William Blair

October 2017

Investment Banking

Packaging

Multiple Forces Continue to Drive Broad-Based M&A Interest in Packaging Industry

In This Report

Relatively low cyclicality of the packaging sector driving financial-sponsor interest

Strategic acquirers seek growth to justify public valuations

Debt markets continue to view packaging favorably

Flexibles segment generating accelerated growth opportunities for packaging companies

CONTENTS

Multiple Forces Continue to Drive Broad-Based M&A Interest in Packaging Industry

Shift toward flexible packaging continues as shippers look to reduce weight and consumers demand more convenient, resealable options.

In 2016, M&A activity in the packaging industry grew to a record $41.9 billion, the third consecutive year that transaction value significantly exceeded the 13-year median of $24.5 billion. Deal value in 2016 was driven by a large number of $750 million-plus transactions. This heightened level of deal-making continued in the first half of 2017, as transaction value in the first six months of the year was up 15% on a year-over-year basis due to transactions such as Advent International's acquisition of Faerch Plast, Multi-Color's acquisition of Constantia Labels, and Leonard Green & Partners' and Oak Hill's acquisition of Charter NEX Films.

Several trends are converging to drive M&A activity in the packaging industry. Based on the view that we may be entering the mid-to-late innings of the current economic expansion, financial sponsors are focusing aggressively on the packaging sector due to the industry's relatively noncyclical nature and ability to generate consistent and predictable cash flow. Publicly traded strategic acquirers are pursuing acquisitions to generate growth to justify valuation multiples that have expanded significantly over the last several years.

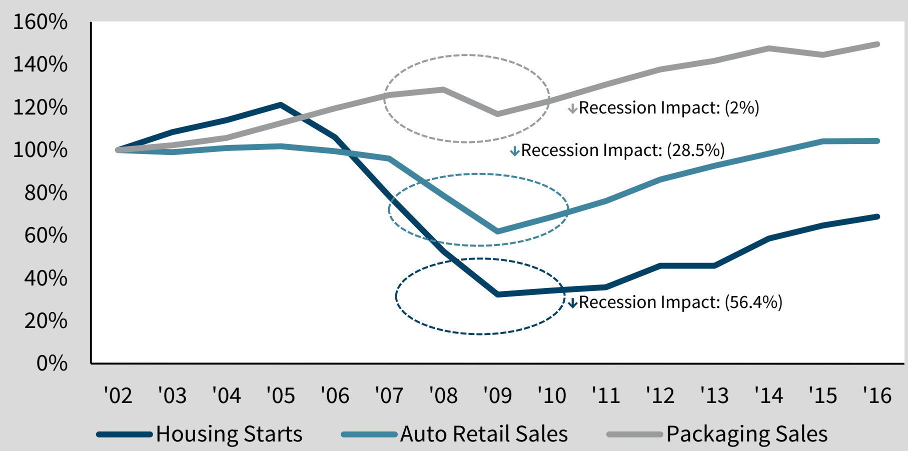
This broad-based interest is being further supported by highly accommodative debt markets, leading to heightened valuations in the first half of 2017. During the first six months of 2017, the median EV/LTM EBITDA multiple in packaging transactions increased to nearly 9.0x, well above the median of 8.3x since 2004.

Low Cyclicality Drives Financial-Sponsor Interest

As the current economic expansion cycle stretches into its eighth year, financial sponsors are becoming increasingly focused on acquiring assets that are relatively well-insulated from an economic downturn. Because a large portion of packaging companies' business is attributable to more defensive and less discretionary end-markets, such as food and beverage, personal care, and other consumer staples, the packaging industry historically has performed much better than other industrial sectors during a downturn. During due diligence, financial sponsors will closely examine a packaging target's customer base to assess those companies' exposure to potential macroeconomic headwinds.

Packaging's Low Cyclicality Attracts Private Equity Interest

The packaging industry's lack of cyclicality, relative to other industrial sectors, was exhibited during the last recession. As we move into what could be the mid-to-late innings of the current economic expansion, packaging companies' strong cash flow generation and the defensive nature of their end-markets make these companies attractive industrial assets for private equity firms.



Sources: The Freedonia Group, Haver Analytics, and WardsAuto

Packaging companies' ability to generate strong cash flow is another reason the industry is attractive to financial sponsors ahead of a potential economic slowdown. Relative to other industrial sectors, packaging has relatively low capital expenditure requirements. This gives packaging companies valuable flexibility during a downturn.

Intense interest from financial sponsors, combined with leveraged finance lenders' favorable view of the packaging industry, has resulted in several high-profile acquisitions at over 10x EBITBA multiples by private equity firms since April 2017, including Genstar Capital's pending acquisition of Tekni-Plex, a manufacturer of food, medical packaging, and tubing; Leonard Green & Partners' and Oak Hill's acquisition of Charter NEX Films, a manufacturer of specialty films for the food and medical industries; Goldman Sachs' acquisition of Transcendia, a manufacturer of custom engineered films for a variety of end-markets, including healthcare, food and beverage, and point-of-purchase display; and Advent International's acquisition of Faerch Plast, a Danish manufacturer of packaging products for the food industry.

Strategic Acquirers Seek Growth to Justify Valuations

Multiples for publicly traded packaging companies, as in many other sectors, have risen significantly since 2011. The median EV/LTM EBITDA multiple for packaging companies as of June 30, 2017, was 9.5x, well above the median of 8.0x since 2004. This multiple expansion has occurred despite the fact that growth potential for the packaging industry is generally tied to GDP and/or population growth.

