

November 2018

Investment Banking

Packaging M&A Activity Remains Strong in 2018

In This Report

Highlights from PACK EXPO International

Financial sponsors aggressively pursuing platform assets

“Healthcare halo” drives premium valuations

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Packaging



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Packaging M&A Activity Remains Strong in 2018

Conversations at October’s PACK EXPO International focused on the trends driving heightened dealmaking in the packaging industry.

Packaging M&A activity remains elevated, driven by the ongoing consolidation of an industry that remains largely fragmented, growth tailwinds provided by eCommerce, on-the-go food and beverage and healthcare markets, and growing interest from financial sponsors drawn to the industry’s defensive characteristics. In the first half of 2018, there were 156 acquisitions of packaging companies totaling \$40.9 billion, a pace well ahead of 2017’s record 307 transactions totaling \$52.8 billion.

The robust demand for packaging assets is reflected in the valuations of these companies. In the first half of 2018, the median EV/EBITDA multiple for packaging acquisitions was 9.4x, well above the longer-term median of 8.3x since 2006. The healthy valuations achieved by sellers have been supported by lenders’ willingness to finance packaging acquisitions, with leverage multiples today sometimes surpassing 7.0x total debt / EBITDA.

In mid-October, we attended PACK EXPO International in Chicago, where we met with executives, corporate development professionals, and investors from across the packaging industry. The four-day event

continues to attract a larger and broader audience each year, with an increasing number of exhibitors displaying innovative, on-trend solutions. Based on our one-on-one meetings and other discussions at PACK EXPO, as well as our M&A advisory work in the sector, we examine several of the most powerful trends that are driving dealmaking activity in the packaging industry.

Financial Sponsors Aggressively Pursuing Platform Assets

A decade into the current economic expansion, most financial sponsors are modeling a downturn during their hold periods, raising the attractiveness of the packaging industry. In addition to packaging companies’ ability to generate strong cash flow, the packaging industry

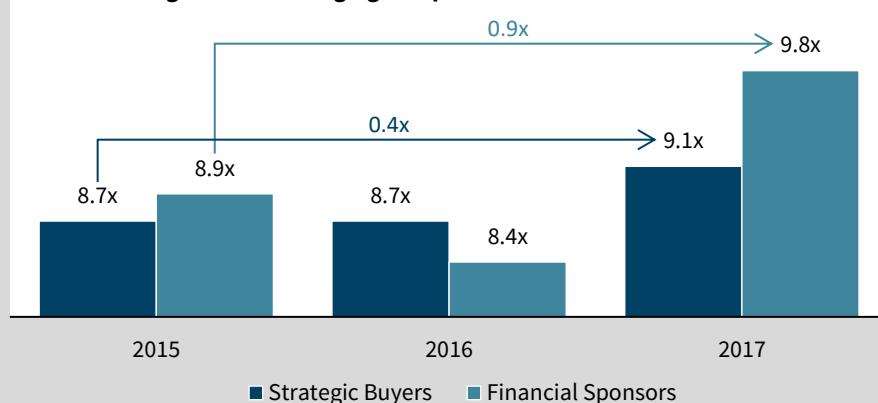
has displayed a relatively high degree of defensiveness during previous downturns, especially packaging assets with a meaningful presence in the healthcare and / or food and beverage end markets.

Financial sponsors have been particularly aggressive in their pursuit of packaging companies with the scale necessary to serve as a platform asset. In addition to EBITDA in excess of ~\$25 million, financial sponsors look for strong management teams, a proven ability to execute on an acquisition strategy, and a focus on less cyclical end markets when identifying potential platform assets. Since 2017, William Blair has served as sell-side advisor on several transactions in which financial sponsors aggressively pursued

Financial Sponsors Outbid Strategics for Platform Assets

It’s becoming increasingly common to see financial sponsors outbid strategic buyers for packaging companies that are large enough to serve as platform assets (~\$25 million+ in EBITDA).

Median Winning Bids for Packaging Companies with \$25+ million EBITDA



Sources: Dealogic and William Blair market analysis

platform assets, including Morgan Stanley Capital Partners' June 2018 acquisition of Comar and ONCAP's December 2017 acquisition of IntraPac.

"Healthcare Halo" Drives Premium Valuations

Driven by the healthcare industry's above-GDP growth and high regulatory and technical requirements, packaging companies serving healthcare end markets consistently achieve valuations one to two "turns" higher than other packaging companies. This "healthcare halo" shines brightest on companies focused on technologically enhanced medical devices and components, which can garner valuations higher than a traditional healthcare packaging company.

Given the challenge of finding suppliers that can fulfill the technical and regulatory requirements of the medical industry, packaging companies that serve medical end markets enjoy stickier customer relationships, more stable revenue, and greater pricing power. Comar's strong position in the dosing and pharmaceutical industries was a powerful value driver in its sale to Morgan Stanley Capital Partners.

eCommerce Spurs Growth and Innovation

As eCommerce continues to grow, so too does demand for packaging companies that provide protective packaging and inside-the-box systems to meet the needs of eCommerce's complex distribution chain that may

involve multiple distribution centers. This dynamic helped drive strategic interest in two companies that manufacture air pillows, bubble cushioning, and other protective packaging used in eCommerce: FP International, which was acquired by Pregis in July 2018, and Polyair, which was acquired by Intertape Polymer Group in August 2018. The growing demand for machinery that adds automation to the packaging process drove interest in ProMach, which traded in March 2018 to Leonard Green & Partners and in Duravant, which traded in July 2018 to Warburg Pincus, a transaction in which William Blair served as buy-side advisor.

As shipping companies transition from basing prices simply on weight and move toward dimensional weight pricing, which incorporates volume into the pricing equation, there are tremendous opportunities for packaging companies who can create innovative solutions that minimize a package's footprint while maintaining its protective properties. In May 2017, Pregis acquired Sharp Packaging Systems, an acquisition allowing Pregis to expand its portfolio of flexible packaging bagging, an increasingly valuable option under dimensional weight pricing. One of the more interesting exhibits at PACK EXPO was a box-on-demand technology that built customized boxes to fit the dimensions of the contents—another way to reduce costs as more shipping companies shift toward dimensional weight pricing.

Ongoing Demand for Sustainable Solutions

Not surprisingly, sustainability was one of the most prevalent themes at PACK EXPO. The industry's focus on sustainability is being driven by regulators and companies, as well as consumers who increasingly view a package's environmental impact as one of the main criteria in buying decisions, along with functionality and convenience. California's ban, starting in 2019, on restaurants providing plastic straws unless requested by a customer and Sealed Air's recent sustainability pledge to deliver a 100% recyclable and reusable product offering by 2025 are just two examples of the widespread movement to reduce or refine the use of plastics within packaging applications.

While plastics will remain an integral part of packaging for the foreseeable future due to their convenience, cost, and performance characteristics, industry executives must look for ways to reduce the environmental impact of their products. These sustainability efforts include increased use of recycled resins and lightweighting. Companies that are able to incorporate these solutions while maintaining performance requirements will enjoy tremendous growth opportunities in the packaging industry and be highly sought after in the M&A arena.

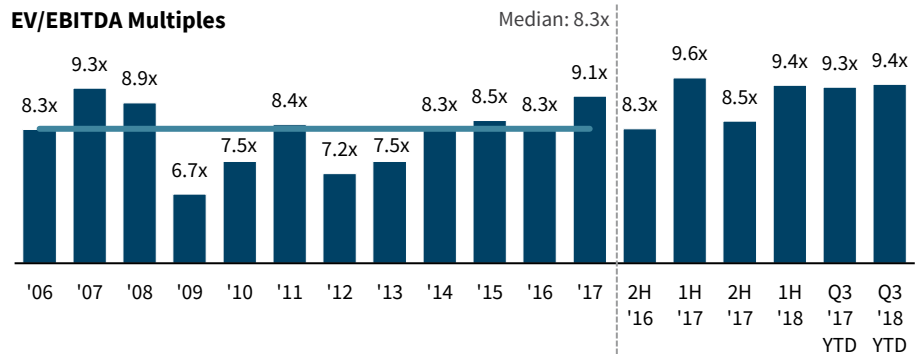
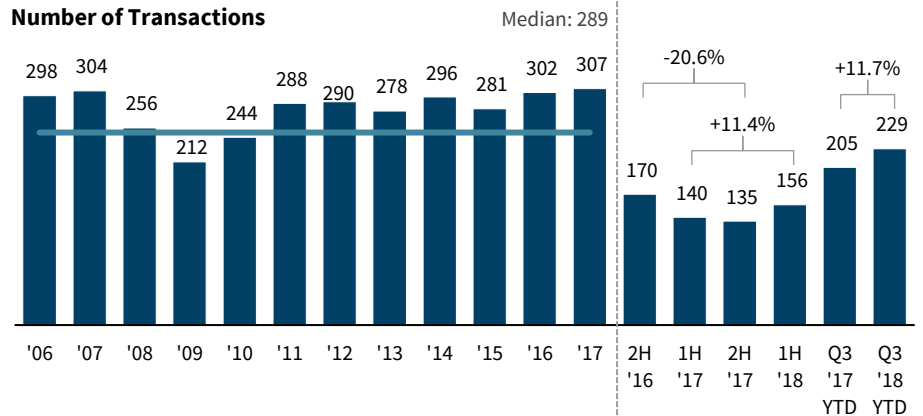
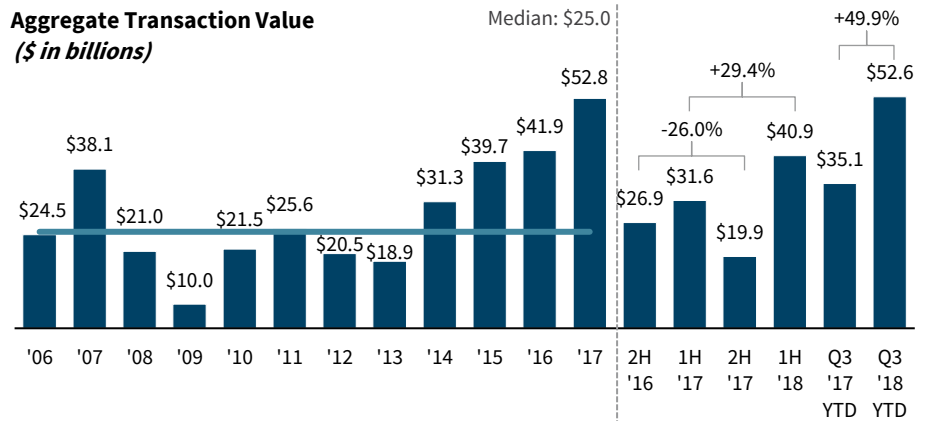
To learn more about these and other trends that are driving the growth of the packaging industry, please don't hesitate to contact us.

