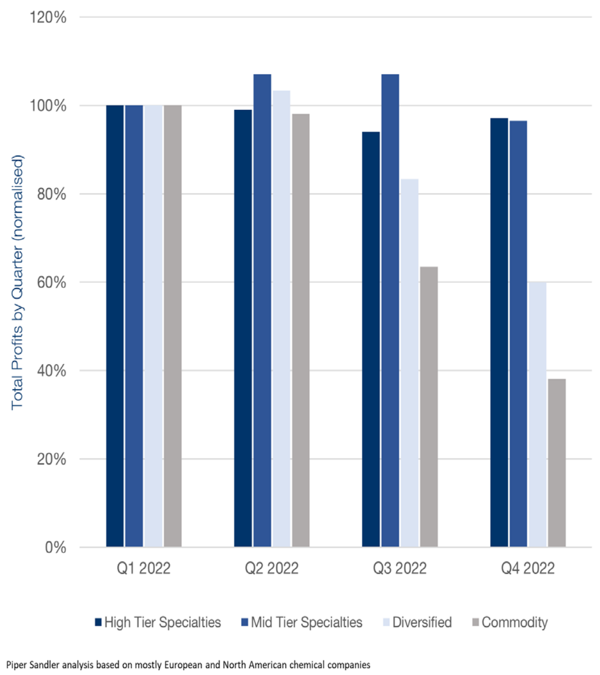
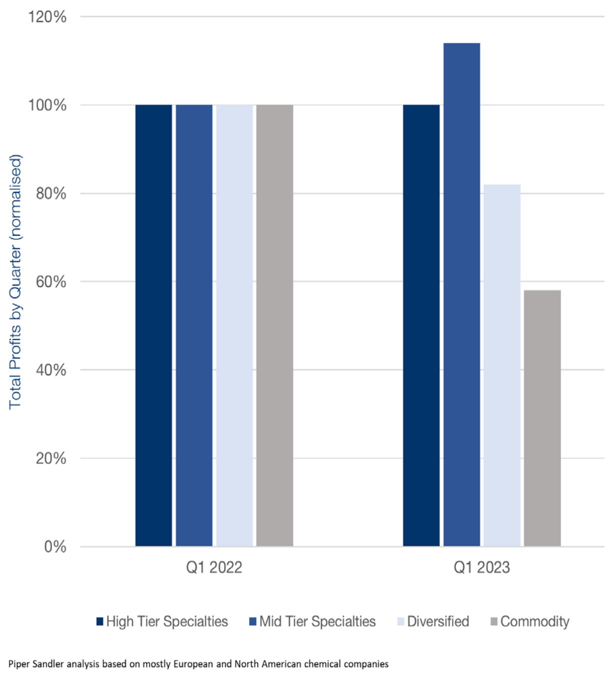


Figure 2: Q1 2022 vs. 2023 Chemical Company Profits by Sector



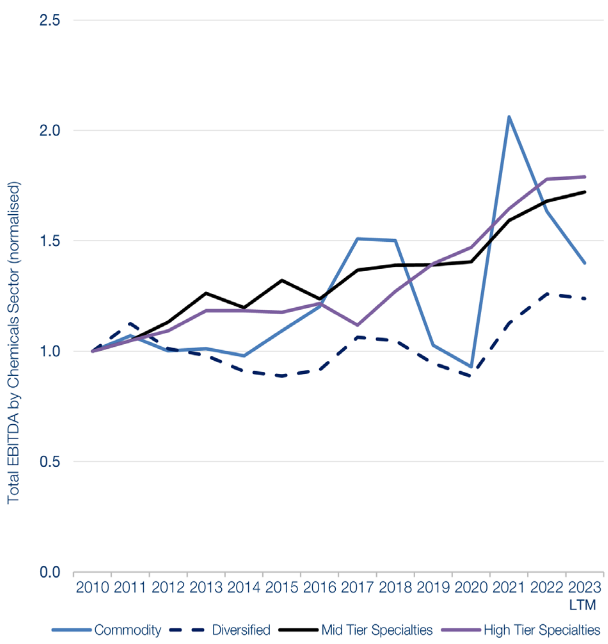
Profits have primarily been squeezed in certain end markets such as construction, which in Europe and the U.S. have suffered through housing volume declines (sales and starts), which in turn, has also impacted adjacent sectors such as DIY, furniture and some retail sales. The biggest impact has naturally been on the chemicals value chain upstream areas which are also usually heavy energy consumers, further squeezing margins. Profits at companies in isocyanates are a good example of being squeezed between the construction market and upstream energy costs. Additionally, Asian companies, and in particular Chinese producers, have continued to produce at a high volume across commodities and intermediates, putting downward pressure in regional and export markets. Profit warnings in these products and sectors will possibly continue throughout 2023.