Eager to generate growth to justify these robust valuations, large packaging companies have become increasingly acquisitive over the past few years. For example, in December 2016, RPC Group announced two acquisitions, ESE World for $275 million and Astrapak for $99 million. In January 2017, WestRock announced that it was expanding its portfolio of paper and packaging solutions by acquiring Multi Packaging Solutions for an implied enterprise value of $2.3 billion. In July 2017, packaging company Multi-Color announced that it would acquire the labels business of Germany-based Constantia Flexibles for $1.3 billion. To learn more about recent high-profile transactions in the packaging industry, see the case studies later in this report.

Flexibles Generate Growth Opportunities for Packaging Companies

Over the past decade the packaging industry has seen a steady shift from rigid containers, made from materials such as paperboard, glass, metal, and rigid plastic, to flexible packaging. This shift has been driven by manufacturers' desire to use lower-cost and lighter-weight materials, as well as evolving customer preferences for enhanced customization, single-serve food and beverage options, and focus on driving demand for products through attractive packaging (i.e., shelf appeal, printing, and advertising).

Growing consumer demand for single-serving/away-from-home meals has led to robust growth in pouches and resealable packages. These options are easy for consumers to transport and improve food preservation by offering tighter seals. Not only does flexible packaging give consumers more convenient options, flexible packaging also provides more ways to differentiate and increase shelf appeal through superior graphics and enhanced features. Within flexibles more broadly, the growth of pouches has been especially impressive. From 2011 to 2016, sales of pouches grew 56% faster than bags and 28% faster than wraps and other flexible products.

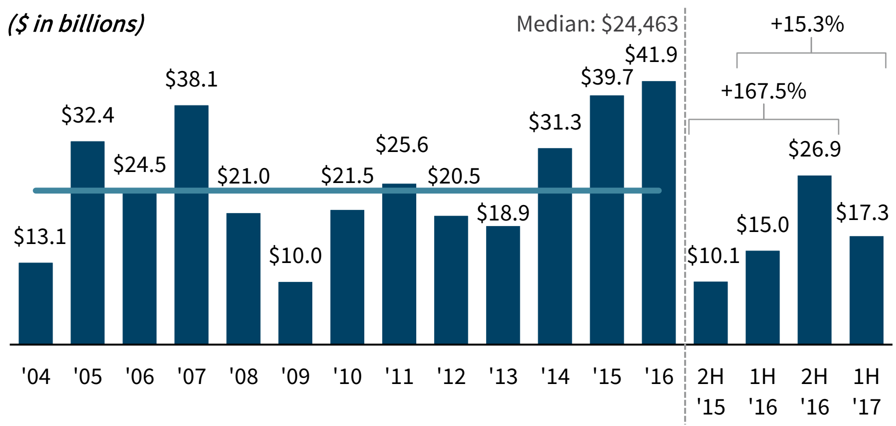
To learn more about trends affecting the M&A landscape in the packaging industry, please do not hesitate to contact us.

Packaging Market Analysis

We look behind the numbers to examine trends in the dealmaking landscape in the packaging industry.

Packaging M&A – Global Transaction Values

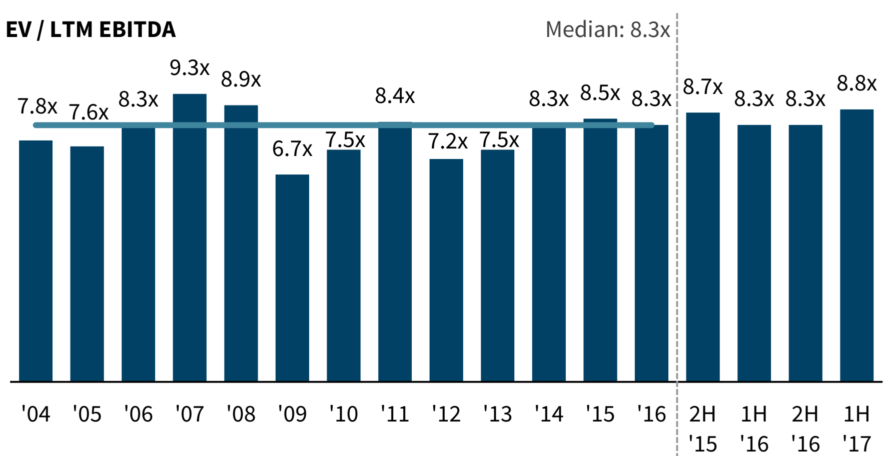
M&A activity in the packaging industry, in terms of transaction value, has increased significantly since 2013. Recent momentum was driven by a large number of $750 million-plus transactions, such as Advent International's acquisition of Faerch Plast, Multi-Color's acquisition of Constantia Labels, and Leonard Green & Partners' and Oak Hill's acquisition of Charter NEX Films. On a year-over-year basis, M&A activity in the first half of 2017 was more than 15% ahead of 2016's pace.