Packaging Market Analysis

We look behind the numbers to examine the market dynamics that are driving dealmaking trends in the packaging industry.

Packaging M&A - Global Value, Volume, and Valuations

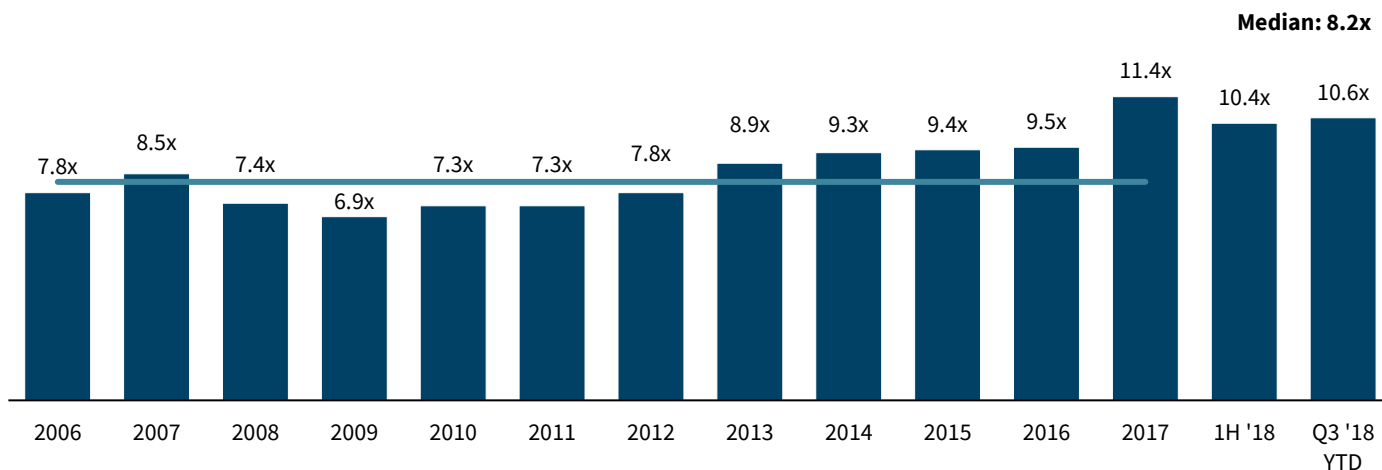
M&A activity in the packaging industry has continued to accelerate in 2018 as both strategic buyers and financial sponsors aggressively pursue opportunities to consolidate the fragmented industry. The \$40.9 billion of transaction value in the first half of the year puts 2018 on pace to far exceed 2017's record level and represents a 29.4% year-over-year increase. The median EV/EBITDA multiple for transactions completed in the first half of the year was 9.4x, well above the median of 8.3x since 2006.



Sources: Dealogic and William Blair market analysis; aggregate volume and value includes all announced deals

Public Company Valuations in Packaging

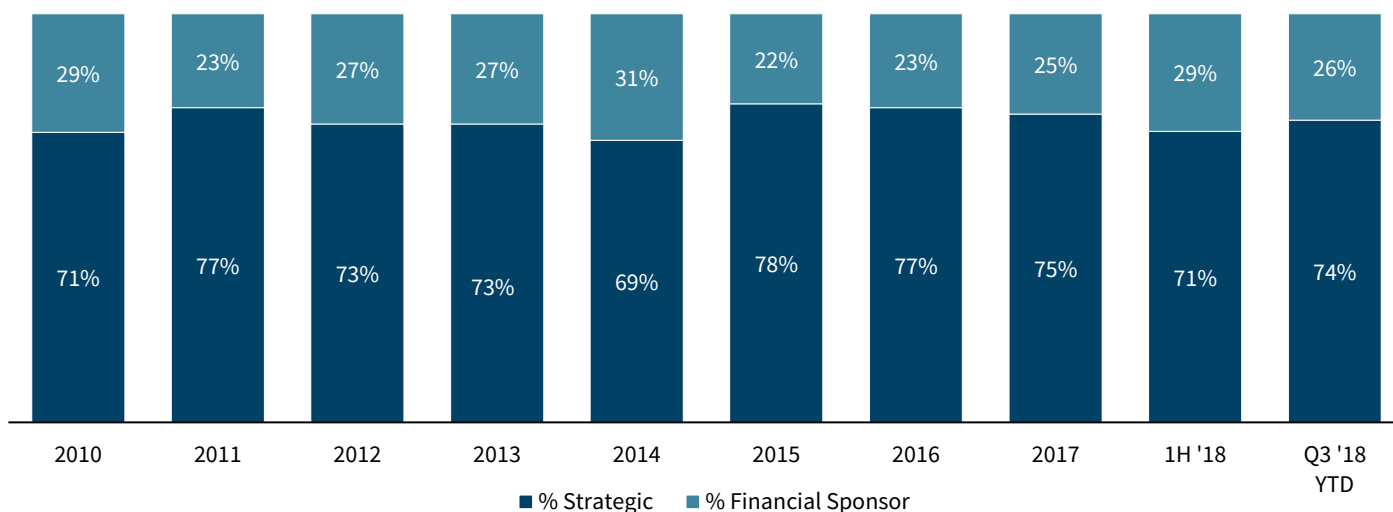
Despite pulling back from 2017’s robust levels, valuations for publicly traded packaging companies remain well above the industry median since 2006. To generate growth and support these strong valuations, packaging companies have become increasingly aggressive in their acquisition efforts.



Source: Capital IQ; Median EV/LTM EBITDA multiples for publicly traded companies shown on pages 17 and 20 of this report

Strategic vs. Financial Sponsor Activity in Packaging M&A

The packaging industry has attracted widespread interest from financial sponsors as we move into what many investors believe are the later stages of the current economic expansion. Packaging companies’ strong cash flow generation and relatively low capital expenditure requirements, as well as the defensive nature of many end markets served by packaging suppliers, make these companies attractive assets for private equity firms that are modeling for a recession in their upcoming hold periods.



Sources: Dealogic and William Blair market analysis

Drawing on our deep sector expertise, including 11 closed transactions in the last 20 months, and the strength of our relationships with buyers around the world, William Blair has built a leading packaging investment banking franchise. Business owners turn to us for outstanding execution for their M&A and capital raising objectives.

Recent transactions include:

€460,000,000



has been acquired by



June 2018

Not Disclosed



has been acquired by

Morgan Stanley
Capital Partners

June 2018

Not Disclosed



has been acquired by



February 2018

Not Disclosed



has been acquired by



December 2017

Not Disclosed



has been acquired by



October 2017

Not Disclosed



has been acquired by



October 2017

Not Disclosed



has been acquired by

JINDAL POLY FILMS LTD

September 2017

Not Disclosed



has acquired



July 2017

\$230,000,000



has acquired



March 2017

**William Blair
By the Numbers***

300+

*bankers globally with local
cultural knowledge*

1,175+

completed transactions since 2013

\$325 billion+

*in advisory and financing
transactions since 2013*

In the past five years as of
October 31, 2018

William Blair's experiences advising business owners across packaging substrates and end markets provide us with a differentiated view on the key drivers of value for packaging businesses.



Selected William Blair Transactions by Type

1 Protein Packaging



2 Produce Packaging



3 Flexible / On-the-Go Packaging



4 Beverage Packaging



5 Pharmaceutical / Nutraceutical Packaging



6 Consumer / Rigid Container Products



7 Foodservice



8 eCommerce / Logistics



9 Boxes / Pallets



Spotlight on Recent William Blair Transactions



Parengo is one of the largest independent single-mill producers of packaging paper and SC-B paper, with capacity of 675,000 tons complemented by a 750,000-ton recovered fiber operation

- Smurfit Kappa was attracted to Parengo's specialist capabilities in the production of light-weight, high-strength testliner, as well as its ability to serve as a supplier to both independent corrugators and integrated paper companies
- William Blair designed a highly customized, targeted process focused on a small set of strategic acquirers resulting in an efficient, competitive process that concluded nine weeks after the first meeting and drove a market-leading multiple (11.2x EV/EBITDA)
- Strong demand for corrugate due to eCommerce tailwinds, Parengo's excellent position on the industry's cost curve and favorable pricing dynamics were key drivers to the market-leading multiple



Comar is a leading provider of health and wellness packaging and dosing solutions predominantly serving the medical, pharmaceutical, and nutraceutical markets

- The acquisition of Comar provides Morgan Stanley Capital Partners (MSCP) an opportunity to further develop a rigid packaging platform within the attractive health and wellness and medical dosage and delivery end-markets
- MSCP was attracted to Comar's successful evolution into a provider of medical delivery devices, the company's successful new product innovation process, and its multiple organic and inorganic avenues for growth
- Diligent buyer identification, senior-level access, thoughtful positioning, and a process strategy that drove strong participation, high process conversion rates, and a forward-looking valuation that resulted in a market-leading multiple in rigid packaging

Spotlight on Recent William Blair Transactions (cont'd)



