



Executive Insights

Finding Growth Opportunities in a Complex Market: Healthcare Components and Solutions

Healthcare supply chains are becoming increasingly complex due to rapidly evolving product regulations and requirements from both original equipment manufacturers (OEMs) and their downstream end users (e.g., patients, healthcare professionals). Companies along the healthcare supply chain are looking for ways to adapt by acquiring new capabilities that will enable them to expand into new applications and/or respond to customer needs. This generates significant opportunities to create value through strategic acquisitions.

A portion of the market that appears ripe for M&A and investment activity is a space defined as healthcare components and solutions (HCCS). In this paper, we will consider opportunities to invest across the HCCS value chain, including (1) contract manufacturers — inclusive of both contract manufacturing organizations (CMOs) and contract development and manufacturing organizations (CDMOs) — for pharmaceuticals, medical devices and related healthcare markets; and (2) high-value primary packaging manufacturers.

It is easy to overlook the investment opportunities in this space by thinking too broadly. For example, prospective corporate and financial sponsor acquirers sometimes want to compare HCCS businesses to their counterparts in the consumer space. But such comparisons can be misleading and fail to recognize some of the distinguishing characteristics of the HCCS space that support an attractive investment opportunity and thus command higher valuations.

Healthcare components and solutions

- **CMOs/CDMOs:** Manufacturing subcomponents and/or integrating multiple components into a subassembly or finished medical or pharmaceutical product such as a drug delivery medical device or blow-fill-seal (BFS) ampule
- **High-value primary packaging:** Specialty packaging (e.g., films, trays/blisters) with high technical requirements (e.g., sterilization)

What makes HCCS an attractive sector?

Several macro trends — such as an aging population, increasing life expectancy and growing access to healthcare — are positive for the healthcare sector in general. The growth rates for categories served by HCCS players are strong and, in most cases, much higher than the gross domestic product (GDP).

Finding Growth Opportunities in a Complex Market: Healthcare Components and Solutions was written by **Thilo Henkes**, **Jeff Cloetingh** and **Amanda Davis Winters**, Managing Directors, and **Jon Moss**, Engagement Manager, at L.E.K. Consulting; and **Robert Bayer**, Senior Managing Director, **Patricio Gonzalez**, Senior Vice President, and **Anne Maercklein**, Associate, at Macquarie Capital.

For more information, contact industrials@lek.com or maccap.industrials@macquarie.com.



MACQUARIE



Executive Insights

Other factors more specific to HCCS companies that make them attractive include the existence of multiple supplier segments (e.g., components, finished solution manufacturing and packaging), substrates and production processes as well as high barriers to entry — owing to a complex regulatory environment, the need for special infrastructure and research and development capabilities, and a long sales cycle. HCCS companies can generate high EBITDA margins, the result of product complexity, mission criticality, high levels of innovation and growing demand (for example, enhanced barrier protection). Furthermore, several important trends ranging from growth in temperature-sensitive drugs to value chain integration underscore the attractiveness of these players.

Growth in temperature-sensitive drugs

Many of the most important drugs (including COVID-19 vaccines) that have come to market in recent years depend on temperature-controlled environments to maintain their stability. For example, biologics have been growing at a 12% annual rate, a trend that is expected to continue at least until 2025, when revenues are projected to reach \$185 billion in the U.S. (see Figure 1). The prospects for biologics are especially promising given the historically higher Food and Drug Administration (FDA) approval rates versus those for other drug types. This is expected to result in greater demand for cold chain technology and temperature-controlled packaging solutions, both active and passive.

