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Strategies for a post COVID-19 world – The chemical industry

As a key industrial link between a volatile oil and gas market and changing consumer needs, the chemical industry has been challenged by the COVID-19 pandemic. Deemed essential critical infrastructure by the Department of Homeland Security, the chemical industry continues to maintain relatively robust operational supply chains for critical items such as filters, masks, rubber gloves, cleaning supplies, personal care products, and pharmaceutical intermediates.

Initially, most chemical companies were rightly focused on the safety of their employees and security of their operational supply chains. Most have worked hard to improve liquidity, manage working capital, limit discretionary spending, and minimize stock buybacks to secure their short-term financial situation. Now management faces tough decisions around: fundamental changes to the manufacturing footprint; raw material sourcing; regional versus global supply chains; repositioning the portfolio on a regional and/or end market basis; and whether to pursue opportunistic M&A.

Based on our analysis of over 70 publicly traded chemical companies, we have identified six common characteristics of leading performers through the five-year period to the end of 2019. We have found that these same characteristics have also resulted in greater resiliency over the past four months. In this paper we discuss the implications of these findings for management as we navigate through the crisis and transition to a new post-COVID-19 world.

From temporary to structural and long-lasting change

Positioning in the chemical industry for a post-COVID-19 world is, in good measure, grounded in the ability to separate temporary changes in the business environment from more structural changes. We are now beginning to see signs of potentially fundamental and long-lasting changes.

Emerging structural changes

The most fundamental structural change that is occurring is to the attractiveness of many of the major end markets served by the chemical industry. These market changes are wide-ranging and include:

- **Cleanliness and hygiene** – Increased industrial and consumer concerns about cleanliness, personal hygiene, and sanitation will propel ongoing demand growth for critical industrial & institutional (I&I) chemicals and surfactants.
- **Sustainability and recycling** – Single-use plastic bag bans may be rethought due to health risks associated with multi-use bags.
- **Entertainment and leisure** – The migration of large venue entertainment to smaller environments will drive an increase in consumer electronics and home remodeling. This should have a positive and long-lasting impact on demand for packaging, electronic chemicals, selected polymers, paints and coatings, and other materials.
- **The food value chain** – Changes in purchasing and consumption behaviors will likely cause a structural shift in food packaging towards single use/family packaging, at the expense of bulk packaging for restaurants and large events.
- **Medical and health care industries** – Significant investment in medical and health care industries will bolster chemical product suppliers such as producers of polymers used in syringes and medical tubing, latex for gloves, and fibers used in filters and masks. A sustained increase in the use of telehealth services should lead to increased demand for electronic communication devices and the associated materials.
- **Airlines/Aerospace** – The dramatic decline in leisure and business air travel will slowly moderate but most expect a long tail of cautious behavior as discretionary travel is limited and a changed airline industry emerges. More broadly, these changes are expected to have a long-term impact on the aerospace industry (e.g. the interior design of aircraft) and, consequently, associated chemicals and materials.
- **Road travel and automotive sector** – As people stay home, the dramatic drop in auto sales and driving miles has caused a significant slowdown for a wide range of chemicals and materials. While this trend will begin to reverse as the economy reopens, it is expected that some of the new work behaviors (i.e. working from home) will be more long-lasting. A countertrend is the continued need for social distancing may keep people away from public transport, with a resulting increase in the use of private vehicles.
- **Dense urbanization** – There may be a slowdown in the rate of urbanization as people look toward living and working in less dense cities/environments. This could affect the demand for, and use of, office space and consequently, construction-related markets and remodeling, retrofitting of work and living spaces.

There will also be fundamental changes in how, and through which channels, business is conducted, resulting in an accelerated and permanent shift to direct-to-consumer retail sales; more emphasis on sustainability and environmental protection; industry regulation; and increased use of technology to enhance productivity in the plant, throughout the supply chain, and in the workplace. All these structural changes will have potentially large direct or indirect effects on the chemical industry.

Chemical company performance drivers

Over the last five years, the chemical industry has been actively reshaping. At the root of these changes are three themes: the pursuit of scale; increasing the mix of true specialty products; and creating greater portfolio focus. Investors have rewarded companies that have followed these three strategies, resulting in sizable EBITDA multiple premiums and higher total shareholder returns (TSRs) associated with scale, portfolio focus, and a higher specialty business mix.