SupplyOne is a leading, value-added distributor and provider of packaging solutions serving a complementary, diverse array of end-markets and customers in the corrugated and rigid and flexible packaging markets

- Wellspring was attracted to SupplyOne's successful acquisition strategy (over 25 acquisitions since inception), as well as the opportunity to further develop SupplyOne's food-related, flexible packaging offering
- Proactively positioned SupplyOne's run-rate EBITDA attributable to strong, eCommerce driven corrugate volume growth and recent pricing increases resulting from favorable corrugate market dynamics
- Early buyer engagement through SupplyOne's participation in William Blair's Private Equity Conference in 2015 and premarketing meetings built rapport and helped buyers develop an early investment thesis and relationship with SupplyOne's management team



IntraPac is a provider of injection molding and blow molding solutions serving several attractive, stable end-markets (e.g., personal care, food and beverage, pharmaceutical)

- The acquisition of IntraPac provides ONCAP the opportunity to establish a larger rigid-packaging platform focused on stable, recession-resilient end-markets
- Successful articulation of forward visibility and earnings momentum via various metrics yielded a run-rate EBITDA-based valuation that is industry-leading in rigid packaging

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Sector and Transaction Data

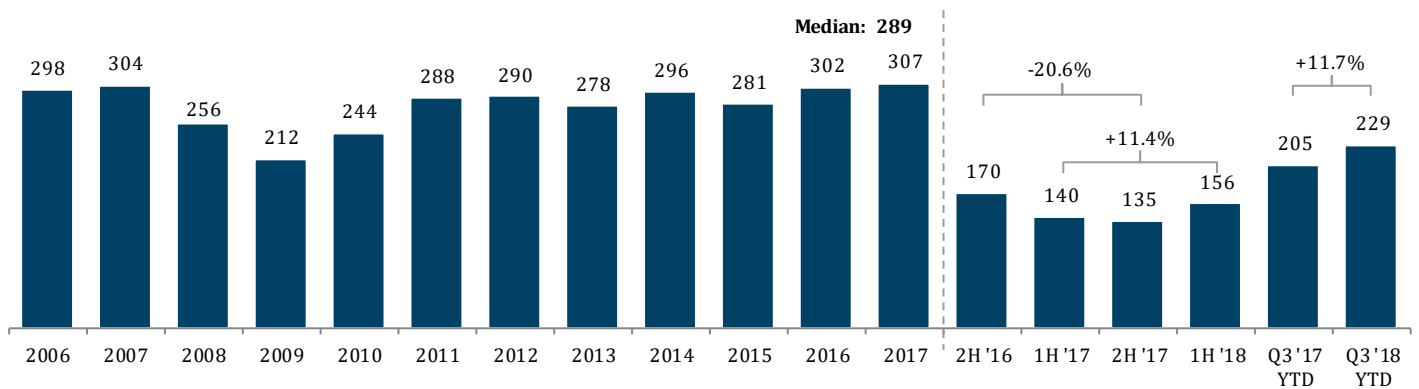
Industry Review and Outlook

M&A Activity

M&A activity in the packaging sector in 2017 increased slightly by 1.7%, which was above the overall global M&A market that was effectively unchanged during the same period. Packaging activity has rebounded in 2018 following a slightly slower second half of 2017. First half 2018 M&A activity in the packaging market increased 11.4% over the same period in 2017, a trend which has continued through September 2018.

Global Packaging Sector Transaction Volume

(number of deals)

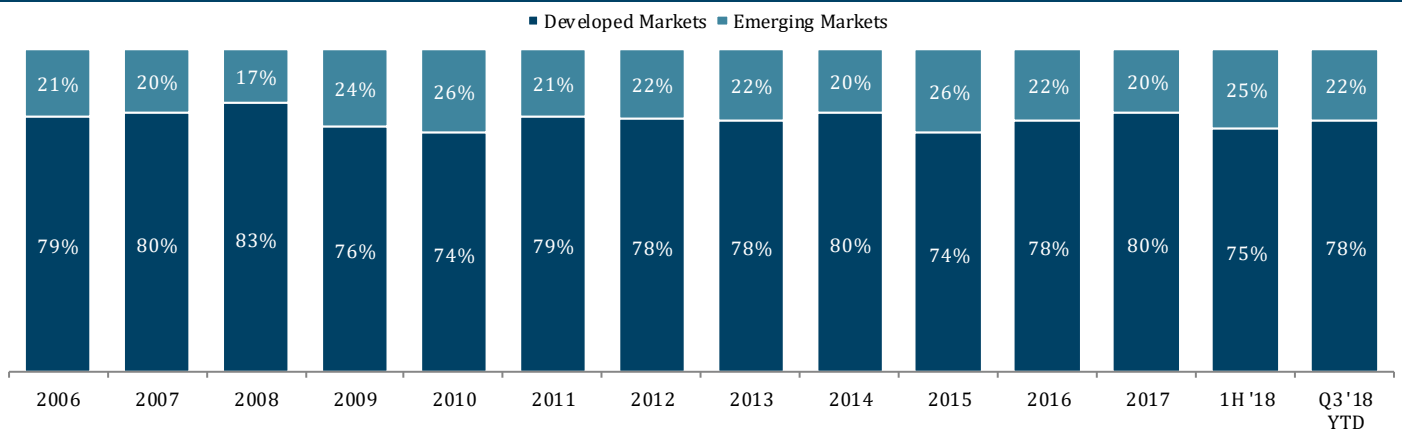


Sources: Dealogic and William Blair's Mergers and Acquisitions market analysis

Emerging Market M&A Transaction Activity

Thus far in 2018, emerging market activity in the packaging sector experienced an increase from 2016 and 2017 levels, with emerging markets packaging M&A accounting for over 22% of activity, up from 20% in 2017. We believe the rise in emerging market M&A is being driven by scaled strategic acquirors created over the past few years through domestic M&A beginning to turn to global markets as a way to expand their addressable market and participate in higher growth regions.

Developed Markets vs. Emerging Markets - M&A Transaction Activity

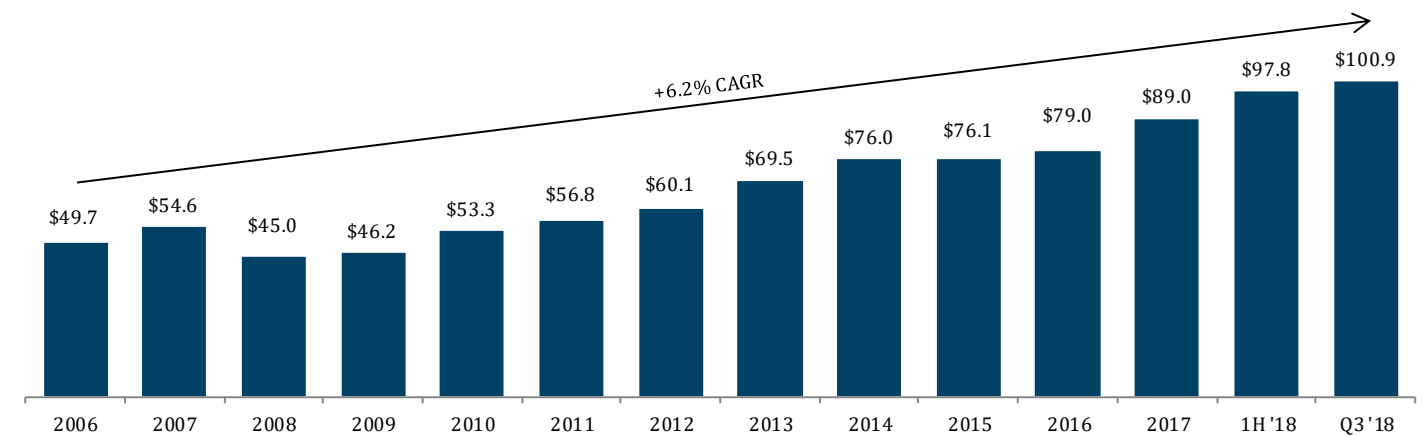


Sources: Dealogic and William Blair's Mergers and Acquisitions market analysis

Earnings Continue to Improve

Earnings in 2017 for William Blair’s group of publicly traded packaging companies continued to expand, nearly doubling since the lows of 2008 and 2009 and growing ~200 bps faster than the long-term median over the period 2015 to 2017. As shown in the exhibit below, earnings have grown at a compound annual rate of over 6.0% since 2006 and over 8.0% from 2015 to 2017. In 2018 thus far, earnings growth has been driven by a continued focus on cost reductions, and revenue growth as a result of an improving global economy and companies turning to packaging as a way to differentiate their product. Uncertainty relating to tariffs for international trade and resin pricing environment may begin to place pressure on earnings going forward.