Growth in outsourcing by OEMs

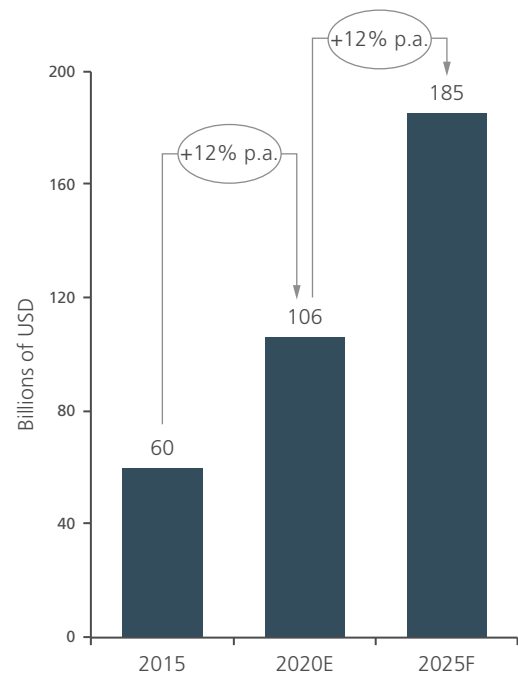
Both pharmaceutical and medical device OEMs have been steadily shifting more aspects of the manufacturing process to HCCS players; this includes component manufacturing and assembly, engineering and design, and packaging. For example, in higher-value Class II and III medical devices, the percentage of outsourced manufacturing and design is expected to reach 80%-85% in 2023, up from 75%-80% in 2013. HCCS companies themselves are focusing on expanding their R&D capabilities to win higher-value-added contracts from OEMs.

As HCCS companies become more sophisticated and increasingly critical players across the value chain, the overall sector is becoming more attractive. Furthermore, the consolidation trend among OEMs, and their increased primary focus on developing drugs and medical devices, is likely to drive increased outsourcing. Creating broader HCCS platforms is one way to take advantage of this outsourcing trend.

HCCS companies capturing more of the value chain

To win more business from OEMs (and benefit from the shift to outsourcing), CMOs and CDMOs are integrating up and down the value chain, from component production to subassembly and value-added services. HCCS companies' assumption of control of

Figure 1
U.S.-marketed biologics value in retail dollars (2015-25F)



Source: Evaluate Ltd., L.E.K. Consulting analysis

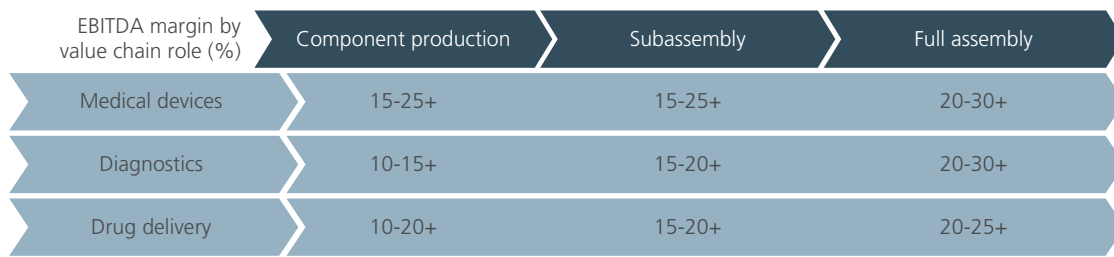
greater portions of the value chain allows them to deliver more integrated solutions rather than discrete point products to their customers. With broader capabilities, their EBITDA margins can increase substantially compared with more narrowly focused CMOs. For example, adding subassembly or full assembly capabilities can enable molders to expand EBITDA margins by 5 to 10 percentage points (see Figure 2).

Overall, pharmaceutical firms and medical device OEMs are working to rationalize their number of supply chain partners and value HCCS providers that have more capabilities across the value chain, enabling HCCS providers to earn higher margins. Value chain integration is also one reason HCCS companies are stepping up their acquisitions of players with adjacent capabilities, allowing them to quickly offer broader solutions to OEMs and capture more outsourcing business with existing and new customers. As is the case generally, companies with differentiated, future-focused capabilities will trade at higher valuation multiples.

Increased prevalence of unit-dose and convenient drug delivery formats

Another key trend we are seeing now in drug delivery is a focus on the patient experience, from the miniaturization of wearables (such as continuous glucose monitoring devices) to the rise in BFS

Figure 2
Impact of value chain integration on margins



Source: L.E.K. Consulting research and analysis

single-unit doses. The latter format, in particular, is expected to see outsized growth, especially in segments like ophthalmology where BFS unit dosing for dry eye treatments is expected to grow rapidly over the next several years (see Figure 3), driven by mix shift toward more convenient unit-dose formatting. Increased demand for unit-dose packaging is expected to result in tailwinds for drug delivery and components, driving growth in select pockets of the HCCS sector.