Sources: Dealogic and William Blair's Mergers and Acquisitions market analysis; aggregate value includes all announced deals

Packaging M&A – Valuation Multiples

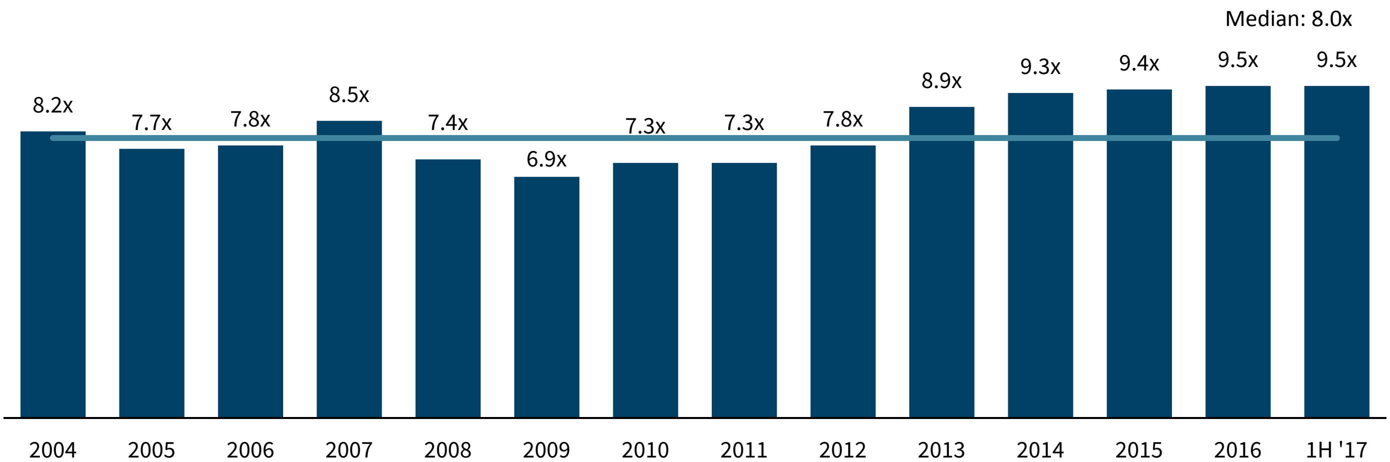
The confluence of strong, broad-based demand from strategic acquirers and financial sponsors and debt markets that view the packaging industry very favorably have supported robust M&A valuations. In the first half of 2017, the median EV/LTM EBITDA multiple for packaging M&A increased to nearly 9.0x, well above the median of 8.3x since 2004. Financing for packaging M&A transactions has consistently eclipsed 6.0x total debt/LTM EBITDA with debt occasionally exceeding 7.0x.



Sources: Dealogic and William Blair

Packaging – Public Company Valuations

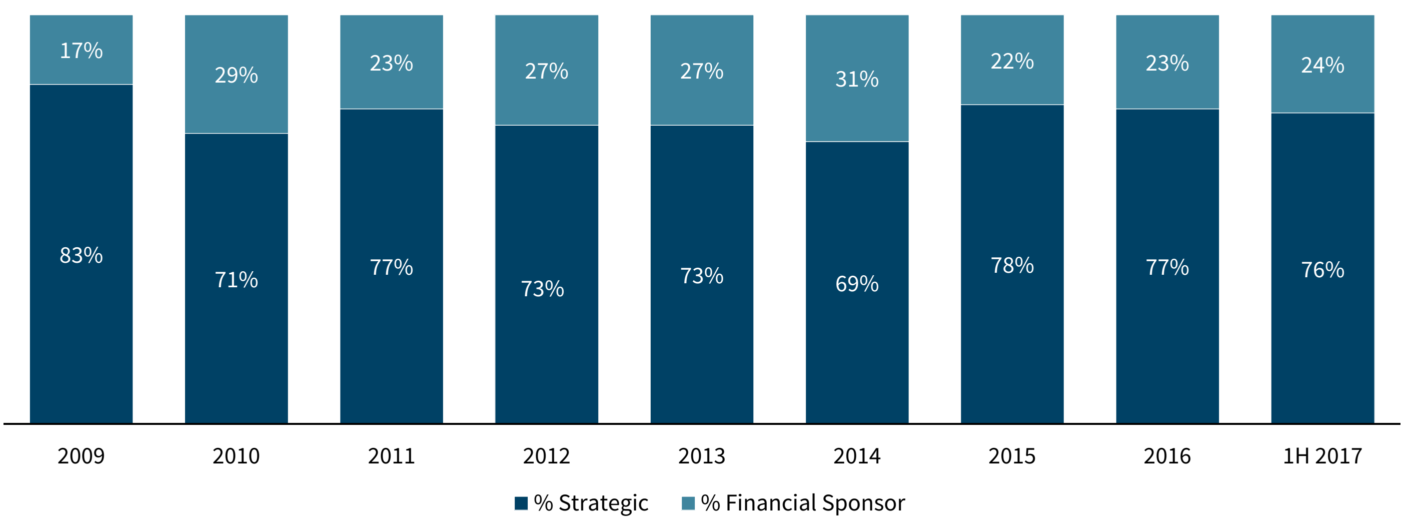
Valuations for publicly traded packaging companies have also risen significantly since 2011, despite the fact that the industry's growth rates are largely tied to GDP growth, which has been tepid over this period. To generate growth and support these strong valuations, packaging companies have become increasingly aggressive in their acquisition efforts.



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

Packaging M&A – Strategic vs. Financial Sponsor Activity

As a percentage of total packaging transactions, financial sponsor activity has been increasing modestly over the past several years. Financial sponsor interest in packaging should continue to grow as the current economic expansion cycle nears what some believe to be its later innings. The industry's lack of cyclicality relative to other industrial sectors makes packaging an attractive space for private equity firms to invest their capital ahead of a potential economic slowdown.