Publicly Traded Packaging Companies – Total Operating Income Per Share

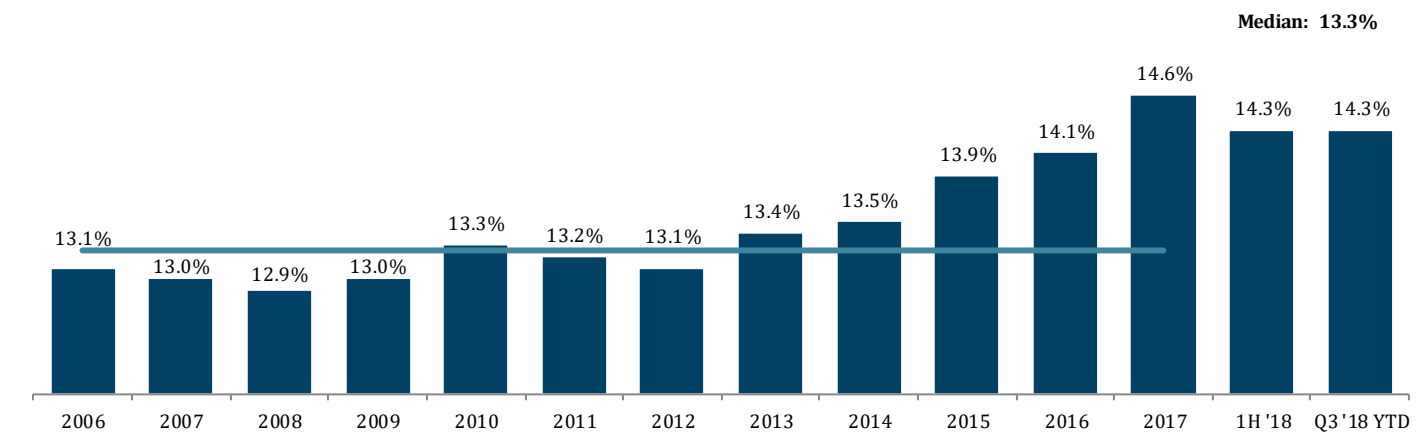


Source: Capital IQ

EBITDA Margin Trends

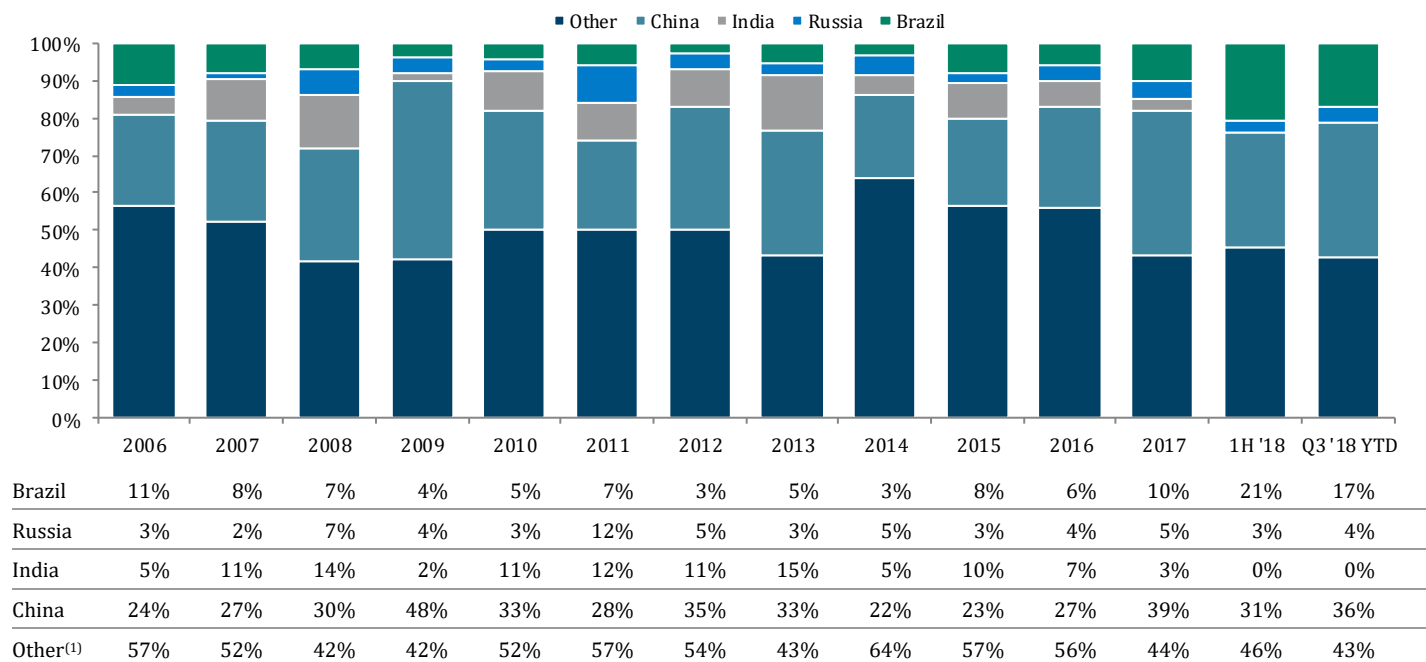
In 2017 and throughout 2018, EBITDA margins remained stable above 14% for the packaging companies tracked by William Blair, above the longer-term median of 13.3%. This reflects a meaningful increase from the lows experienced in 2008.

Publicly Traded Packaging Companies – LTM EBITDA Margins



Source: Capital IQ

Emerging Markets Packaging M&A Activity



Note: Selected countries derived from the Dow Jones list of emerging countries

Sources: Dealogic and William Blair's analysis

(1) Other countries include: Argentina, Bulgaria, Chile, Colombia, Czech Republic, Egypt, Estonia, Hungary, Indonesia, Jordan, Lithuania, Malaysia, Mexico, Pakistan, Oman, Peru, Philippines, Poland, Qatar, Romania, South Africa, Thailand, Turkey, and United Arab Emirates

A few select examples of recent emerging markets M&A activity are profiled below:

In October 2018, **Advent International**, a U.S.-based global private equity firm acquired India's largest rigid plastic packaging solution provider for the fast-moving consumer goods (FMCG) industry, **Manjushree Technopack**.

Australia-based **Pro-Pac Packaging** merged with Australia-based **Integrated Packaging Group**, a provider of engineered flexible packaging films, for ~A\$180 million.

DS Smith acquired Romania-based **EcoPack and EcoPaper**, an integrated packaging and paper group predominately serving the fast-moving consumer goods (FMCG) market, for ~€208 million.

During the first half of 2018, Netherlands-based **Weener Plastics**, sponsored by 3i Group, made two acquisitions in emerging markets expanding their geographic reach and complementing their portfolio of packaging solutions.

- **Weener Plastics** acquired **Proenfar**, a Colombia-based manufacturer of pharmaceutical and cosmetics plastic packaging solutions operating four production plants in Latin America.
- **Weener Plastics** also acquired Russia-based **Artpack Ltd**, a producer of plastic bottles for the Personal Care and Home Care industries.

Recent Notable Packaging Transactions

Announced: August 2018

Target:



Bemis Company, Inc.
Neenah, WI

Acquirer:



Amcor Limited
Melbourne, Australia

Key Metrics:

Implied Enterprise Value (\$M):	\$6,824
EV/LTM Revenue:	1.7x
EV/LTM EBITDA:	11.9x

Observations/Rationale:

Bemis is a provider of flexible and rigid plastic packaging products serving the food and beverage, consumer products, healthcare, and other markets worldwide. Bemis has a technical base in polymer chemistry, film extrusion, coating and laminating, printing, and converting. Based in Neenah, Wisconsin, Bemis employs approximately 16,000 individuals worldwide. Amcor is a global leader in sustainable packaging solutions, supplying a broad range of rigid and flexible packaging products into the food, beverage, healthcare, personal care, and other fast-moving consumer end-markets. Based in Southbank, Australia, Amcor employs approximately 32,000 individuals worldwide.

- Proposed transaction structured as an all-stock combination with a fixed exchange ratio of 5.1 Amcor shares for each Bemis share outstanding
- Acquisition creates a global flexible packaging player with \$9 billion in pro forma revenue, an increased presence in attractive end-markets (i.e., protein and healthcare packaging), and a geographic footprint that spans North America, Latin America, APAC, and EMEA
- Pretax annual cost synergies of about \$180 million predominantly focused on procurement and operations enhancements; transaction expected to yield double-digit PF EPS accretion for Amcor shareholders
- Transaction is targeted to close during Q1 2019, with the combined business listed on both the NYSE and the ASX stock exchanges under the Amcor name

Announced: July 2018

Target:



CSP Technologies, Inc.
Auburn, AL

Acquirer:



AptarGroup, Inc.
Crystal Lake, IL

Key Metrics:

Implied Enterprise Value (\$M):	\$555
EV/LTM Revenue:	~4.0x
EV/LTM EBITDA:	~13.0x

Observations/Rationale:

CSP Technologies is a global provider of vials, films, molded components, and trays for the healthcare diagnostic and food safety end-markets. CSP's capabilities include injection and blow molding, thermoforming, compounding, and heat staging performed across a footprint spanning the United States, Europe, and Asia. AptarGroup is a global supplier of a broad range of innovative dispensing and sealing solutions for the beauty, personal care, home care, prescription drug, consumer healthcare, injectables, food, and beverage markets. Based in Crystal Lake, Illinois, AptarGroup employs approximately 13,000 individuals worldwide.

- Acquisition is highly complementary and consistent with Aptar's long-term strategy of offering increasingly complex medical devices and solutions
- CSP's innovative culture provides opportunity to further Aptar's position as a leader in medically focused engineered solutions
- Opportunity to leverage CSP's active packaging offering across Aptar's end-market portfolio

Announced: May 2018

Target:



The Waddington Group Inc.
Covington, Kentucky

Acquirer:



Novolex Holdings, Inc.
Hartsville, SC

Key Metrics:

Implied Enterprise Value (\$M):	\$2,300
EV/LTM Revenue:	~2.5x
EV/LTM EBITDA:	Proprietary

Observations/Rationale:

The Waddington Group (TWG) is a global manufacturer of thermoformed plastic packaging and disposables serving the foodservice, bakery, deli, produce, and confectionery markets. TWG operates across a platform of 3,000 employees and 16 manufacturing locations worldwide. Before its acquisition by Novolex, TWG was a subsidiary company of Newell Brands, a global, publicly traded consumer goods company. Novolex, a portfolio company of The Carlyle Group, is a leading provider of paper and flexible packaging solutions serving retail, grocery, foodservice, hospitality, institutional, and industrial markets across a footprint of 62 manufacturing plants worldwide.