Shift from central lab to point-of-care testing

The benefits of being able to receive rapid diagnostic test results wherever the patient is tested — whether in a physician’s office, a school or an airport, or even in a consumer’s home via a select subset of home test kits — are well established. Without the need to send samples to a central lab for processing, point-of-care (POC) diagnostics are both convenient and cost-efficient. POC testing can also help prevent the spread of communicable diseases like COVID-19. These types of tests are especially useful in remote locations where central labs may be hundreds of miles away.

Consequently, it is no surprise that POC testing is on the rise, with growth projected to be triple that of central lab testing through 2025. Other factors are also at play, from the increase in personalized medicine to a rise in disease incidence. POC testing requires HCCS companies to adapt and innovate in order to win an increasing share of this high-value business. HCCS companies that can help OEMs launch global campaigns to manufacture and deliver products into POC will capture more of this growth (see Figure 4) and command a valuation premium relative to peers.

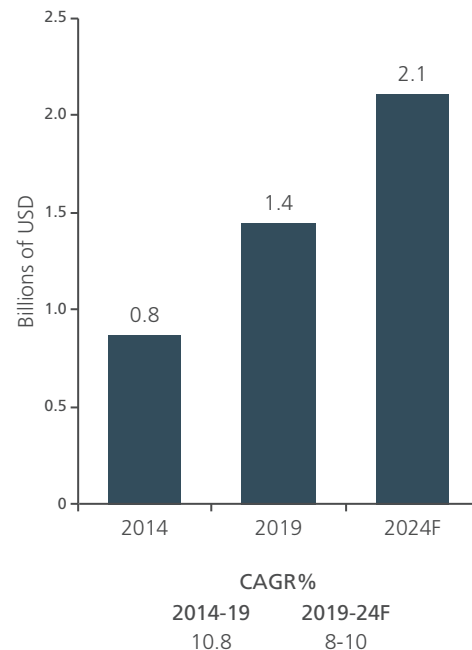
Diversified packaging: A misleading comparison

M&A activity has been robust in the diversified packaging sector for many years. Because of this, many corporate and financial sponsor acquirers have a natural tendency to look at diversified packaging as a reference point in determining valuation levels for HCCS companies, especially considering that some diversified

packaging companies have a degree of healthcare exposure. While the manufacturing technology may appear similar, the product complexity, regulatory framework, R&D intensity and growth trends are very different.

HCCS companies have financial metrics that in most cases are superior to those of diversified packaging companies — including above-GDP organic growth, higher EBITDA margins and strong free cash flow (FCF) conversion — and because of this they

Figure 3
Outsourced BFS market for respiratory and ophthalmic indications (2014-24)



Source: IMS; L.E.K. Consulting research and analysis

Executive Insights

command higher valuation multiples relative to diversified packaging companies.

There are several reasons why HCCS companies command EBITDA margins that are more in line with medical device companies than with diversified packaging companies. First, HCCS products are highly regulated because they house products that often go on or into the body. Special infrastructure is required to manufacture HCCS products, including clean rooms and specialized equipment. For example, when a medical device is submitted for FDA review, it is not only the device that is put through the approval process but also its packaging. Regulatory requirements, focus on safety and the fact that pharmaceuticals are in direct contact with the medical device/packaging shield this category from a sustainability-driven push away from plastics. Product cost relative to packaging/input components is very high, and packaging failure can lead to substantial liabilities for OEMs. HCCS companies closely collaborate with their customers to develop innovative solutions so packaging decisions are made early in the development cycle. The stringent regulation and mission-critical nature of healthcare-related products create high barriers to entry and lead to much “stickier” revenue for HCCS providers than is found in most other packaging markets.