Perhaps of more interest is the strength of specialty chemicals profits, which have been remarkably stable. As shown in Figures 1-3, profits have been growing steadily over the last 10 years. Only in some sectors of specialty chemicals, such as coatings (construction and auto-related) or electronic chemicals, have profits been adversely hit. Otherwise, profitability and margins have remained strong and sectors such as food ingredients, healthcare-related chemicals, specialty surfactants and flavors & fragrances have all shown resilient profitability.

Impact on Chemicals M&A

Unsurprisingly, with rising interest rates and forecast regional recessions, chemical company M&A deal volumes have dropped significantly. Other factors such as energy prices, the war in Ukraine and debt availability have also impacted the outlook and have negatively affected appetite for acquisitions.

Figure 3: Average Chemical Company Profits by Sector



Piper Sandler analysis based on mostly European and North American chemical companies

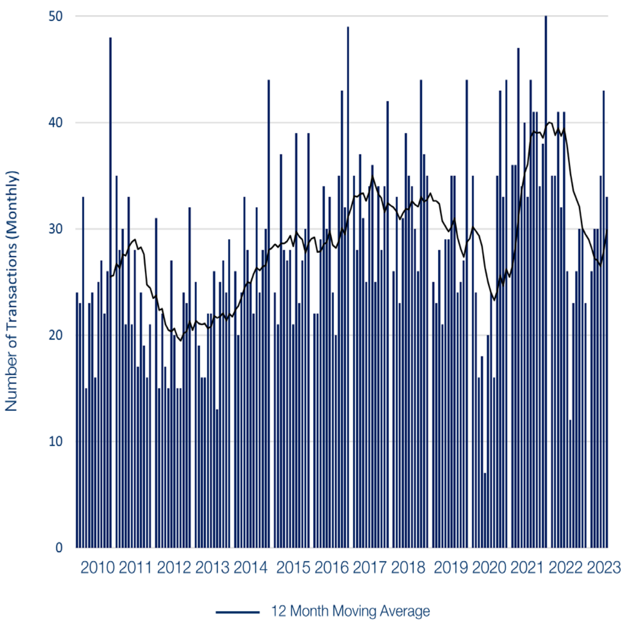
In Figure 4, the 10-year transaction volumes show that the number of deals has declined in 2022 and in early 2023, but there has been pick up in the number of deals in May and June, and definitely more than in Q3/Q4 2022, although China accounts for much of the increase in activity.

Much of the volume decline has been driven by companies waiting to see how both interest rates and economies develop. The “sitting on your hands” mentality is understandable as companies are protecting their own balance sheets in case of further downturns. Of course, most company balance sheets are in relatively good shape across chemicals, and acquiring businesses in 2023 would be counter-cyclical, and therefore highly likely to be a shrewd investment.

Although a company making an acquisition could be seen as being bold and strategically astute, investors see cash preservation/lower debt as being preferable in current volatile markets; hence, company executive boards are often unwilling to make investment decisions in the current climate. There is a belief that private equity has also largely disappeared from the market. Figure 5 shows this is definitely not the case with the share of acquisitions in chemicals by private equity remaining at a high level of c. 25% of all transactions in chemicals. Debt costs and availability have restricted the ability of financial sponsors in some sale processes, but the decline overall has mirrored the fall by industry/strategic investors. With weak market fundamentals in some parts of the industry and a somewhat more limited buyer universe, the number of businesses coming to market has also fallen. Companies have been hesitant to divest businesses in a weak M&A environment. Additionally, with a lack of profit transparency in some sectors in 2023, there has been a delay in bringing assets to market.