- Novolex was attracted to Waddington's strong expertise in rigid plastic food packaging and sustainable packaging, which are key strategic priorities for Novolex as it looks to further diversify its business; TWG represents a new rigid packaging focused vertical within the Novolex offering
- Newell elected to divest Waddington in an effort to focus on its core offering and generate proceeds to be used for capital structure initiatives (i.e., deleveraging, share repurchase)
- Transaction represents Novolex's eighth acquisition since 2012

Announced: April 2018

Target: 
 COVERIS™
 HIGH PERFORMANCE PACKAGING
 Coveris (Rigid)
 Chicago, IL

Acquirer: **LINDSAY GOLDBERG**
 Lindsay Goldberg
 New York, NY

Key Metrics:
 Implied Enterprise Value (\$M): ~\$850
 EV/LTM Revenue: ~1.3x
 EV/LTM EBITDA: ~8.8x

Observations/Rationale:

Coveris is one of the largest manufacturers of plastic and other value-added packaging products in the world. Coveris elected to divest select segments of its business (e.g., rigid, flexibles) to assist in deleveraging initiatives and maximize value. The rigid segment manufactures injection-molded or thermoformed and decorated rigid plastic and paper packaging solutions, including bowls, cups, lids, and trays. These products are sold primarily in Europe and North America. Lindsay Goldberg is a private equity firm specializing in buyouts; acquisitions; follow-on acquisitions; recapitalizations; industry consolidation financing and investments in family-owned business undergoing a generational ownership change; and in publicly traded companies.

- Lindsay Goldberg was attracted to Coveris Rigid Packaging's broad range of product categories (e.g., containers, trays, closures), which complemented by a PET expansion strategy creates several avenues for future growth
- Continues Lindsay Goldberg's focus on investing in growth packaging platforms, with previous and relevant investments in Golden West Packaging and Weener Plastics
- The business will rebrand into Paccor, a well-known rigid packaging brand name that was originally the name of one of the pieces combined to create the rigid packaging offering within Coveris

Announced: April 2018

Target: 
 COVERIS™
 HIGH PERFORMANCE PACKAGING
 Coveris (Americas)
 Chicago, IL

Acquirer: 
 tc • TRANSCONTINENTAL
 TC Transcontinental, Inc.
 Montreal, Canada

Key Metrics:
 Implied Enterprise Value (\$M): \$1,320
 EV/LTM Revenue: 1.4x
 EV/LTM EBITDA: 10.3x

Observations/Rationale:

Coveris is one of the largest manufacturers of plastic and other value-added packaging products in the world. Its flexible packaging business manufactures a variety of flexible and semi-rigid plastic and paper products, including bags, pouches, cartonboard, roll stocks, films, laminates, coated substrates, sleeves, and labels. These products are sold primarily in North America, Central America, the United Kingdom, and Asian-Pacific markets. TC Transcontinental is Canada's largest printer and a key supplier of flexible packaging in North America and also a leader in its specialty media segments. TC Transcontinental currently has over 6,100 employees in Canada and the United States, and had revenues of approximately C\$2.0 billion.

- Positions TC Transcontinental as a top 10 flexible packaging converter in North America, with a strong presence in several of flexible packaging's fastest growing markets (e.g., food and beverage, healthcare)
- Transaction increases TC Transcontinental's flexible packaging footprint (7 to 23 facilities) and expands its product portfolio (e.g., film manufacturing)
- Value creation to be realized through cost synergies (\$20 million over 24 months) attributable to procurement of raw materials and integration of film manufacturing and plate making operations; implied post-synergy transaction multiple of 8.9x

Announced: February 2018

Target: 
 WS Packaging Group
 Leaders in Printing and Packaging Worldwide
 WS Packaging Group, Inc.
 Green Bay, WI

Acquirer: 
 Platinum Equity
 Beverly Hills, CA

Key Metrics:
 Implied Enterprise Value (\$M): Proprietary
 EV/LTM Revenue: Proprietary
 EV/LTM EBITDA: Proprietary

Observations/Rationale:

WS Packaging Group is one of the largest printing and label converting operations in North America focused on pressure sensitive, glue applied, shrink sleeve, and in-mold labeling applications. WS Packaging operates 17 manufacturing facilities in the United States and Mexico employing about 2,000 employees and serving a diverse customer base. Platinum Equity is a global investment firm with \$13 billion of assets under management and a portfolio of more than 30 operating companies around the world. Since its founding, Platinum Equity has completed more than 200 acquisitions.

- Platinum's investment thesis focuses on pursuing operational initiatives to drive profitability growth
- Fragmented labels industry provides opportunity to supplement organic initiatives through a market consolidation strategy
- Platinum was attracted to WS Packaging's diverse, blue-chip customer base in recession-resilient end-markets including food and beverage, consumer packaging goods, and pharmaceuticals

Announced: January 2018**Observations/Rationale:**

Target:  **PROMACH**
ProMach, Inc.
Covington, KY

Acquirer:  **LGP**
Leonard Green & Partners, L.P.
Los Angeles, CA

Key Metrics:
Implied Enterprise Value (\$M): \$2,200
EV/LTM Revenue: Proprietary
EV/LTM EBITDA: ~15.0x

ProMach is a packaging and processing machinery manufacturer and integrated systems provider, with over 30 equipment brands sold throughout the world. ProMach manufactures and integrates solutions for the global filling, primary and secondary packaging, pharmaceutical packaging, and labeling and coding segments. Leonard Green & Partners is a private equity firm investing in a range of industries such as retail, consumer products/services, packaging, distribution, and healthcare and wellness.

- Leonard Green was attracted to ProMach's diverse offering of packaging and processing equipment, strong brand equity across its portfolio, and leading management team with a proven ability to drive organic growth and execute a robust M&A strategy
- ProMach's proven acquisition strategy, deep M&A pipeline, and strong cash flow dynamics drove strong interest; the buy-and-build strategy is central to Leonard Green's investment thesis
- Transaction represents Leonard Green's second acquisition in the packaging sector following its acquisition of Charter NEX in 2017

Announced: January 2018**Observations/Rationale:**

Target:  **Foam Fabricators**
Foam Fabricators, Inc.
Scottsdale, AZ

Acquirer:  **COMPASS**
Compass Diversified Holdings
Westport, CT

Key Metrics:
Implied Enterprise Value (\$M): \$248
EV/LTM Revenue: ~2.0x
EV/LTM EBITDA: ~8.3x

Foam Fabricators is a designer and manufacturer of custom molded protective foam solutions and OEM components made from expanded polymers such as expanded polystyrene (EPS) and expanded polypropylene (EPP). Foam Fabricators serves high tech, appliance, consumer goods, military, and medical end-markets from 14 manufacturing facilities across North America. Compass Diversified Holdings (CODI) is a publicly traded holding company (NYSE: CODI) that partners with management teams to acquire and manage North American middle-market businesses. CODI focuses on acquiring leading industrial or branded consumer companies based in North America.

- CODI was attracted to Foam Fabricators' leadership position in segments of the protective packaging market and its efficient, decentralized operating structure
- Compelling shift toward health and wellness products driving strong demand for EPS packaging to protect and insulate healthcare-related products (e.g., medication) creating demand for Foam Fabricators' products
- Attractive margin management and proven performance during all business cycles were key investment considerations for CODI

Announced: December 2017**Observations/Rationale:**

Target:  **Powerflute**
Powerflute Group Holdings Oy
Kuopio, Finland

Acquirer:  **mondi**
Mondi plc
Vienna, Austria

Key Metrics:
Implied Enterprise Value (\$M): ~€435
EV/LTM Revenue: ~2.0x
EV/LTM EBITDA: ~8.7x

Powerflute operates a packaging paper mill in Kuopio, Finland, with annual capacity of 285,000 tons manufacturing high-performance fluting products. Powerflute's premium fluting products provide for transportation of fruit and vegetables, high-value industrial goods (e.g., electrical appliances), and automotive components across the European and international markets. Mondi is a fully integrated provider of packaging and paper solutions serving the European, North American, South African, and Russian markets. Mondi provides personal care components, stand-up pouches, films, and corrugated products to the consumer, food and beverage, and retail markets.

- Mondi was attracted to the opportunity to expand its product offering and deepen its wallet share with existing customers by further broadening its containerboard product range and geographic reach
- Powerflute's strong profitability is margin enhancing to Mondi, before considering potential cost savings
- Transaction is expected to provide meaningful cost synergies for Mondi through its existing presence in European virgin containerboard markets and its proven track record of reducing costs and improving efficiency

Announced: November 2017

Target: 
 CLOPAY
 PLASTIC PRODUCTS
A Griffon Company
 Clopay Plastic Products
 (Griffon Corporation)
 Mason, OH

Acquirer: 
 Berry Global Group, Inc.
 Evansville, IN

Key Metrics:
 Implied Enterprise Value (\$M): \$475
 EV/LTM Revenue: 1.0x
 EV/LTM EBITDA: 9.0x

Observations/Rationale:

Clopay Plastic Products is a global supplier of printed breathable films, elastic films, and laminates with product offerings uniquely designed for applications in the hygiene, healthcare, construction, and industrial protective apparel markets. Berry Global (NYSE: BERY) is an Evansville, Indiana-based manufacturer of plastic packaging products and systems with operations in North America, South America, Europe, and Asia. Berry's products include engineered materials, nonwoven specialty materials, and consumer packaging, which are sold into stable, consumer-oriented end-markets, such as healthcare, personal care, and food and beverage.

- Acquisition of Clopay aligns well with Berry's strategy of further developing innovative, technical solutions serving the faster-growing health and hygiene markets
- Berry was attracted to the opportunity to acquire new capabilities in the production of technical films, where Clopay is a known innovator with patent-protected breathable hygiene films
- Berry anticipates the ability to realize about \$20 million in annual cost synergies

Announced: September 2017

Target: 
 RING Container Technologies
 Ring Container Technologies
 Oakland, TN

Acquirer: 
 MSD Partners, LP
 New York, NY

Key Metrics:
 Implied Enterprise Value (\$M): Proprietary
 EV/LTM Revenue: Proprietary
 EV/LTM EBITDA: Proprietary

Observations/Rationale:

Ring Container Technologies is a leading blow molder of high-density polyethylene (HDPE) and polyethylene terephthalate (PET) plastic bottles for the foodservice, retail food, and other end-use markets. Ring operates across a manufacturing footprint of 17 cities across the United States, Canada, and the United Kingdom. MSD Partners, L.P., is the exclusive capital manager of Michael Dell and his family. MSD Partners uses a multi-disciplinary investment strategy focused on maximizing long-term capital appreciation by making investments across regions and end-markets.