Our analysis of over 70 publicly traded chemical companies over the last five years (2014–2019, a period of generally solid economic growth) suggests that leading companies have, on average, delivered approximately five percentage points higher TSR, and a 200 to 300 bps EBITDA multiple premium (see Figure 1).

Six characteristics of leading performers

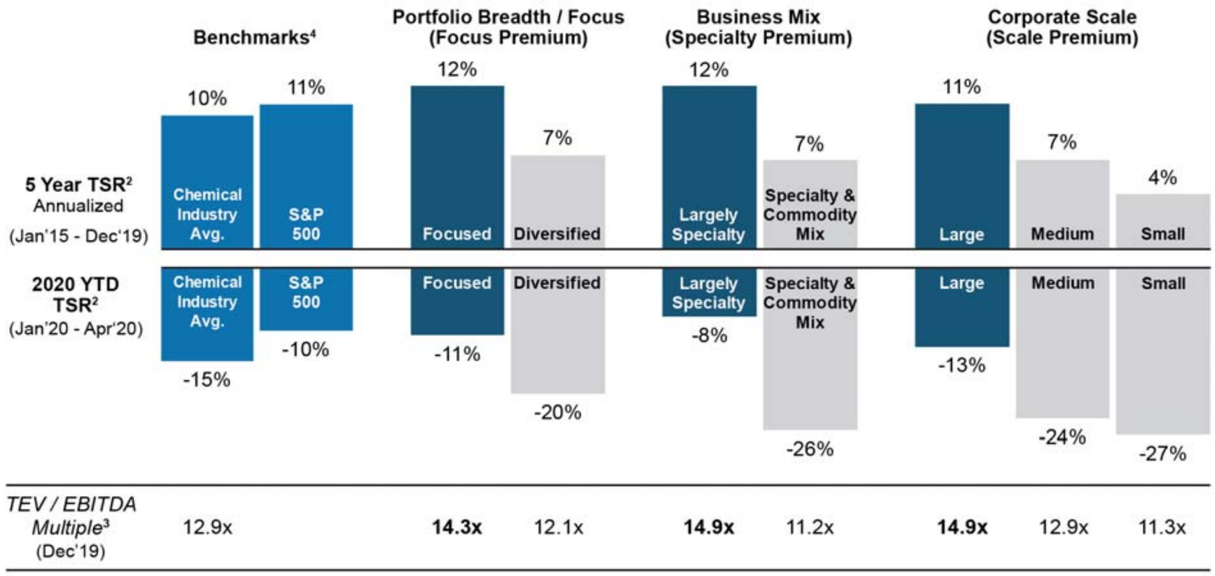
A closer examination reveals the following common characteristics of the leading performers

1. Portfolio coherence – a high degree of focus on few businesses or markets with strong linkages that can be monetized (e.g. market, technology, manufacturing footprint)
2. Leadership positions in chosen products or sectors – often a benefit of focus and scale in its core businesses or markets
3. Attractive market structure – participation in markets that offer, on average, high and relatively stable margins and returns
4. Strong technology/innovation capabilities – a significant value contribution from technologies and commercially successful innovation that are differentiated, supporting superior margins
5. Good growth dynamic – products and end-market positioning that offer higher underlying growth and growth optionality
6. Cycle resiliency – relatively stable performance through an economic cycle both in terms of volumes and margin stability

Leading performers were also more resilient in recent downturn

Our analysis highlights the fact that the same six factors that contributed to leading performance in the five-year period to the end of 2019, also resulted in significantly greater resiliency over the past four months (January through April 30, 2020). As shown in Figure 1, the leading performers, on average, delivered ~10 to 20 percentage points higher TSRs than their weaker peers during this period.