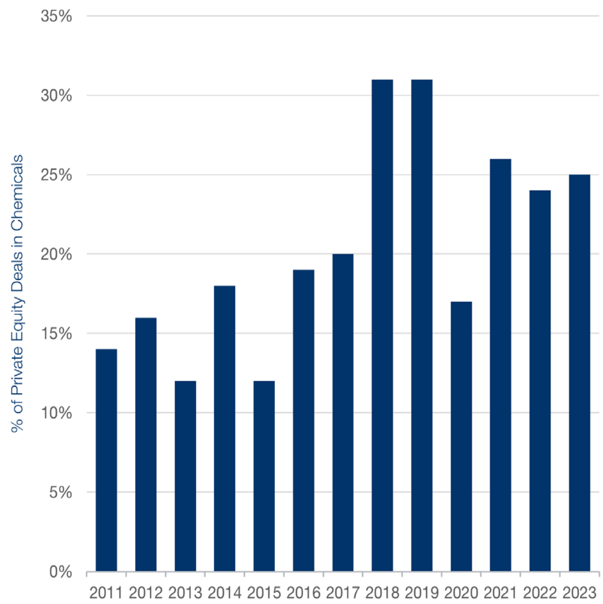
The lower volume of businesses for sale has not been balanced across all sectors. The dearth of divestments has been mainly in the mid-tier specialty chemicals area, where normally strongly performing businesses have less forward visibility for 2023, and therefore, any sale would be influenced by economic conditions, rather than the fundamentals of the underlying businesses. Larger businesses in particular (c. EBITDA >$250m) are struggling to find buyers due to credit conditions and are also delaying divestment.

Figure 4: Monthly Chemicals M&A Volumes



Piper Sandler and Capiq analysis. Deals above $10m

Figure 5: Private Equity Share of Chemicals Transactions

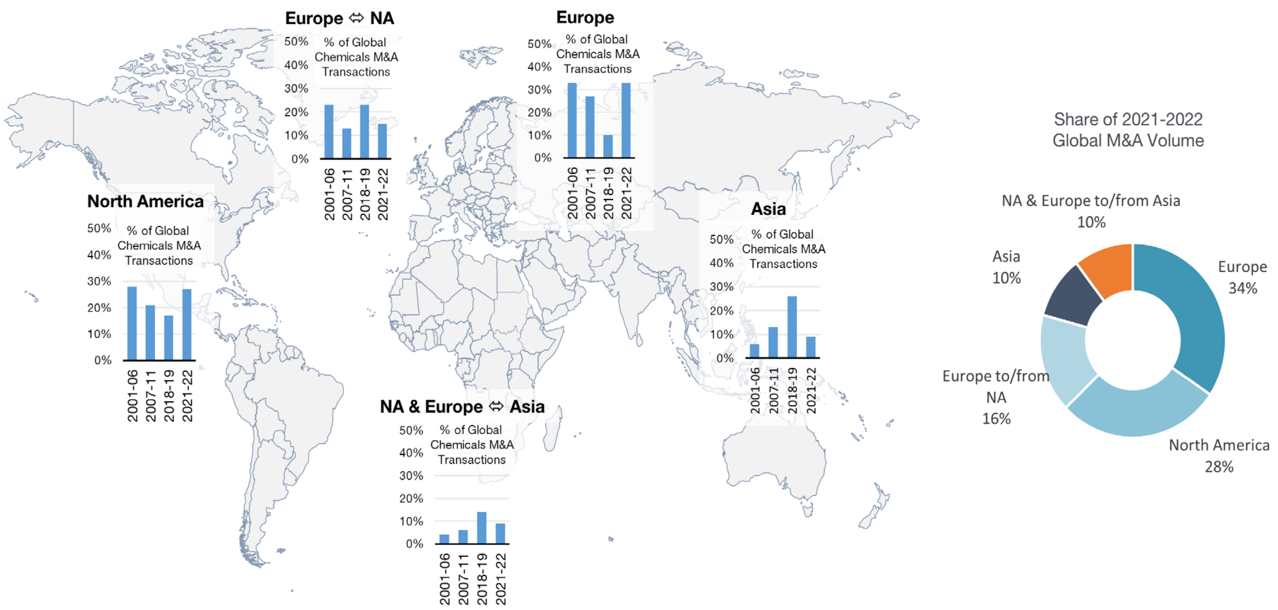


Piper Sandler and Capiq analysis

However, high-end speciality chemicals as well as the lower-end of the intermediates/semi-specialties are still being brought to market. The high-end, such as the reported divestment of Lucas Meyer (by IFF), will likely attract significant interest as did the acquisitions of Solus Biotech and PI Advanced Materials. At the other end of the spectrum, companies continue to want to realign portfolios and divestments, and processes by Chemours, Total and Evonik show the desire of chemical companies to focus on their higher growth businesses. We would expect this split to continue with the high and lower-end of the market continuing to provide the bulk of the M&A in North America and Western Europe.

