Highlights

- Profit growth is driving chemicals EV/EBITDA trading multiples which have hit an all-time high

- High tier specialty chemicals and additives companies benefitting most with multiples increasing from c. 10 to 14x EV/EBITDA in the last 7 years

- Chemical company profits remaining strong with no sign of weakening and consolidation continues to underpin margin growth

- Monthly chemical company transaction volumes also continuing to track higher with 2018 expected to remain strong
EV/EBITDA Multiple Growth

For the last few years the frequent claim from many in the chemical industry and investment community has been that acquisitions are too expensive, valuations are abnormally high and trading multiples are at an unsustainable level. But is this really true and, if so, why are acquisitions still being undertaken at a brisk pace?

Although there is no doubt that some chemical company share prices together with the wider stock indices have risen significantly, especially in the last year, it is less clear how much of this increase is linked to the underlying performance of the companies. Therefore to understand how fundamental performance and, more specifically profitability, drives valuation, we have analysed the trading multiples of a wide range of companies and broadly defined chemical sectors.

It is generally acknowledged and as we have demonstrated in previous newsletters, the underlying driver for share price performance is increasing profit. This is intuitively obvious as increasing cash flow will attract investment as mounting expected returns will accrue either directly to shareholders through dividends, share buybacks or increased size and therefore value. Growth companies have higher multiples as valuation precedes increased profits. Investors expect higher returns, thereby boosting share price and multiples.

So how have chemical company EBITDA trading multiples (EV/EBITDA) performed over the last 15 years and more importantly over the last five years? Our analysis is shown in Figure 1 and is based primarily on c. 60 North American and European companies with some more established Asian companies included. What is clear from Figure 1 is that chemical company multiples have expanded significantly over the last c. 10 years and have overtaken the last peak of 2007. Indeed trading multiples are almost 20% higher than 2007 and seem to have decoupled from historical levels with average multiples now at more than 12x, albeit 2017 has yet to close out. At this level it would appear that chemical companies have perhaps become overvalued.

However, equally striking is how close EBITDA multiples track profits. Figure 1 also shows the average profit (absolute $ basis is used to eliminate oil price impacts) of the chosen companies over the same period. Remarkably, since 2009 average trading multiples have tracked profits with a highly convincing correlation coefficient of 0.95. Hence, chemical company stock valuations have simply followed profits and trading multiples are simply in line with company profits. As companies grow profits through M&A, lower costs, innovation or geographic expansion, there is limited evidence to suggests that stock prices will reverse the current trend.

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**Figure 1 Chemical Company Trading Multiples and Profit (US $)**

![Graph showing chemical company trading multiples and profit](image_url)

Stock markets are assuming chemical company profits will maintain momentum in 2017.
Naturally, if profit growth stalls for whatever reason then we would expect a correction. Certainly, in 2017 EBITDA multiples appear to have moved above profit growth. But, stated profits typically lag share prices and only towards the end of the year will it be clear if there has been a disconnection between the share prices and profits. If cash flow or profits prove disappointing, we would expect a market adjustment accordingly. However, it should be noted that stock prices follow profit growth rather than absolute level of cash flow.

Of course, the subsequent question is what underpins chemical company profits and how sustainable are they in the near future. In our view three key factors have combined:

- Low interest rates that have both lowered costs and supported more debt on balance sheets, more capital expenditure and M&A
- Lower feedstock and energy costs, especially in the US, thereby increasing profits across the entire chain but mostly for commodity and diversified companies
- Consolidation and M&A, particularly in more downstream speciality sectors and additives, that has resulted in higher growth and profitability for the remaining companies

In our view, the last point has had the most sustained impact on chemical company profits and therefore trading multiples. Figures 2 and 3 quite clearly show the dramatic difference in fortunes of the broadly defined different chemical sectors. It is striking how much the Higher Tier Specialties and Additives sectors are benefitting from an increasingly positive cash flow outlook for the sector. Furthermore, Specialties are driving much of the trading multiple uplift we are witnessing in chemical stocks (Figure 4 shows how closely trading multiple follows profit growth for High Tier Specialities). Conversely, Commodity and Diversified (companies that incorporate commodity and intermediates through to specialties) have shown limited EBITDA multiple increase, as any cash flow growth in these sectors has been partially negated by increasing Chinese competition and lower oil prices. This split between higher growth downstream and lower growth upstream companies has now become quite marked and investors have perhaps divided the market too starkly. The performance of many diversified and commodity companies probably warrants more reward, but with investors focused on growth this is unlikely to change anytime soon.
Consolidation