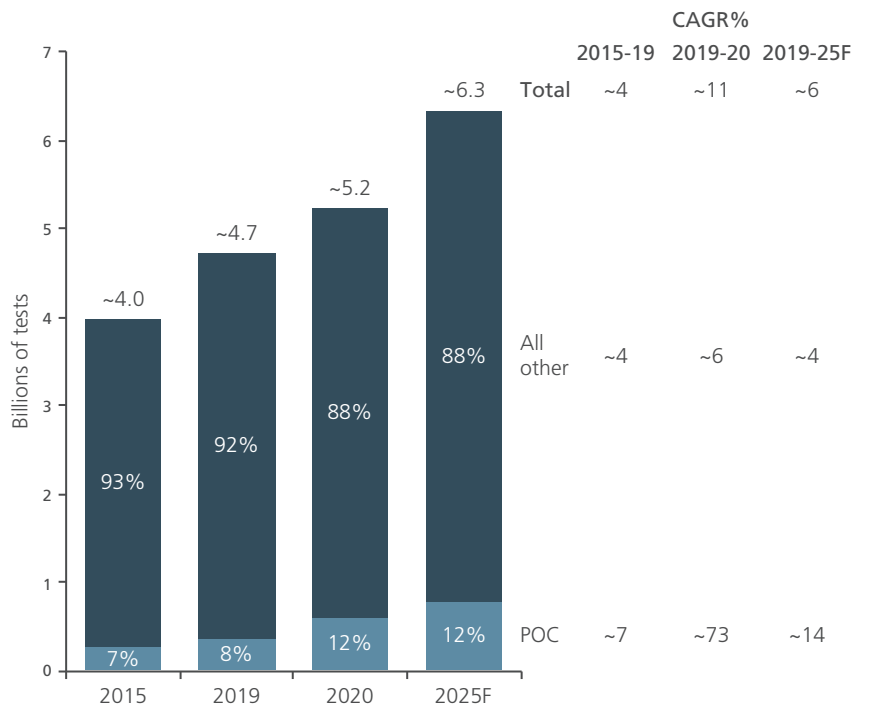
HCCS companies also generally feature strong and stable FCF conversion, which is similar to that of diversified packaging companies. However, it is important to note that the FCF conversion for HCCS depends on where the company is in the product development cycle. Once a drug or medical device is in market, it generates long-term, highly steady revenues for HCCS, offsetting upfront investments. The nondiscretionary nature of HCCS products further supports stable FCF generation in contrast to diversified packagers.

Figure 5 illustrates these differences between HCCS providers and diversified packagers. For example, projected revenue growth between 2020 and 2022 is much higher for the three healthcare categories than for diversified packaging. Likewise, the healthcare categories have superior margins that are 5% to 10% above diversified packagers'. Together, these metrics demonstrate why investors are willing to pay more for these companies versus diversified packagers, and thus their enterprise value (EV) to next 12 months (NTM) EBITDA multiple is much higher.

Indeed, the HCCS sector has performed well over time, with multiples showing consistent gains. Public investors have become

Figure 4
POC diagnostics

U.S. in-vitro diagnostic test procedure volume (2015-25F)*



*Excludes blood glucose testing

Source: Kalorama; L.E.K. Consulting research and analysis

more sophisticated in how they analyze the sector, and have noted the difference between HCCS and diversified packaging. In the public sector, CDMO and healthcare packaging multiples have expanded ~6 times EV/NTM EBITDA over the course of five years (see Figure 6). Similarly, our analysis of select private sector transactions shows an increase of ~3 times last-12-months (LTM) EBITDA — from ~10 times LTM EBITDA in the period from 2015 to 2017 to ~13 times LTM EBITDA in the 2018 to 2020 time frame. These multiples are significantly higher than those of diversified packaging (see Figure 5), driven by the evidence shown above that the two sectors are not comparable for valuation purposes.

Building an HCCS platform through M&A

For organizations looking to create value in the HCCS space, there are several routes to consider:

- **Create a focused HCCS business:** Organizations can generate value by acquiring manufacturers that have some healthcare exposure and transforming them into pure-play healthcare packagers via M&A. This transformation ultimately makes the assets more attractive to future HCCS participants

Executive Insights

and increases their willingness to pay a true HCCS multiple. It is important to pursue acquisitions that expand capabilities in order to materially increase healthcare exposure and required infrastructure to meet healthcare standards. Because add-on HCCS investments typically require paying higher multiples than those in the original transaction, the higher valuation should be somewhat offset by synergies and support an eventual rerating of the whole business at a higher multiple. It is important to note that transformation may require a complete rebranding of the business to present the new company as an HCCS-focused player.