Sources: Dealogic and William Blair

Drawing on our deep sector expertise 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:

Not Disclosed FABBRI GROUP has been acquired by ARGOS SODITIC October 2017	Not Disclosed AFP has been acquired by JINDAL POLY FILMS LTD September 2017	$115,000,000 PolyOne Designed Structures and Solutions has been acquired by Arsenal Capital Partners July 2017
Not Disclosed Warburg Pincus has acquired DURAVANT July 2017	Not Disclosed INTERNATIONAL PAPER Divested China foodservice business to Huhtamaki June 2017	Not Disclosed CHARTER NEX FILMS has been acquired by IG&P May 2017
$230,000,000 SONOCO has acquired PPC Peninsula Packaging Company March 2017	Not Disclosed ProAmpac has been acquired by Pritzker Group Private Capital November 2016	Not Disclosed mullinix Packages, Inc. has been acquired by Sabert makes food look great July 2016

William Blair made a minority investment in and entered into a strategic alliance with BDA Partners in order to offer clients our collective global reach

William Blair By the Numbers*

300+

bankers globally with local cultural knowledge

2,000+

completed advisory and financing transactions

$230+

billion in transaction value for our clients

*In the past five years as of January 31, 2017

William Blair Spotlight on Recent Transactions

Not Disclosed
AFP
has been acquired by
JINDAL POLY FILMS LTD
September 2017

The acquisition of AFP provides Jindal access to a portfolio of technologically advanced, leading load security films and strengthens its relationships with companies in the food, beverage, and FMCG segments

- Jindal was attracted to AFP's nano-layer technology focused on manufacturing films with a proven ability to dramatically reduce the damage of goods during transit and the overall total cost of ownership of films
- The acquisition provides AFP with access to Jindal's global network enhancing its overall reach for global customers

$115,000,000
PolyOne
Designed Structures and Solutions
has been acquired by
Arsenal Capital Partners
July 2017

The acquisition of PolyOne's Designed Structures and Solutions (DSS) segment provides an attractive opportunity to carve-out and transform a $400 million non-core platform

- Arsenal Capital Partners was attracted to the multiple avenues for growth via DSS' diverse portfolio of solutions and the highly fragmented nature of the packaging and plastic film and sheet sectors
- DSS' position as a non-core segment for PolyOne provides an opportunity to create value by utilizing multiple levers such as facility consolidation, exposure to high growth resin opportunities, increased wallet share across a large, attractive customer base, and industry consolidation

$230,000,000
SONOCO
has acquired
PPC PENINSULA PACKAGING COMPANY
March 2017

The acquisition of Peninsula Packaging strengthens Sonoco's position in the growing fresh and natural food categories

- Peninsula Packaging further expands Sonoco's consumer packaging portfolio, as well as provides potential for manufacturing and supply chain synergies resulting from the combination of the thermoformed trays and film lidding stock businesses
- Sonoco elected to engage William Blair based on its relevant and current transaction experiences in the packaging industry, most notably following its role as sell-side advisor to Mullinix in its sale to Sabert; William Blair provided guidance on M&A strategy including how and when to accelerate diligence and the appropriate bidding strategy to pursue

Packaging
Investment Banking

Paul Hindsley
Managing Director
+1 312 364 8576
phindsley@williamblair.com

Elliot Farkas
Managing Director
+1 312 364 8157
efarkas@williamblair.com

Brian Flynn
Associate
+1 312 364 5381
bflynn@williamblair.com

Sector and Transaction Data

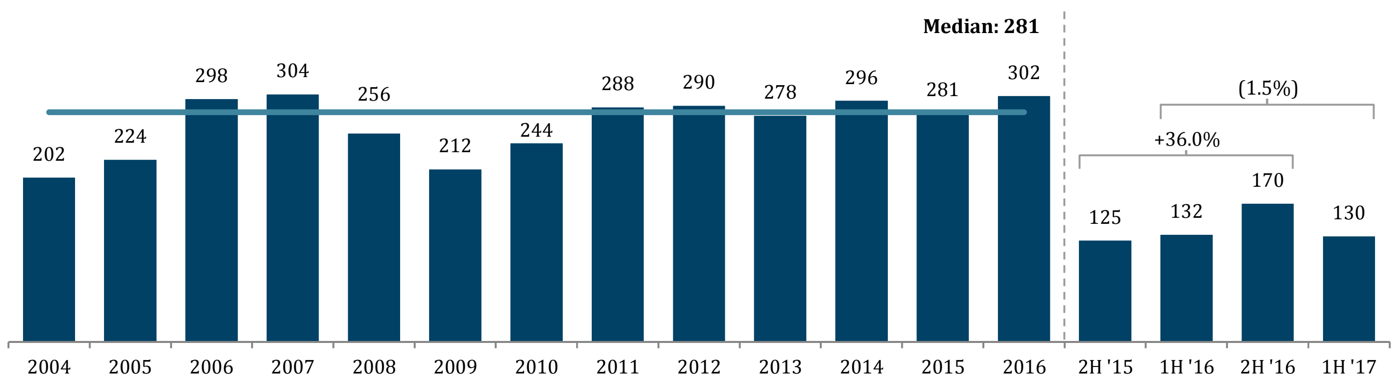
Industry Review and Outlook

M&A Activity

M&A activity in the packaging sector in 2016 increased slightly by 7.5%, above the overall global M&A market which decreased roughly 8% during the same period. Packaging activity was strongest during the second half of 2016, with the second half up modestly from both the first half of 2016 and the second half of 2015. Packaging M&A activity has remained strong thus far in 2017, with the number of announced transactions down 1.5% from 1H 2016.