As shown in Figure 6, since the COVID-19 lockdowns, the majority of M&A has been centered on Europe and North America. This is a big change, as prior to the global pandemic, Asian-centered, or outbound chemicals M&A, was growing rapidly, but the restrictive lockdowns in the region curtailed much of the M&A activity. Since then, China in particular has been slow to recover and restricted in its M&A ambitions by economic and geopolitical factors. Southeast Asia has made some notable acquisitions with PTTGC and Petronas Chemicals being the most prominent, but this region alone cannot make up for low levels of Chinese M&A and the slow pick up of Japanese companies re-entering the market (albeit with a recent increase in activity). In the next year or two, this situation is unlikely to change and Europe and North America will continue to drive the market with Asia and ROW being only a small part of overall chemicals M&A.

Figure 6: Global M&A Deal Flow and Share

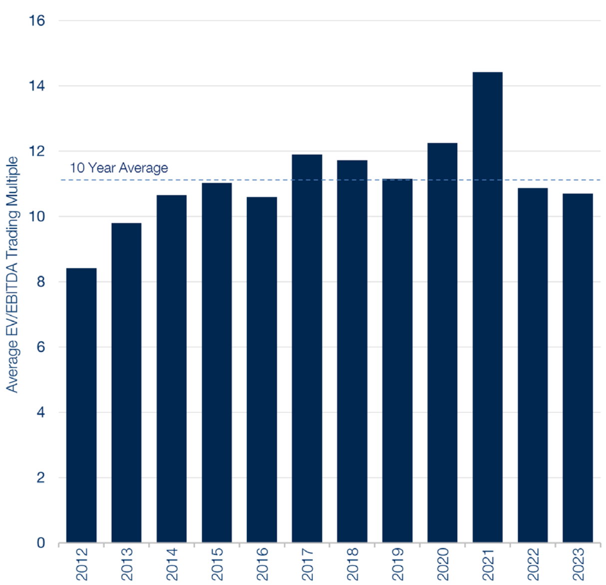


Piper Sandler, Mergermarket and Capiq analysis

Valuations

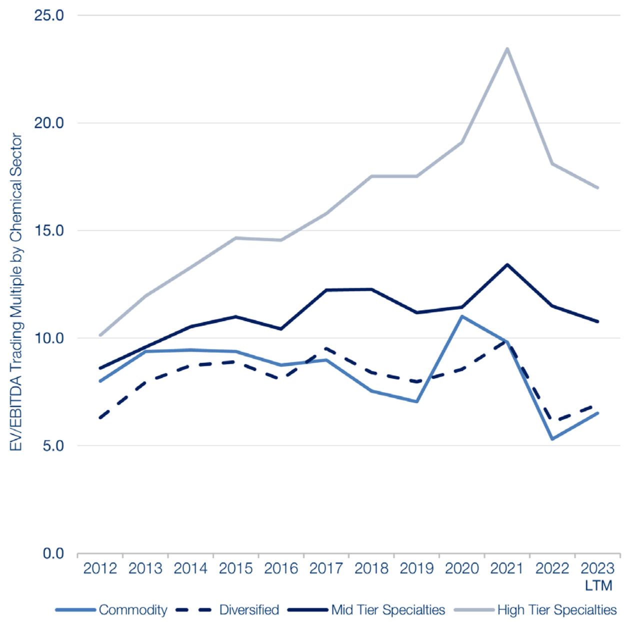
Despite the headwinds for M&A and slowing regional economies, trading multiples have remained at levels close to the 10-year average of c. 11 x EV/EBITDA (Figure 7). The American and European stock markets have risen from lows in 2022, and although chemical stocks have not been in demand compared to the likes of Apple, Alphabet, Nvidia and other tech stocks that have driven the markets higher, they have been partly bolstered by increasing markets. Furthermore, markets such as Japan have risen by about 20% this year with chemical stocks such as Mitsubishi Chemical, Mitsui and Shin-Etsu increasing sharply since the beginning of the year. Some of the multiples are being artificially boosted by lower EBITDAs, especially in some commodity areas, and share prices are perhaps yet to fully react to the lower earnings estimates. Although commodities, intermediates and diversified chemicals stock prices are more susceptible to market movements and are trading at approximately the level of 10 years ago, overall chemicals valuations are underpinned by mid and high-tier specialty chemicals (Figure 8). The consolidation in the sector, better margin management, market focus and, most importantly, growth continue to drive valuation. Specialties valuations remain at high levels relative to history and are not expected to fall significantly from present levels of 11x and 16.5x EV/EBITDA for mid and high-tier specialty chemicals respectively. Since the majority of companies (more than 60%) now fall into these sectors, trading multiples overall for chemicals will be supported by specialty chemicals.