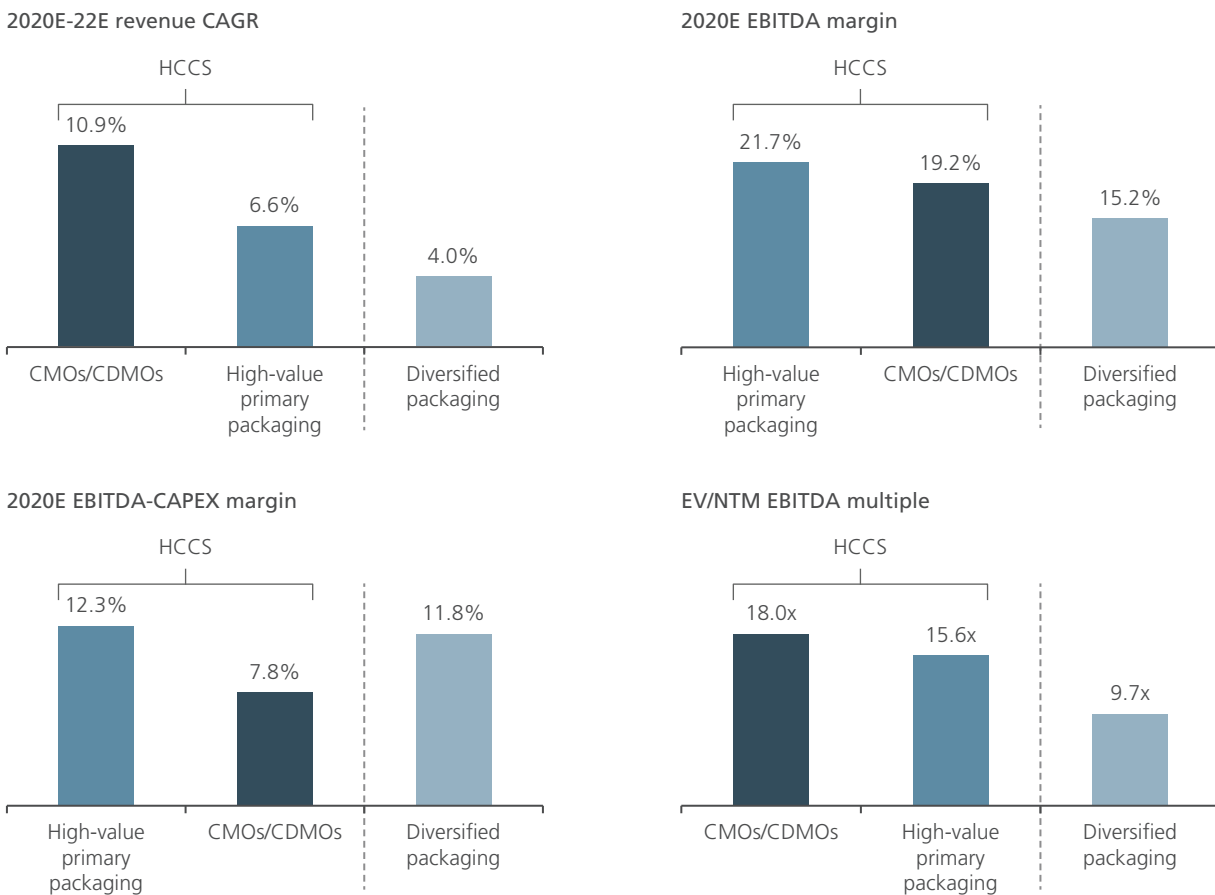
- **Roll up the sector:** HCCS markets remain fragmented across certain subcategories. Value can be created by buying up

HCCS assets and consolidating them. Eventually this will create economies of scale, unlock synergies and result in multiple accretion. Industry participants will place a higher value on companies that have a well-planned M&A roadmap and strong relationships with the private owners of targets in the sector.