Global Packaging Sector Transaction Volume

(number of deals)

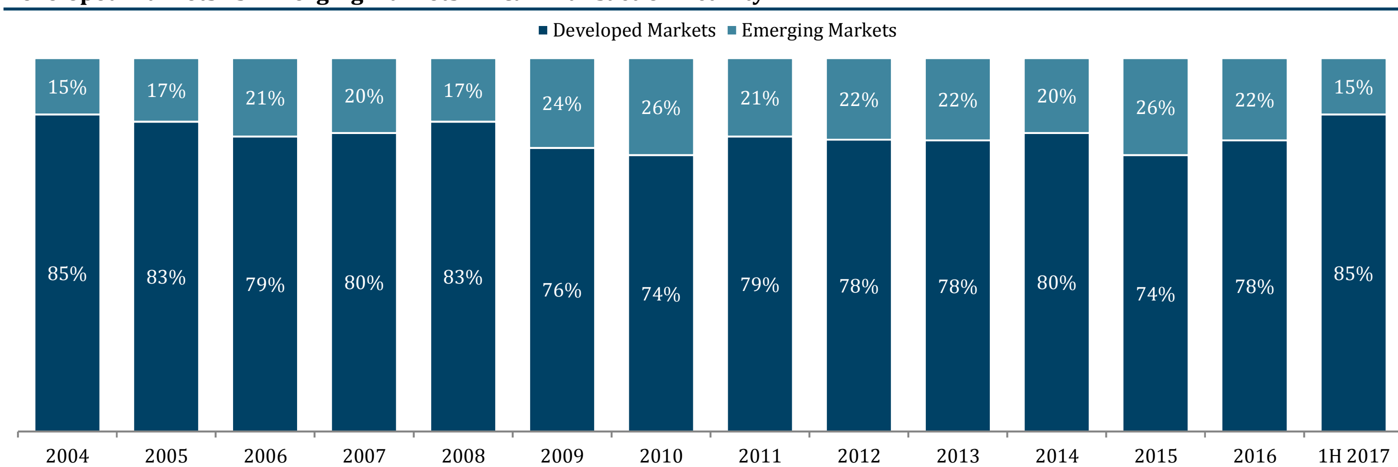


Sources: Dealogic and William Blair's Mergers and Acquisitions market analysis

Emerging Market M&A Transaction Activity

During 2016 and thus far in 2017, emerging market activity in the packaging sector experienced a decline from 2015, with emerging markets packaging M&A accounting for 22% and 15% of activity, respectively. We believe the decline has been driven by global geopolitical uncertainty and increased scrutiny of outbound acquisitions by foreign investors.

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

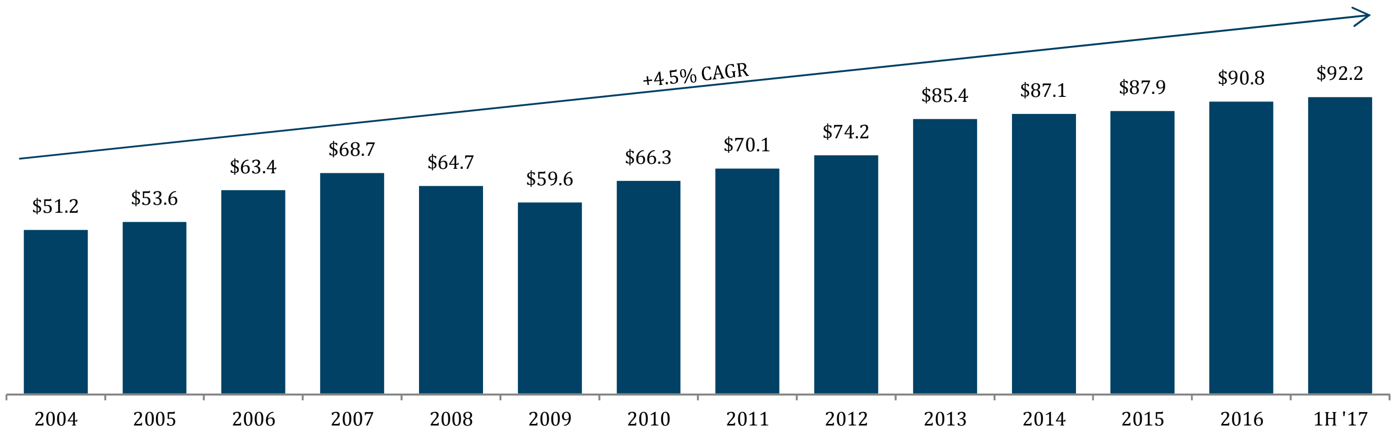


Sources: Dealogic and William Blair's Mergers and Acquisitions market analysis

Earnings Continue to Improve

Earnings in 2016 for William Blair's group of publicly traded packaging companies continued to rebound, up roughly 55% since the lows of 2009. This rebound continues a modest and stable upward trend since the downturn that ended in first quarter 2009. As shown in the exhibit below, earnings have grown at a 4.5% compound annual rate since 2004. In 2017 thus far, earnings growth has been driven by a continued focus on cost reductions, relatively stable resin prices, and revenue growth as a result of an improving global economy.