- Ring's leadership position in the edible oil packaging market and proven, long-term ability to grow organically above market growth rates were key investment considerations for MSD Partners
- Stable end-market profile and strong cash flow dynamics aligned well with MSD Partners' long-term investment criteria; acquisition highlights the current trend of family office investors increasingly targeting and acquiring packaging-related companies
- Ring was attracted to MSD Partners' long-term investment horizon approach and commitment to maintaining Ring's culture

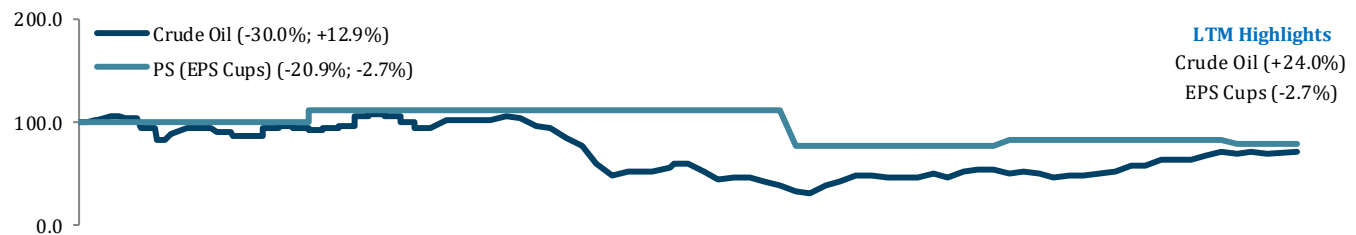
Current Industry Trends

Resin Prices Trends

Resin prices increased, on average, approximately 7% during the second half of 2017. In 2018 thus far, resin price growth have essentially been flat, up less than 1% from the beginning of the year. Rising oil prices, up over 10% in September 2018 YTD, and disciplined supply side dynamics have contributed to maintaining the elevated resin prices during the first nine months of 2018. Most analysts believe that incremental capacity in the United States will result in a gradual decline in resin prices over time.

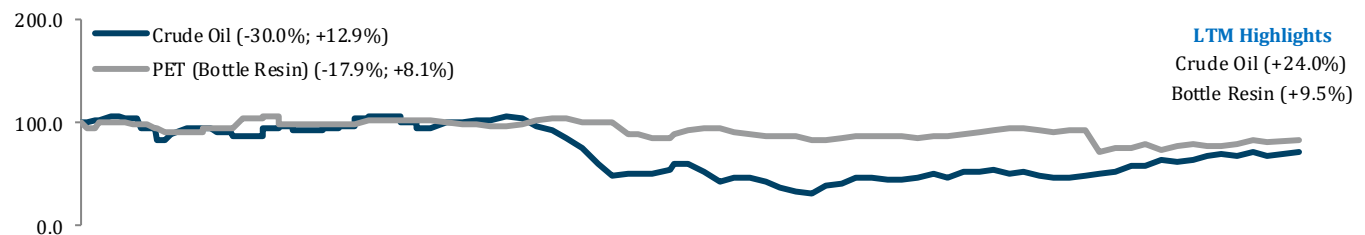
Crude Oil vs. PS (EPS Cups)

(Index Price vs. Jan-12; vs. Jan-18)



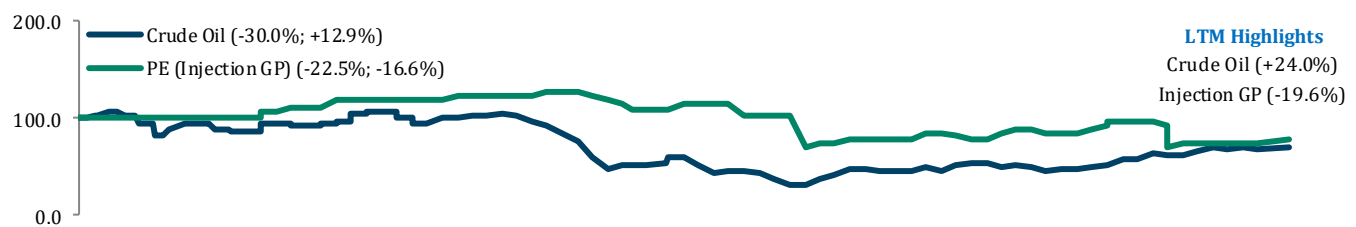
Crude Oil vs. PET (Bottle Resin)

(Index Price vs. Jan-12; vs. Jan-18)



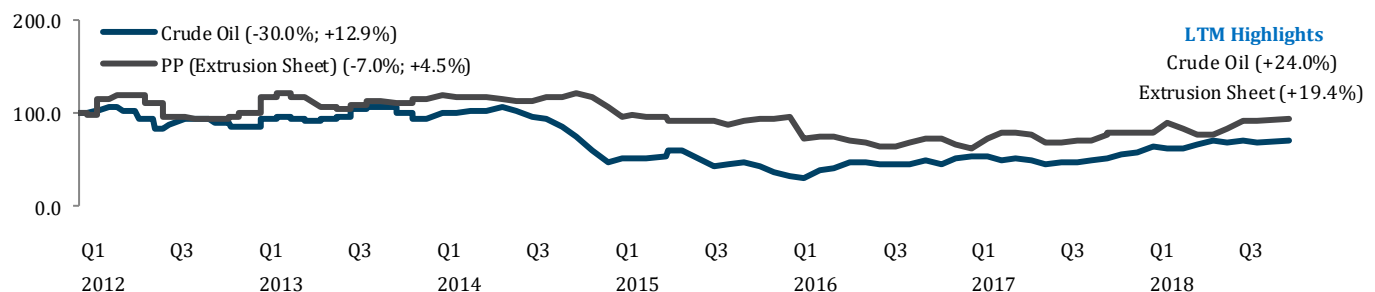
Crude Oil vs. PE (Injection GP)

(Index Price vs. Jan-12; vs. Jan-18)



Crude Oil vs. PP (Extrusion Sheet)

(Index Price vs. Jan-12; vs. Jan-18)



Sources: Bloomberg, Plastics News, Foundation for Internal Business and Economic Research, Wall Street Journal, and Department of Energy

Public Packaging Company Valuations by Sector

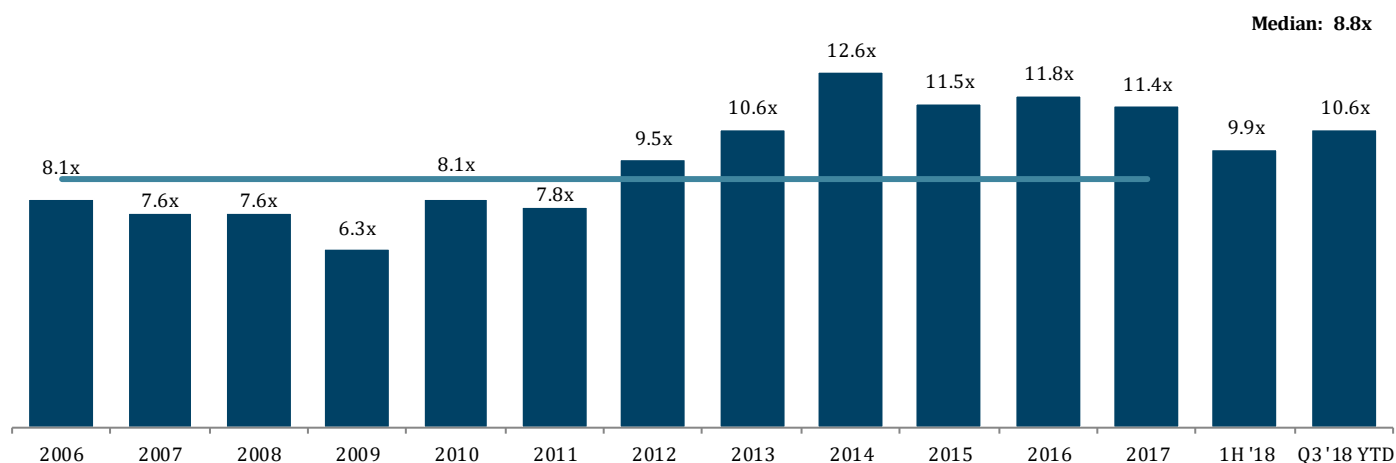
Flexible Packaging

Select Comparable Public Company Metrics

Company	Stock Price Change Since 09/30/17	LTM Financials		LTM Margins			Valuation				
		Revenue	EBITDA	Gross Profit	EBITDA	OCF Margin ⁽¹⁾	Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/EBITDA
Amcor Limited	(17.0%)	\$9,319.1	\$1,336.5	19.9%	14.3%	10.7%	\$11,434.5	\$15,292.6	1.64x	11.4x	2.9x
Berry Global Group, Inc.	(14.6%)	\$7,696.0	\$1,340.0	18.8%	17.4%	10.5%	\$6,377.8	\$11,966.8	1.55x	8.9x	4.2x
Intertape Polymer Group Inc.	1.8%	\$779.3	\$100.7	20.3%	12.9%	9.3%	\$934.3	\$1,066.0	1.37x	10.6x	1.3x
Huhtamäki Oyj	(20.5%)	\$3,348.4	\$425.6	16.3%	12.7%	8.7%	\$3,346.9	\$4,392.3	1.25x	9.8x	2.2x
Sealed Air Corporation	(6.0%)	\$4,700.2	\$795.9	31.5%	16.9%	14.1%	\$6,300.5	\$9,531.9	2.03x	12.0x	4.2x
Sonoco Products Company	10.0%	\$5,334.3	\$723.5	19.2%	13.6%	9.2%	\$5,539.4	\$6,804.6	1.28x	9.4x	1.6x
Wipak Ltd.	(10.3%)	\$889.8	\$197.7	30.5%	22.2%	17.6%	\$2,395.5	\$2,096.9	2.36x	10.6x	N/A
Mean		\$5,931.5	\$925.7	19.7%	14.9%	10.1%	\$6,248.8	\$9,441.8	1.52x	10.3x	2.8x
Median		\$7,696.0	\$1,336.5	19.9%	14.3%	10.5%	\$6,377.8	\$11,966.8	1.55x	10.6x	2.9x