- **Expand geographic reach:** HCCS customers value a national footprint and global reach. Pharmaceutical firms, diagnostics manufacturers and medical device OEMs are increasingly launching products globally. In parallel, they are looking to rationalize their supplier bases while continuing to seek HCCS partners with local production facilities. For instance, many medical device OEMs manufacture products

Figure 5
Benchmarking HCCS against other categories

Framework to analyze an HCCS target



Note: High-value primary packaging includes Aptar, Gerresheimer and West Pharma; CMOs/CDMOs include Lonza, Catalent, Recipharm and Siegfried; diversified packaging includes Amcor, Berry, Sealed Air, Silgan and Sonoco
Source: FactSet as of March 16, 2021

Executive Insights

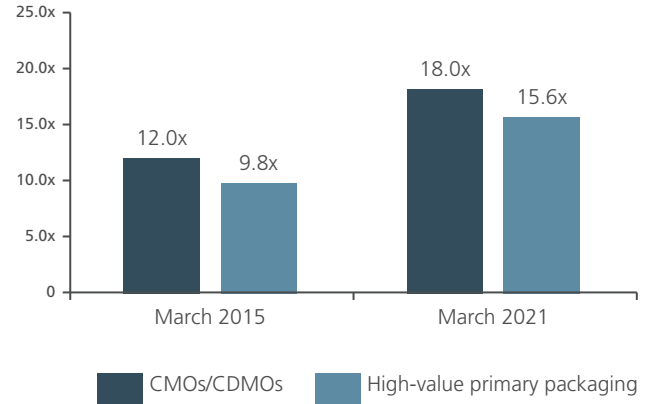
in locations such as Puerto Rico and Costa Rica and expect their U.S.-based HCCS providers to maintain adjacent facilities in these locations. Consequently, acquirers are often willing to pay more for global platforms with strong local market positions.

- **Broaden solution offerings:** To capture more wallet share from increased healthcare OEM outsourcing, HCCS companies need to offer a wider range of products and services. M&A is an important means of acquiring both capabilities and R&D. Furthermore, expanded customer relationships can be used to cross-sell other offerings, gain wallet share and support a shift from Tier 2 to Tier 1 supplier status, driving incremental customer loyalty. Acquiring niche capabilities can also help differentiate a platform, providing an advantage that ultimately translates into greater profitability and thus higher valuation.

As market participants continue to become more sophisticated and appreciate the attributes of HCCS, valuations will likely continue to expand. Thoughtfulness around an HCCS platform's potential and understanding the evolving healthcare market will help acquirers maximize returns in this sector.

Figure 6
Growth in multiples for the healthcare packaging sector

HCCS EV/NTM EBITDA multiples — then vs. now



Note: CMOs/CDMOs include Lonza, Catalent, Recipharm and Siegfried; high-value primary packaging includes Aptar, Gerresheimer and West Pharma
Source: FactSet as of March 16, 2021

Executive Insights

About the Authors



Thilo Henkes is a Managing Director and Partner in L.E.K. Consulting's Boston office and leads the firm's global Paper & Packaging practice. Thilo is also active in the firm's Building & Construction, Industrial Equipment and Private Equity practices. He joined L.E.K. in 2000 and has more than 20 years of consulting experience specializing in transaction support and developing post-acquisition

value-enhancing strategies for portfolio companies. Thilo was recently named a 2021 Global Leader in Consulting by *Consulting Magazine*.



Jeff Cloetingh is a Managing Director and Partner in L.E.K. Consulting's Boston office. As a leader in the firm's Paper & Packaging practice and broader Industrials team, Jeff has worked with corporate and financial sponsor clients globally on the development of growth strategy, go-to-market commercial strategy, investment thesis development, value creation plans and M&A

transaction support. He has worked in consulting since 2006 and with L.E.K. for the past decade.



Amanda Davis Winters is a Managing Director and Partner in L.E.K. Consulting's New York office. A member of the Industrials practice, Amanda has a particular focus on packaging, chemicals and environmental services. She has deep expertise in market entry strategy, market segment prioritization, go-to-market and commercial planning, inorganic growth strategy,

and both buy- and sell-side diligence.



Jon Moss is an Engagement Manager in L.E.K. Consulting's Chicago office. Jon is a member of the firm's Industrials practice, with a focus on the Paper & Packaging and Building & Construction practices. He has worked on growth strategy engagements focused on both U.S. and international opportunities and has supported corporate and private equity clients on buy- and

sell-side transactions.