Figure 7: Chemical Company Trading Multiples



Piper Sandler and Capiq analysis

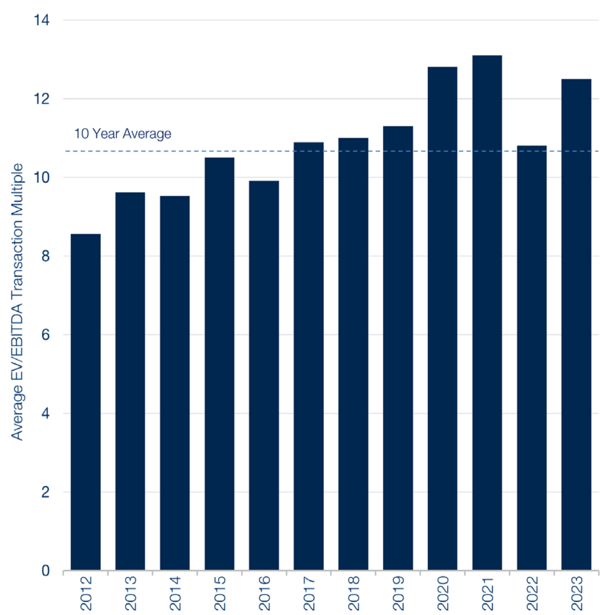
Figure 8: Chemical Company Trading Multiples by Segment



Piper Sandler and Capiq analysis

Transaction multiples are a better guide to real current M&A valuations. However, in such a thin overall M&A market they are less meaningful, especially now as there have been several high-end transactions recently, which partially skews the results. Nevertheless as shown in Figure 9, transaction multiples are in line with trading multiples at c. 12x EV/EBITDA.

Figure 9: Chemical Company Transaction EBITDA Multiples



Piper Sandler internal analysis. Disclosed Transactions > c.$100m. 2023 until June 30 2023. Average excludes 2023

Outlook

In our view, the remainder of 2023 will be subdued with several interlocking impacts affecting chemical companies and markets in the second half of the year and into 2024:

1. Destocking will subside in Q3 as many customers will have reached a limit that balances demand and stock level, with a corresponding uptick in purchasing helping much of the industry. Destocking has already reduced considerably in Q2 this year.

2. Pressure across commodities and intermediates could intensify as Chinese demand remains below expected levels. Production across C2 and C3 chemicals is pushing the market into oversupply. The same is true for many intermediates such as BPA, MMA and oxo-alcohols where China/ME continues to push supply into the market.

3. Construction and other weak sectors such as industrial part production will continue to be a drag on demand volumes throughout 2023, albeit with a recent slight uptick in North America.

4. Across specialty chemicals, margins are expected to firm up for mid-tier product and market areas. High-tier specialty chemicals profits and growth will remain robust as demand resilience, consolidation, cost control and less destocking all play a role.

5. Limited private equity activity but with a return in 2024 in both buying and selling to appease investors and deploy capital. Already, there is big growth in secondary funds buying LP investors' stakes indicating the pressure of delayed market activity is impacting financial sponsors.

These competing factors will likely lead to an improving outlook for performance/specialty chemical companies and a corresponding increase in M&A activity in these areas in 2024. Buyers such as cash-rich PE funds and larger Asian/Middle Eastern oil price-backed businesses that have already been active, such as ADNOC, PTT, Petronas and OMV, have all signalled their intent to use M&A to grow. Furthermore, a backlog of deals waiting to come to market as economic and credit conditions improve will start to hit the market, thereby increasing supply.

Additional pressure on European companies to realign portfolios will only increase for those with remaining upstream assets, energy-intensive businesses or those impacted by sustainability and the ICE to EV transition. The resulting list of potential divestments is growing, most of which will likely come to market in 2024.