(1) Operating cash flow (OCF) calculated as EBITDA less capital expenditures
Sources: Capital IQ, FactSet, and William Blair as of September 30, 2018

Valuation Multiples - LTM EBITDA



Rigid Packaging

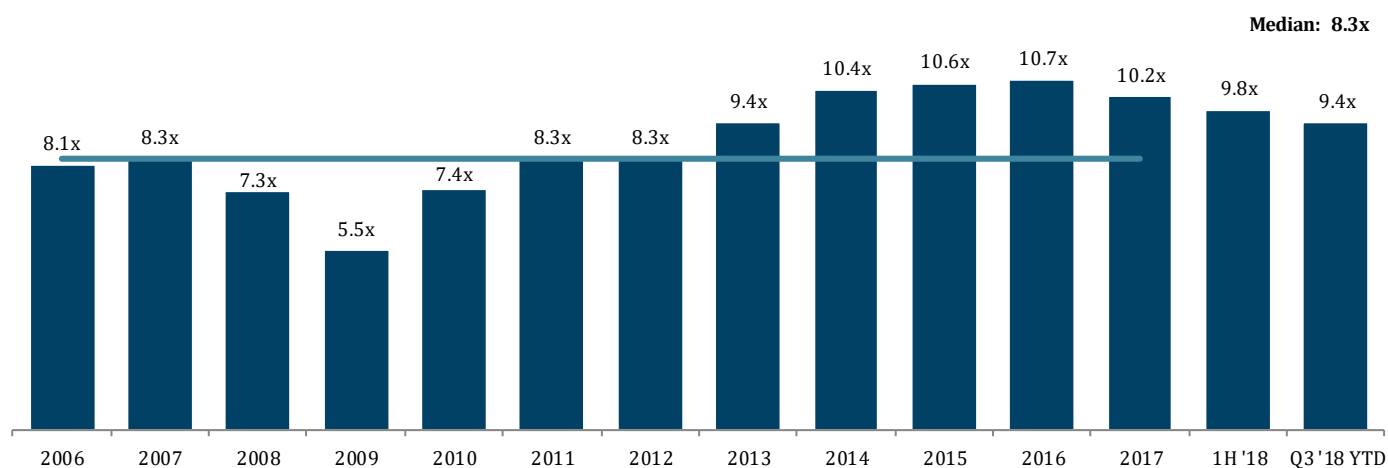
Select Comparable Public Company Metrics

Company	Stock Price Change Since 09/30/17	LTM Financials		LTM Margins			Valuation				
		Revenue	EBITDA	Gross Profit	EBITDA	OCF Margin ⁽¹⁾	Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/EBITDA
Amcor Limited	(17.0%)	\$9,319.1	\$1,336.5	19.9%	14.3%	10.7%	\$11,434.5	\$15,292.6	1.64x	11.4x	2.9x
AptarGroup, Inc.	24.8%	\$2,705.6	\$529.1	34.8%	19.6%	13.7%	\$6,699.6	\$7,236.5	2.67x	13.7x	2.0x
Berry Global Group, Inc.	(14.6%)	\$7,696.0	\$1,340.0	18.8%	17.4%	10.5%	\$6,377.8	\$11,966.8	1.55x	8.9x	4.2x
Silgan Holdings Inc.	(5.5%)	\$4,374.2	\$642.3	16.4%	14.7%	10.3%	\$3,075.2	\$5,856.6	1.34x	9.1x	4.3x
Sonoco Products Company	10.0%	\$5,334.3	\$723.5	19.2%	13.6%	9.2%	\$5,539.4	\$6,804.6	1.28x	9.4x	1.6x
RPC Group Plc	(21.9%)	\$4,964.5	\$756.0	50.3%	15.2%	9.5%	\$4,202.6	\$5,828.5	1.17x	7.7x	2.0x
Mean		\$5,885.8	\$914.3	21.8%	15.9%	10.9%	\$6,625.3	\$9,431.4	1.70x	10.5x	3.0x
Median		\$5,334.3	\$723.5	19.2%	14.7%	10.5%	\$6,377.8	\$7,236.5	1.55x	9.4x	2.9x

(1) Operating cash flow (OCF) calculated as EBITDA less capital expenditures

Sources: Capital IQ, FactSet, and William Blair as of September 30, 2018

Valuation Multiples - LTM EBITDA



Labels

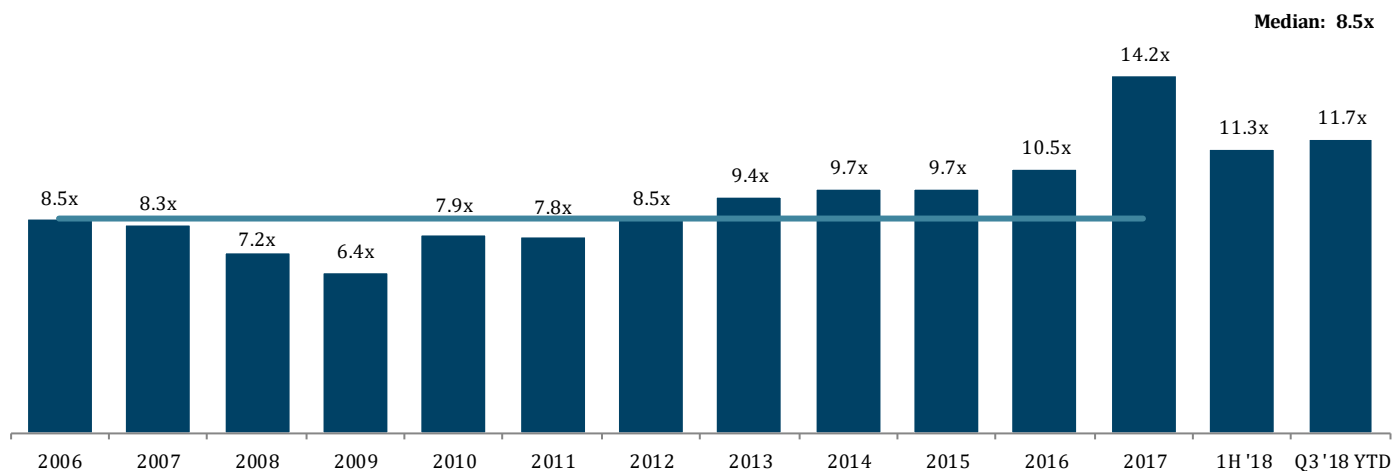
Select Comparable Public Company Metrics

Company	Stock Price Change Since 09/30/17	LTM Financials		LTM Margins		Valuation					
		Revenue	EBITDA	Gross Profit	EBITDA	OCF Margin ⁽¹⁾	Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/EBITDA
Avery Dennison Corporation	10.2%	\$7,125.6	\$928.4	26.8%	13.0%	10.9%	\$9,395.1	\$10,907.6	1.53x	11.7x	1.8x
CCL Industries Inc.	(6.8%)	\$3,884.3	\$783.6	30.4%	20.2%	14.7%	\$7,934.1	\$9,391.0	2.47x	12.2x	1.9x
Multi-Color Corp.	(24.0%)	\$1,514.6	\$272.7	18.8%	18.0%	12.1%	\$1,275.9	\$2,820.9	1.86x	10.3x	5.7x
Mean		\$4,174.8	\$661.6	25.4%	17.1%	12.6%	\$6,201.7	\$7,706.5	1.95x	11.4x	3.1x
Median		\$3,884.3	\$783.6	26.8%	18.0%	12.1%	\$7,934.1	\$9,391.0	1.86x	11.7x	1.9x

(2) Operating cash flow (OCF) calculated as EBITDA less capital expenditures

Sources: Capital IQ, FactSet, and William Blair as of September 30, 2018

Valuation Multiples – LTM EBITDA



Paper Packaging

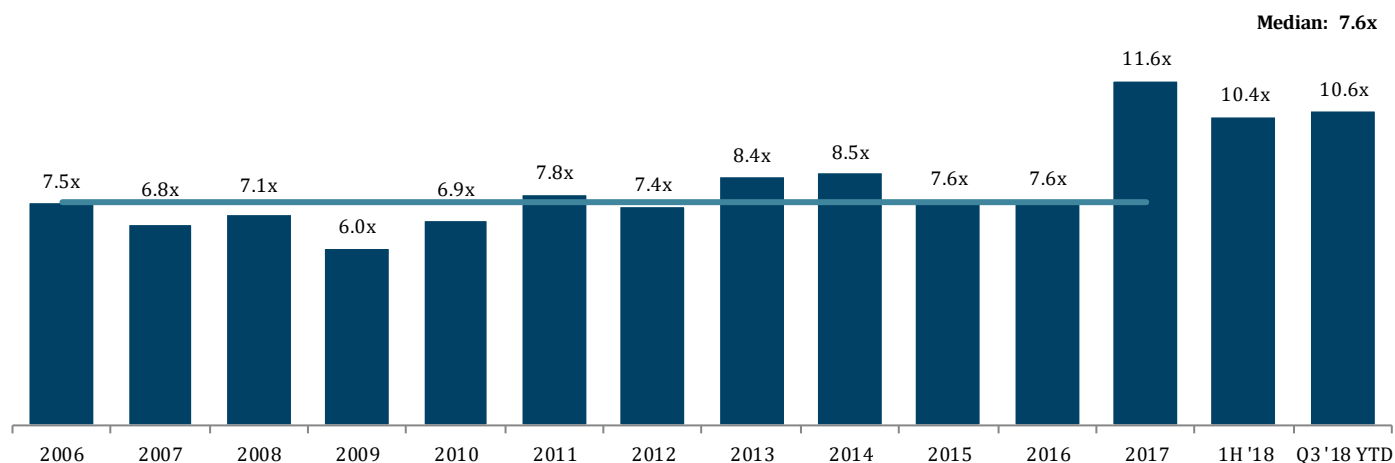
Select Comparable Public Company Metrics