Robert Bayer is a Senior Managing Director and Co-Head of Macquarie Capital's Industrials business in the Americas. Robert joined Macquarie in 2018 and has more than 25

years of experience advising public, financial sponsor-owned and family-owned companies globally on mergers and acquisitions, strategy, corporate structure and capital raises. He has extensive transaction experience across several sectors, including paper and packaging, plastic components, and films and specialty materials in various consumer, industrial and healthcare end markets.



Patricio Gonzalez is a Senior Vice President at Macquarie Capital in the firm's Industrials practice. Patricio joined Macquarie in 2019 and has more than 15 years of experience advising

public, financial sponsor-owned and family-owned companies globally on mergers and acquisitions, strategy, corporate structure and capital raises. He has extensive transaction experience across several sectors, including diversified packaging, plastic components and containers, glass, fiber packaging, and films and specialty materials serving the healthcare and consumer end markets.



Anne Maercklein is an Associate at Macquarie Capital. Anne joined Macquarie in 2014 and is a member of the firm's Industrials practice, with a focus on packaging, healthcare components

and industrial services. She has worked on engagements supporting corporate, private equity, family office and SPAC clients on buy- and sell-side transactions. Previously, Anne spent four years helping Macquarie and its clients assess credit risk for multiple sectors, including healthcare.

About L.E.K. Consulting

L.E.K. Consulting is a global management consulting firm that uses deep industry expertise and rigorous analysis to help business leaders achieve practical results with real impact. We are uncompromising in our approach to helping clients consistently make better decisions, deliver improved business performance and create greater shareholder returns. The firm advises and supports global companies that are leaders in their industries — including the largest private- and public-sector organizations, private equity firms, and emerging entrepreneurial businesses. Founded in 1983, L.E.K. employs more than 1,600 professionals across the Americas, Asia-Pacific and Europe. For more information, go to www.lek.com.

About Macquarie Capital

Macquarie Capital is the corporate advisory, capital markets and principal investment arm of Macquarie Group (ASX: MQG; ADR: MQBKY). Macquarie Capital combines specialist expertise, innovative advice and flexible capital solutions to help our clients and partners make opportunity reality. Our global corporate M&A, advisory, investing, development and equities capabilities are underpinned by deep sector expertise and a full spectrum of capital solutions from debt, equity, and private capital raising and financing to investing our own capital to enable new opportunities. For more information, go to www.macquarie.com.

Any opinions and estimates offered in this article constitute the authors' judgment and are subject to change without notice, as are statements about market trends, which are based on current market conditions.

The foregoing is included for informational purposes only and does not constitute an offer to sell or a solicitation to buy any security. This communication is not intended for distribution to, or use by, any person or entity in any location where such distribution or use would be contrary to law or regulation. "Macquarie Capital" refers to Macquarie Corporate Holdings Pty Limited, its worldwide subsidiaries and the funds or other investment vehicles that they manage. Macquarie Corporate Holdings Pty Limited is an indirect, wholly-owned subsidiary of Macquarie Group Limited. Macquarie Capital is not an authorized deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia). The obligations of Macquarie Capital do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542 ("MBL"). MBL does not guarantee or otherwise provide assurance in respect of the obligations of Macquarie Capital.

This market commentary does not constitute legal, tax accounting or investment advice. Recipients should independently evaluate any specific investment in consultation with their legal, tax, accounting, and investment advisors. Past performance is not indicative of future results. This market commentary may include forward-looking statements, forecasts, estimates, projections, opinions and investment theses, which may be identified by the use of terminology such as "anticipate", "believe", "estimate", "expect", "intend", "may", "can", "plan", "will", "would", "should", "seek", "project", "continue", "target" and similar expressions. No representation is made or will be made that any forward-looking statements will be achieved or will prove to be correct or that any assumptions on which such statements may be based are reasonable. A number of factors could cause actual future results and operations to vary materially and adversely from the forward-looking statements. Qualitative statements regarding political, regulatory, market and economic environments and opportunities are based on the authors' opinion, belief and judgment.