Whether valuation multiples rise with increasing activity seems doubtful at this stage, as the cost of debt will remain elevated compared to the last 10 years. This will limit private equity ability to maximise leverage. The cost of debt will also curb industry players, and hence, valuations are likely to remain at current levels in the mid-term.

Therefore, 2024 is expected to be a pivotal year as the forecast plateau or decline in interest rates will signal a change in economic conditions. With more businesses coming to market and better profit visibility, buyers will also be more willing to transact. 2024 will be a significantly more active M&A market, but only after the low of 2023 has been navigated.

Advisor on the Largest Deals in the Chemicals Sector

$11.7 billion

The Carlyle Group GIC

have acquired the Specialty Chemicals business of

AkzoNobel

now known as

Nouryon

Financial Advisor

October 2018

$5.2 billion

Platinum Equity

has acquired

Solenis

from

Clayton Dubilier & Rice BASF

Financial Advisor

November 2021

$4.8 billion

GC

(PTT Global Chemical)

has acquired

allnex

from

Advent International Global Private Equity

Financial Advisor

December 2021

$4.7 billion

BainCapital Cinven

have acquired the Specialty Ingredients business of

Lonza

Financial Advisor

July 2021

$4.6 billion

Solenis

a portfolio company of

Platinum Equity

has acquired

Diversey

majority controlled by

BainCapital

Financial Advisor

July 2023

$2.4 billion

Petronas

has acquired

Perstorp

from

PAI Partners

Financial Advisor

October 2022

SJL PARTNERS
and
SD BIOSENSOR
have acquired
meridian BIOSCIENCE
Financial Advisor
January 2023

heubach
and
SK CAPITAL
have acquired the Pigments business of
CLARIANT
Financial Advisor
January 2022

H.I.G. CAPITAL
has sold
VALTRIS SPECIALTY CHEMICALS
to
SK CAPITAL
Financial Advisor
August 2022

SK CAPITAL
has sold
TECHMER PM POLYMER MODIFIERS
to
GRYPHON INVESTORS
Financial Advisor
September 2022

SK CAPITAL
has sold
Niacet
to
KERRY
Financial Advisor
September 2021

H.I.G. CAPITAL
has acquired
Formerra
the Polymer Distribution business of
AVIENT
Financial Advisor
November 2022

BalmoralFunds
has acquired
TRECORA Resources
Financial Advisor
June 2022

SK CAPITAL
has acquired
SEQENS
from
EURAZEO
Financial Advisor
December 2021

arxada
(formerly Lonza Specialty Ingredients)
a portfolio company of
BainCapital and Cinven
has combined with
TROY
Financial Advisor
January 2022

EVERARC
has acquired
Perimeter SOLUTIONS
from
SK CAPITAL
Financial Advisor
January 2022

danimer scientific
has acquired
NOVOMER Catalyzed Chemistry
Financial Advisor
August 2021

NAUTIC
has sold
SPARTECH
to
THE JORDAN COMPANY
Financial Advisor
May 2021

FALCON PRIVATE HOLDINGS
has sold
ARISTECH SURFACES
to
TRINSEO
Financial Advisor
September 2021

AEA
has acquired
VERDESIAN
from
PAINE SCHWARTZ PARTNERS
Financial Advisor
February 2021

AURORA CAPITAL PARTNERS
has acquired
SPRAY-TEK
Financial Advisor
December 2021

FENZI
has partnered with
ARSENAL CAPITAL PARTNERS
Financial Advisor
April 2021

MOMENTIVE
jointly owned by
KCC SJL PARTNERS
has sold its
Consumer Sealant business to
Henkel
Financial Advisor
November 2020

CLARIANT
has sold its
Masterbatches business to
PolyOne
Financial Advisor
July 2020

INDORAMA VENTURES
has acquired the
Integrated Oxides and Derivatives businesses of
HUNTSMAN
Financial Advisor
January 2020

synthomer
has acquired
OMNOVA SOLUTIONS
Financial Advisor
April 2020

ARKEMA
has acquired
ArrMaz
from
GOLDEN GATE CAPITAL
Financial Advisor
July 2019

INEOS
has acquired the Ashtabula, OH Titanium Dioxide plant of
TRONOX
Financial Advisor
May 2019

SK CAPITAL
has acquired the Performance Products and Solutions Division from
PolyOne
Financial Advisor
October 2019