Publicly Traded Packaging Companies – Total Operating Income Per Share[(1)]



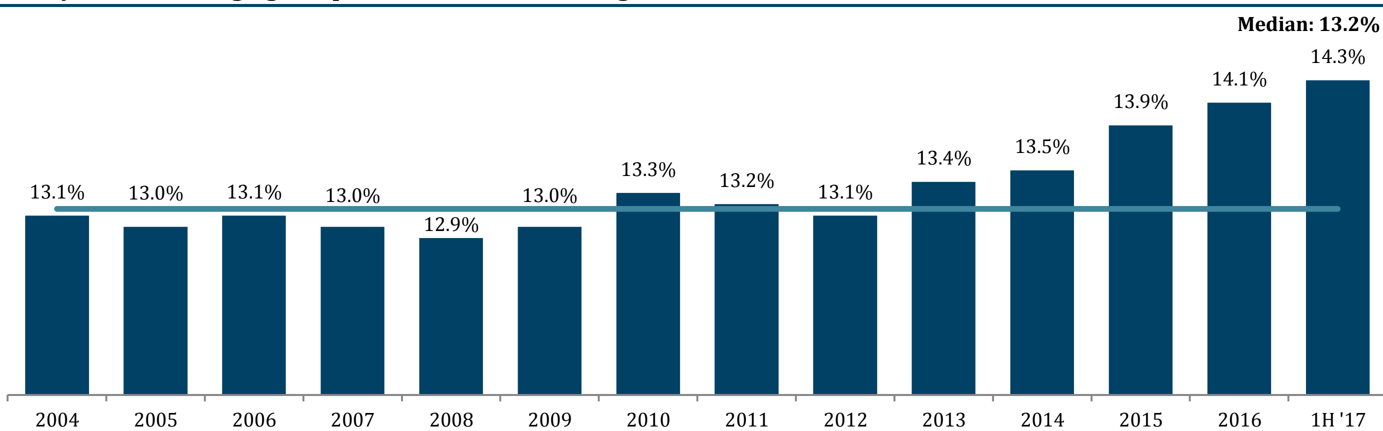
Source: Capital IQ

(1) Total operating income per share for the LTM period for all publicly traded companies shown on pages 17 through 20 of this report

EBITDA Margin Trends

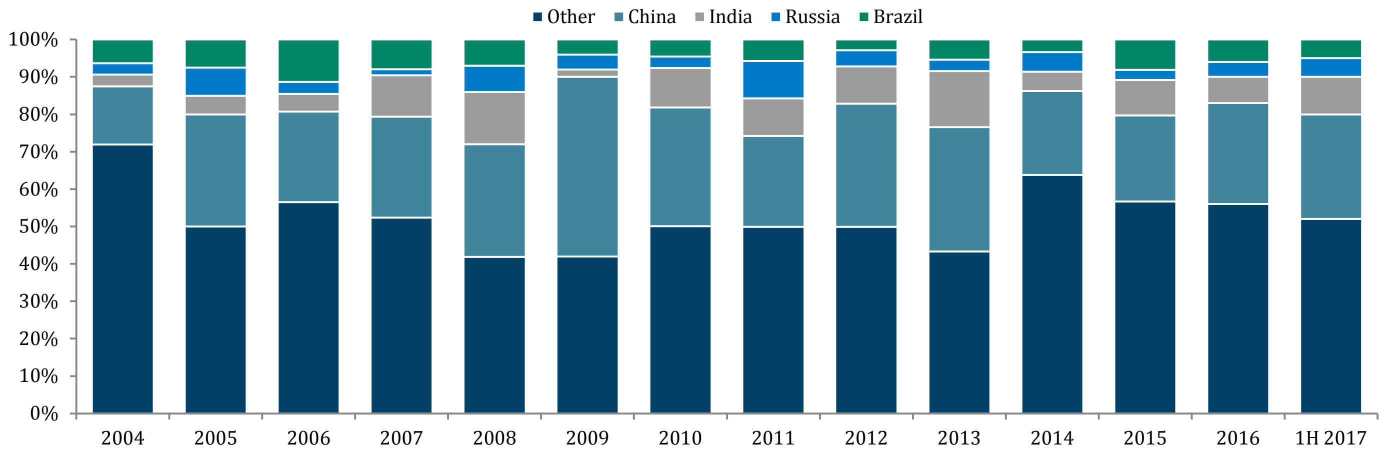
In 2016, EBITDA margins remained stable before leveling off near 14.3% for the packaging companies tracked by William Blair, above the longer-term median of 13.2%. This reflects a marked increase from the lows experienced in 2008.

Publicly Traded Packaging Companies – LTM EBITDA Margins



Source: Capital IQ

Emerging Markets Packaging M&A Activity



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	1H 2017
Brazil	6%	8%	11%	8%	7%	4%	5%	7%	3%	5%	3%	8%	6%	5%
Russia	3%	8%	3%	2%	7%	4%	3%	12%	5%	3%	5%	3%	4%	5%
India	3%	5%	5%	11%	14%	2%	11%	12%	11%	15%	5%	10%	7%	10%
China	16%	30%	24%	27%	30%	48%	33%	28%	35%	33%	22%	23%	27%	28%
Other[1]	72%	50%	57%	52%	42%	42%	52%	57%	54%	43%	64%	57%	56%	52%

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:

RPC Group, a U.K.-based manufacturer of plastic and packaging products, acquired South Africa-based **Astrapak**, for $99 million.

Hengan International Group acquired Malaysia-based **Wang-Zheng Bhd**, a provider of packaging products, for $20 million.

Nippon Paper Industries Co acquired India-based **Plus Paper Foodpac Ltd**, a manufacturer of food service packaging products, for $15 million.

During calendar year 2016, Australia-based **Amcor** made five acquisitions totaling more than $800 million. Two of these transactions targeted emerging markets.