Figure 1: Total shareholder return of chemical companies (past 5 years vs. past 4 months)[1]



Notes:

1. CRA segmented over 70 listed chemical companies in the US and Europe along three dimensions:
   - **Business mix** – defined by principal characteristics of a company's main lines of business; companies were classified as either largely specialty (i.e., portfolio is composed largely of high-value, performance-driven, relatively low volume businesses) or specialty/commodity mix (i.e., a portfolio more largely comprised of commodity-like, volume/cost driven businesses).
   - **Portfolio breadth/focus** – defined by number of business segments and their degree of relatedness; companies were classified as either focused (i.e., few closely related businesses or one core business) or diversified (i.e., more than two major businesses with limited meaningful linkages between them, e.g., in market, technology or manufacturing)
   - **Corporate scale** – defined by company's market capitalization; companies were categorized as large cap (greater than $10bn), mid cap (between $3bn and $10bn) and small cap (less than $3bn).
2. Total Shareholder Return (TSR) based on market capitalization weighted average of TSR of companies in each segment.; 5-year TSR: 1/1/2015 - 12/31/2019; 2020 YTD TSR: 1/1/2020 - 4/30/2020
3. Average TEV/EBITDA multiples of the segment; total enterprise value (TEV) as of 12/31/2019; company reported EBITDA of FY 2019
4. Net total return of S&P 500 (including reinvestment of dividends after the deduction of withholding tax)

Source: Capital IQ and CRA analysis

The COVID-19 crisis highlights four critical factors that have contributed to the relative outperformance of chemical industry leaders through the downturn. These include:

- **End market positioning** – particularly in serving "essential" end markets – e.g. cleaning and hygiene, packaging, nutritional/food ingredients, etc.
- **Regional positioning and mix** – balance of sales between regions as the extent and timing of the impact of COVID-19 has varied across regions
- **Supply chains** – regional access minimizes dislocations in production and raw material supply vs. more global supply chains
- **Liquidity** – balance sheet strength, working capital management, debt access and structures to manage through the crisis

Our analysis indicates that larger, scaled companies with a higher specialty mix and focused portfolios performed significantly better in "normal" times and were also significantly more resilient in the recent market downturn. For example, companies like Ecolab, Stepan, and FMC that are highly focused on more "essential" products and/or services have outperformed. Similarly, focused companies like Air Products and Air Liquide have benefited from a business model which generates stable returns while other focused companies, like Sherwin Williams and Quaker, have demonstrated relatively strong resilience due to a more localized/regional business model and a diverse end-market mix.

Strategies for a post-COVID-19 world – More of the same or a different path

While there is no one-size-fits-all strategy for managing in the current crisis, each company will soon face (or already faces) critical strategic decisions related to the need for portfolio shifts, reshaping supply chains, altering regional positioning, taking measures to "de-risk" businesses or the overall portfolio, and deciding if and when to pursue M&A opportunities. We believe that a disciplined and thoughtful assessment of the company's portfolio, the impact of structural changes on its business and its future, and the implications of strategic priorities is warranted. Figure 2 provides a guide on how to proceed.

Figure 2: A path forward – Guiding steps

Step	Key questions / Issues addressed
1. **Performance and positioning assessment**	• How well did we perform relative to peers over the past five years leading up to the COVID-19 crisis? • How resilient have we been during the downturn driven by COVID-19? • How are we positioned relative to the characteristics of leading companies?
2. **Structural vs. temporary changes**	• Which industry/market/segment changes are temporary, and which are structural? • What is the impact of these changes so far and which are the most material looking forward?
3. **Rethinking performance criteria**	• How do we think about risk in this new environment and what are the implications? • Do we need to rethink the trade-off between growth and performance stability?
4. **Where are we headed**	• Has our fundamental view of the attractiveness of our portfolio and key businesses changed? • Do we need to realign our end-market exposure? Regional mix? Supply chain? Operating footprint? Innovation and technology program? • Does our business model need to be reshaped? If so, what aspects?
5. **Priorities and staging**	• What are the implications for our overall strategic, operational, financial, and organizational priorities? • What changes are critical to move on sooner (can we afford to wait)? • What are the highest-value priorities on the executive management agenda to address?

COVID-19 has led to a difficult environment for the chemical industry with some of the changes likely to be structural and long-lasting. Chemical industry executives need to begin to look beyond the short term and make decisions that will guide the company for success over the years ahead.

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