A key element of the EBITDA growth has been consolidation across the downstream chemicals sectors. Recent transactions such as:

- H.B.Fuller - Royal Adhesives
- Bayer - Monsanto and the Dow/DuPont Agro
- Novacap acquisition of PCAS and Chemoxy

have only served to highlight that this trend will continue across many sectors and sub-sectors. The level of consolidation and the declining level of M&A opportunities have only served to increase both the expected multiple and also the level of profitability. This virtuous circle (from the seller’s viewpoint) of rising purchase prices will likely continue until the
consolidation has played out or global economic activity takes a downward step. In Figure 5, several of the key sectors that are showing increasing consolidation trends are highlighted and they typify the type and level of ongoing activity.

Our expectation is that certain sub-segments will show accelerated consolidation in the next few years. Specifically, Electronic Chemicals, Adhesives and Sealants, Food Ingredients and Coatings are potentially at the forefront of the consolidation trend with a convergence of factors supporting increasing M&A activity; large companies seeking to acquire higher growth business, incumbents wanting to grow and end markets benefiting from global mega-trends. In addition, special factors will also influence the speed of consolidation. For example, electronic chemicals have rapidly rising R&D costs and also changing competitive dynamics with the emergence of Versum and DowDuPont. Adhesives and Sealants have been the most active recently as Arkema, H.B. Fuller and Henkel continue to consolidate a fragmented supply base while extracting significant synergies.

In total, we forecast 10-12 performance chemicals sub-segments will undergo major consolidation in the next c. 3-5 years (Figure 6).

Conversely, the level of Chinese participation in a selection of intermediates chemicals is a mirror image of specialty chemicals consolidation (as shown in our last newsletter). The Chinese expansion across intermediates such as adipic acid, caprolactam, butanediol and increasingly isocyanates has been one of the driving forces of European and US companies exiting intermediates and expanding in downstream, more
specialised sectors. Again this trend is likely continue in the mid-term thereby further increasing consolidation and therefore M&A downstream.

**Figure 6 Sub-Sectors Undergoing Consolidation**

<table>
<thead>
<tr>
<th>Sub-sectors</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Electronic Chemicals</td>
<td>Food Ingredients</td>
</tr>
<tr>
<td>Paints &amp; Coatings</td>
<td>Flavors &amp; Fragrances</td>
</tr>
<tr>
<td>Adhesives &amp; Sealants</td>
<td>Fine Chemicals</td>
</tr>
<tr>
<td>Surfactants</td>
<td>Polymer Additives</td>
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<tr>
<td>Pigments</td>
<td>Oil and Mining Chemicals</td>
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**Chemicals M&A Transaction Volumes**

We have tracked monthly chemicals transactions since 2010 with the aim of having a better indicator of the forward level of M&A activity. As can be seen in Figure 7, 2017 has been the strongest of the last 8 years and, despite a moderate softening from highs reached earlier in the year, we would expect the year to be the highest on record. At this stage there is little to suggest that M&A activity will change significantly.

Although global interest rates are expected to slowly rise in the next year, we would not foresee a change in the level of M&A activity. GDP growth remains robust in North America, and Europe is finally beginning to grow more strongly. Furthermore, chemical industry consolidation will have a much bigger impact than any relatively modest base rate rises. Hence our forecast for 2018 is for another strong year, albeit not quite at the most recent highs.
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The Valence Group

The Valence Group is a specialist investment bank offering M&A advisory services exclusively to companies and investors in the chemicals, materials and related sectors.

The Valence Group team includes a unique combination of professionals with backgrounds in investment banking, strategic consulting and senior management within the chemicals and materials industries, all focused exclusively on providing M&A advisory services to the chemicals and materials sector.

The firm’s offices are located in New York and London.
The Valence Group acted as financial advisor to PolyOne and issued a Fairness Opinion to PolyOne's Board of Directors.

The Valence Group acted as independent advisor to the Board of Directors of Solutia.

The Valence Group acted as financial advisor to the shareholders of Nubiola Group.

The Valence Group acted as financial advisor to Permira.

The Valence Group acted as financial advisor to the shareholders of Nubiola Group.

The Valence Group acted as M&A advisor to INEOS and Solvay.

The Valence Group acted as financial advisor to Arsenal capital.

The Valence Group acted as financial advisor to the shareholders of HSC Corporation.

The Valence Group acted as financial advisor to Permira.

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