Company	Stock Price Change Since 09/30/17	LTM Financials		LTM Margins			Valuation				
		Revenue	EBITDA	Gross Profit	EBITDA	OCF Margin ⁽¹⁾	Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/EBITDA
Cascades Inc.	(18.5%)	\$3,513.6	\$335.5	15.0%	9.5%	4.8%	\$920.0	\$2,271.8	0.67x	7.0x	3.8x
DS Smith Plc	(5.6%)	\$7,704.8	\$915.5	9.2%	11.9%	7.5%	\$8,542.3	\$10,882.6	1.43x	12.0x	2.5x
Graphic Packaging Holding Company	0.4%	\$5,625.2	\$878.1	16.0%	15.6%	8.3%	\$4,348.3	\$8,015.8	1.42x	9.1x	3.3x
Greif, Inc.	(8.3%)	\$7,728.0	\$1,007.1	33.6%	13.0%	9.3%	\$10,549.1	\$14,364.5	1.86x	14.3x	3.8x
International Paper Company	(13.5%)	\$5,540.0	\$811.0	19.2%	14.6%	7.6%	\$9,143.4	\$10,810.4	1.95x	13.3x	2.1x
Mondi plc	2.1%	\$8,635.7	\$1,805.6	44.8%	20.9%	15.1%	\$13,279.3	\$16,505.3	1.96x	9.4x	1.6x
Packaging Corporation of America	(4.4%)	\$3,702.5	\$513.0	14.5%	13.9%	9.3%	\$7,058.3	\$8,723.8	2.36x	17.0x	3.2x
Smurfit Kappa Group plc	26.3%	\$2,926.7	\$533.6	32.1%	18.2%	12.3%	\$2,607.0	\$2,823.6	0.99x	5.4x	0.4x
Universal Forest Products, Inc.	8.0%	\$1,023.2	\$143.1	39.7%	14.0%	9.1%	\$6,010.9	\$6,183.6	NMF	NMF	1.2x
WestRock Company	(5.8%)	\$4,786.1	\$584.1	17.6%	12.2%	8.0%	\$5,611.6	\$6,437.2	1.34x	11.0x	1.4x
Mean		\$6,142.9	\$784.0	18.5%	12.5%	7.5%	\$6,089.9	\$8,883.7	1.34x	10.6x	3.3x
Median		\$6,665.0	\$896.8	15.5%	12.5%	7.9%	\$6,445.3	\$9,449.2	1.43x	10.6x	3.5x

(1) Operating cash flow (OCF) calculated as EBITDA less capital expenditures

Sources: Capital IQ, FactSet, and William Blair as of September 30, 2018

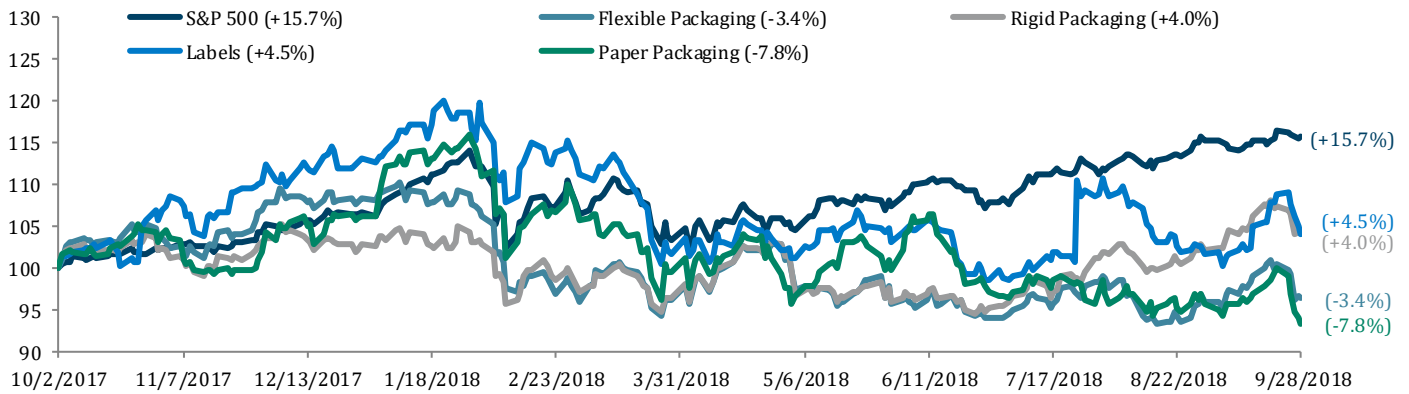
Valuation Multiples - LTM EBITDA



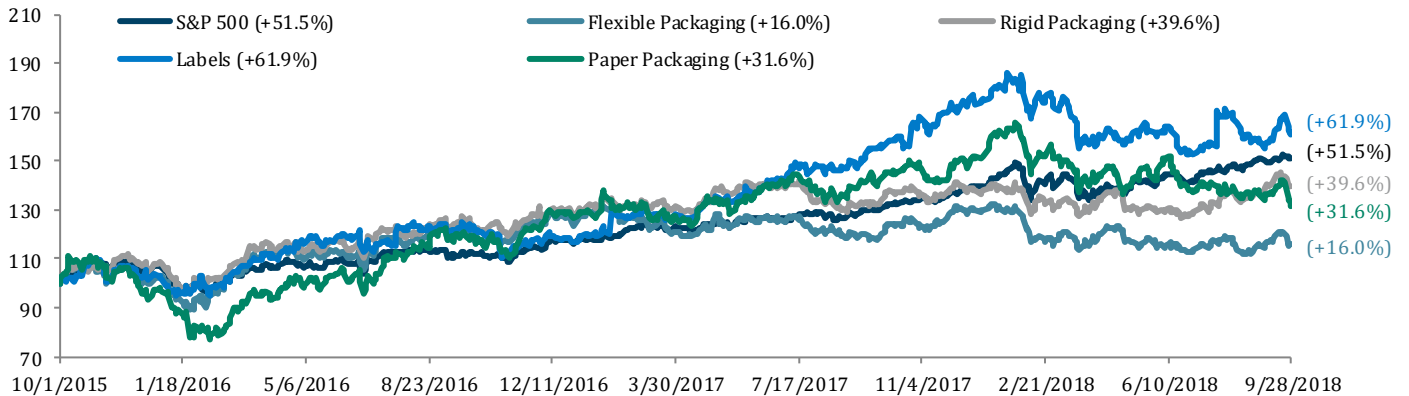
Indexed Share Price Performance

The exhibits below illustrate how each group of packaging public companies has performed, on an indexed basis, and relative to the S&P 500, over the last 12 months, 3 years, and 10 years. In the last 12 months, packaging company performance has lagged the broader market due to the better relative performance of higher growth sectors in the S&P 500. Over the past 10 years, packaging public companies have outperformed the S&P 500 due to their stable earnings profile, which yields insights into packaging private company valuations. As indicated previously, valuations in the private sector continues to be strong as longer-term investors favor packaging assets for their stability and attractive cash flow profiles as we enter the later innings of the current financial cycle.

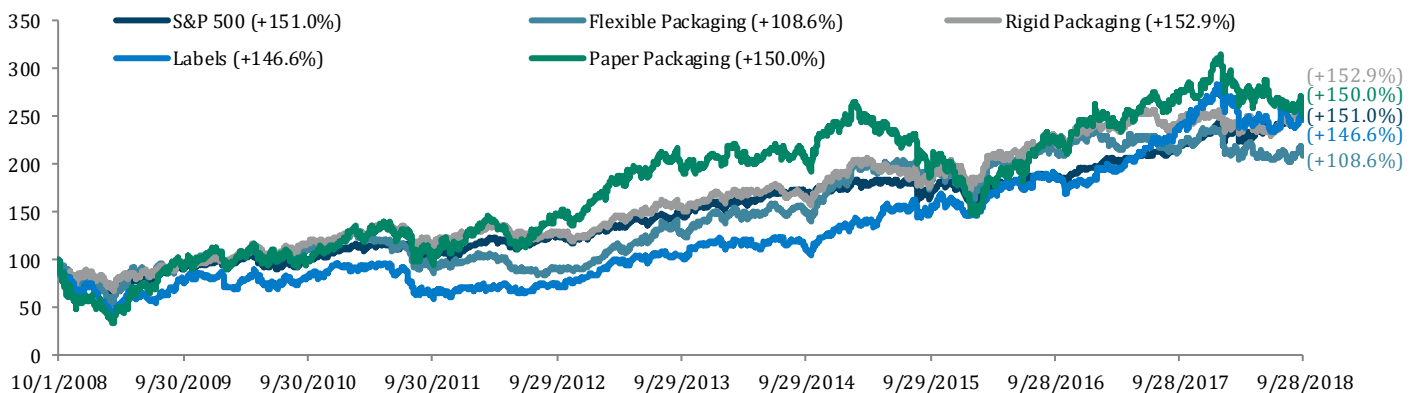
Indexed Stock Performance – Last 12 Months



Indexed Stock Performance – Last Three Years



Indexed Stock Performance – Last 10 Years



Source: FactSet as of September 30, 2018

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