- **Amcor** acquired Chilean-based **Alusa SA**, a producer of plastic and paper packaging products, for $435 million.
- **Amcor** also acquired **Hebei Qite Packing Co Ltd**, a Chinese manufacturer of paper packaging products, for $27 million.

Recent Notable Packaging Transactions

Announced: June 2017 | **Observations/Rationale:**

Target: Faerch plast (EQT Partners) Holstebro, Denmark

Acquirer: Advent International GLOBAL PRIVATE EQUITY Boston, MA

Key Metrics:

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

Færch Plast manufactures and supplies plastic packaging products for the food industry, specifically focused on plastic trays, sealing films, absorbers, lids, and semi-automatic sealing machines for use in shops and central kitchens. Faerch Plast serves the European market through an operational footprint that spans six manufacturing sites in Denmark, the UK, the Czech Republic and Spain. Advent International is a global venture capital and private equity firm focused on several end-markets including business and financial services, healthcare, industrial, retail, consumer, and TMT (technology, media, and telecommunication).

- Advent was attracted to Faerch Plast's leading position in the Western European rigid packaging market and its strong design and operational capabilities
- Compelling societal trends towards "on-the-go" food packaging solutions driven by a desire for convenient food options coupled with food retailers looking to achieve differentiation through new and innovative packaging solutions, provides Faerch Plast with a long runway for organic growth, which was a key factor for Advent
- One of the main benefits of Advent's investment is the additional capital and resources to advance Faerch Plast's growth strategy focused on deepening its presence in key Western European markets (e.g., France, Spain, Germany) and executing attractive add-on acquisitions

Announced: May 2017 | **Observations/Rationale:**

Target: CHARTER NEX FILMS (Pamplona Capital Management) Milton, WI

Acquirer: LG&P Los Angeles, CA; OAK HILL CAPITAL PARTNERS Stamford, CT

Key Metrics:

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

Charter NEX Films engages in the engineering, extruding, and manufacturing of highly specialty films for the food, medical and protective packaging end-markets. Their specialty firms serve as mission-critical solutions that are designed to maintain food freshness, taste and color, and extend shelf-life of products. Leonard Green & Partners is a private equity and venture capital firm investing in a range of industries such as retail, consumer products/services, distribution, and healthcare and wellness. Oak Hill is a private equity managing fund with more than $10 billion of initial capital commitments since inception. Oak Hill applies an industry-focused, theme-based approach investing in the Consumer, Retail and Distribution, Industrials, Media and Communications, and Services sectors.

- Charter NEX's #1 position in the specialty films market, strong cash flow dynamics and proven, long-term growth of +15% annually were key investment characteristics for Leonard Green
- Leonard Green's investment provides the opportunity to further Charter NEX's organic growth strategy of expanding its manufacturing footprint domestically and internationally, as well as continuing its acquisition plan following the successful acquisition of Optimum Plastics

Announced: May 2017 | **Observations/Rationale:**

Target: Transcendia A SPECIALTY FILMS COMPANY (The Jordan Company) Franklin Park, IL

Acquirer: Goldman Sachs Merchant Banking Division New York, NY

Key Metrics:

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

Transcendia manufactures a broad portfolio of custom engineered materials for a wide variety of end-markets including the healthcare, point of purchase-display, protective & aesthetic, industrial, food and beverage, window, anti-corrosion, and security ID applications in the United States and internationally. Goldman Sachs is an investment banking and investment management firm. Goldman Sachs Merchant Banking Division is the segment responsible for the firm's private equity and venture capital investments across a broad range of industries in the Americas, Europe, and Asia.

- Goldman Sachs was attracted to Transcendia's leading position across a diverse portfolio of attractive end-markets and its several organic growth initiatives focused on deepening positions with existing customers and entering into new end-markets and geographies
- Deep pipeline of acquisition opportunities was of keen interest for Goldman Sachs; opportunity to drive growth through M&A is a core pillar to their investment strategy

Announced: April 2017

Target: Consolidated Container Company
(Bain Capital)
Atlanta, GA

Acquirer: LOEWS CORPORATION
New York, NY

Key Metrics:

Implied Enterprise Value ($M):	$1,200
EV/LTM Revenue:	Proprietary
EV/LTM EBITDA:	Proprietary

Observations/Rationale:

Consolidated Container (CCC) is blow molder of rigid plastic packaging solutions to the dairy, water, beverage, food, specialty chemical, automotive, and nutrition markets. In addition, CCC operates a resin recycling operation for post-consumer resin. Loews Corporation is a publicly traded, multi-industry holding company with businesses in the insurance, energy and hospitality industries.

- Loews Corporation maintains a well-defined investment strategy; Consolidated Container checked each of the boxes and was viewed as an attractive platform for growth
- Loews was attracted to Consolidated Containers' scale compared to its competitors, the highly fragmented nature of the rigid packaging market and CCC's high free cash flow
- Transaction represents Loews' first acquisition in the packaging sector

Announced: February 2017

Target: Letica CORPORATION
Rochester Hills, MI

Acquirer: RPC
Northamptonshire, United Kingdom

Key Metrics:

Implied Enterprise Value ($M):	$490(1)
EV/LTM Revenue:	1.42X
EV/LTM EBITDA:	11.2X

Observations/Rationale:

Letica Corporation is a leading provider of rigid plastic products that are designed and manufactured through thermoforming, injection molding, paper-forming, and sheet extrusion processes. Letica has 13 facilities across North America and serves the building, construction, food service, chemical and retail end-markets. RPC Group operates as a plastic products design and engineering company for packaging and non-packaging markets worldwide through a diverse range of operations including: injection molding, blow molding, thermoforming, blown film extrusion and rotational molding. RPC Group serves a global customer base across six end-markets: food, non-food, personal care, beverage, healthcare, and technical components.