CPS PERFORMANCE MATERIALS CORP
a portfolio company of
ARSENAL CAPITAL PARTNERS
has acquired
GEO SPECIALTY CHEMICALS
Financial Advisor
August 2019

GOLDEN GATE CAPITAL
has acquired
ActiveMinerals INTERNATIONAL, LLC
from
MERIT CAPITAL PARTNERS
Financial Advisor
November 2018

Charlesbank CAPITAL PARTNERS LLC
has sold
PLASKOLITE
to
PPC Partners
Financial Advisor
December 2018

DUNES POINT CAPITAL
has sold
MILLER
to
HUBER
Financial Advisor
April 2019

INEOS
has acquired the Composites business and German BDO plant of
Ashland
Financial Advisor
September 2019

Quaker
has acquired
HOUGHTON
from
Gulf
Financial Advisor
August 2019

SOLENIS
a portfolio company of
CLAYTON DUBILIER & RICE
has merged with the Paper and Water Chemicals business of
BASF
Financial Advisor
February 2019

ChemicalInvest
a joint venture of
DSM CVC Capital Partners
has sold
FIBRANT
to
HSC
Financial Advisor
October 2018

US SILICA
has acquired
EP Minerals
a portfolio company of
GOLDEN GATE CAPITAL
Financial Advisor
May 2018

THE CARLYLE GROUP GIC
have acquired the Specialty Chemicals business of
AkzoNobel
now known as
Nouryon
Financial Advisor
October 2018

SK CAPITAL
has acquired the Fire Safety and Oil Additives businesses of
ICL
Financial Advisor
March 2018

ITAÚSA
has sold
Elekeiroz
to
H.I.G. CAPITAL
Financial Advisor
June 2018

EP Minerals
a portfolio company of
GOLDEN GATE CAPITAL
has acquired the Bleaching Clay and Mineral Adsorbents business of
BASF
Financial Advisor
June 2017

ARCHROMA
a portfolio company of
SK CAPITAL
has been recapitalized
Financial Advisor
June 2017

NMC
NEW MOUNTAIN CAPITAL LLC
has partnered with
Gelest
Financial Advisor
August 2017

Niacet
has been sold to
SK CAPITAL
Financial Advisor
February 2017

ROCKWOOD THEBE
have sold
Safripol
to
KAP
Financial Advisor
January 2017

EVONIK
has acquired the
Silica business of
HUBER
Financial Advisor
September 2017

INEOS
has sold its Expandable
Polystyrene business to
synthos
Financial Advisor
August 2016

eurazeo
has acquired
novacap
a portfolio company of
ARDIAN
Financial Advisor
June 2016

Arsenal | Capital Partners
has sold
ROYAL ADHESIVES & SEALANTS
to
AMERICAN SECURITIES
Financial Advisor
June 2015

nubiola
has been sold to
FERRO
Financial Advisor
June 2015

INEOS SOLVAY
has sold certain Chlorvinyls
businesses as a remedy to secure
European Commission approval of
INOVYN, their planned PVC JV, to
INTERNATIONAL CHEMICAL INVESTORS GROUP
Financial Advisor
August 2015

DOW
has sold its Sodium Borohydride
business to
Vertellus
a portfolio company of
WIND POINT PARTNERS
Financial Advisor
January 2015

canexus
has been sold to
CHEMTRADE
Financial Advisor
October 2015

Arsenal | Capital Partners
a portfolio company of
ACCELLA POLYURETHANE SYSTEMS
has sold its Plastisols business to
PolyOne
Financial Advisor
December 2014

HSC CORPORATION
(Zhangjiagang, China)
has been sold to
CYG
ChangYuan Group
(Shenzen, China)
Financial Advisor
December 2014

Permira
has acquired
CABB
from
Bridgepoint
Financial Advisor
June 2014

cbpe capital
has sold
Warwick Chemicals
to
Lubrizol
Financial Advisor
December 2014

TESSENDERLO GROUP
has sold its Compounds business to
MITSUBISHI CHEMICAL
Financial Advisor
October 2015

Niacet
has acquired
ChemSolutions B.V. from
Kemira
Financial Advisor
March 2013

CYTEC
has sold its Building Block
Chemicals Division to
H.I.G. CAPITAL
Financial Advisor
February 2011

PolyOne
has sold its 50% ownership interest
in SunBelt Chlor Alkali Partnership to
Olin
Financial Advisor
February 2011

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