- RPC was attracted to the opportunity to leverage Letica's platform to deepen its position with global customers and strengthen its production and design capabilities
- Letica provides RPC with a North American beachhead strategically positioned to assist in a global consolidation trend; RPC views the North American market as highly fragmented and ripe for consolidation
- The transaction is expected to generate meaningful cost synergies for RPC relating to procurement and distribution efficiencies, as well as potential incremental savings from best practice sharing and cross-selling

Announced: February 2017

Target: MAUSER
(Clayton, Dubilier & Rice)
Oosterhout, The Netherlands

Acquirer: BWAY corporation
(Stone Canyon Industries)
Atlanta, GA

Key Metrics:

Implied Enterprise Value ($M):	$2,300
EV/LTM Revenue:	1.51x
EV/LTM EBITDA:	10.5X

Observations/Rationale:

Mauser Group manufactures and supplies rigid industrial packaging solutions worldwide to the chemical, petrochemical, pharmaceutical, and food and beverage end-markets. Its products include plastic, metal, and fiber drums, as well as intermediate bulk containers (IBC). BWAY Corporation manufactures and markets rigid metal containers including paint cans, steel pails, aerosol cans, F-style containers, mono-top cans, pour top cans, ammunition boxes and oil cans. BWAY also manufactures rigid plastic packaging including pails, drums, and hybrid paint cans.

- Highly complementary product portfolio strengthening the combined company's positon as a leading provider of rigid general line packaging
- Transaction provides meaningful revenue and cost synergies through cross-selling opportunities, expanding the combined company's customer reach via a global footprint, as well as potential savings across procurement and SG&A operations
- Transaction represents Stone Canyon's second acquisition in the packaging industry in the last year following its acquisition of BWAY in October 2016

(1) $640 with earn-out

Announced: January 2017

Target:

Multi Packaging Solutions

(Formerly publicly traded)
New York, NY

Acquirer: WestRock
Richmond, VA

Key Metrics:

Implied Enterprise Value ($M):	$2,257.0
EV/LTM Revenue:	1.44x
EV/LTM EBITDA:	10.5x

Observations/Rationale:

Multi Packaging Solutions ("MPS") is a leading global provider of print-based specialty packaging solutions with a differentiated product offering that includes premium folding cartons, inserts, labels, and rigid packaging. MPS serves a diverse customer base in the consumer and healthcare sectors with locations in North America, Europe, and Asia. WestRock manufactures and sells paper and packaging solutions for the consumer and corrugated markets in North and South America, Europe, and Asia. The company operates through the Corrugated Packaging, Consumer Packaging, and Land and Development segments.

- WestRock was attracted to the opportunity to leverage Multi-Packaging Solutions' differentiated offering to advance its pursuit to further develop a value-added solutions platform
- MPS complementary print, graphics and design capabilities are expected to further diversify WestRock's offering towards a more balanced portfolio of corrugated and consumer, value-added packaging solutions
- Transaction expected to realize significant synergies of ~$85 mm by the end of FY 2019; meaningful portion of the savings are to be realized by insourcing ~35% of the incremental paperboard consumption of ~225,000 tons

Announced: January 2017

Target: WestRock
Specialty Closures and
Dispensing Systems Business
Richmond, VA

Acquirer: SILGAN HOLDINGS INC.
Stamford, CT

Key Metrics:

Implied Enterprise Value ($M):	$1,025
EV/LTM Revenue:	1.81x
EV/LTM EBITDA:	Proprietary

Observations/Rationale:

WestRock's Specialty Closures and Dispensing Systems Business is a leading global supplier of highly engineered triggers, pumps, sprayers and dispensing closure solutions to major branded consumer goods product companies in the Home, Health and Beauty markets. Silgan is a leading supplier of metal containers in North America and Europe and a leading worldwide supplier of metal, composite and plastic closures for food and beverage products. In addition, Silgan is a leading manufacturer of plastic containers for shelf-stable food and personal care products in North America.

- Highly complementary expansion of Silgan's closures segment with significant customer overlap providing the ability to realize cross-selling opportunities across the combined company's enhanced global footprint
- Silgan was attracted to the margin profile and leading technological offering of WestRock's Dispensing segment
- Transaction expected to generate ~$15 mm in synergies within the first 24 months post-transaction; synergies to be realized through savings attributable to the reduction of duplicative corporate expenses and operational efficiencies

Announced: November 2016

Target: TRICORBRAUN
(CHS Capital)
St. Louis, MO

Acquirer: AEA
New York, NY

Key Metrics:

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

Observations/Rationale:

TricorBraun is a leading supplier of plastic and glass containers, closures, dispensers and tubes, with 40+ locations globally. The company serves cosmetics and personal care, beer and wine, liquor and spirits, food and beverages, drug and pharmacy/healthcare, pet and vet, industrial chemical, and household chemical markets; and small businesses, crafters, and hobbyists. AEA Investors is a global private equity firm investing across four sectors: value-added industrial products, specialty chemicals, consumer/retail and services.

- AEA Investors was attracted to TricorBraun's innovative and comprehensive portfolio of rigid packaging solutions and its position in a highly attractive segment of the packaging industry
- AEA's investment provides additional capital to support its organic growth plan and increase the available capital for future investment and acquisitions
- Transaction represents AEA's second time owning TricorBraun following their initial investment in 2004

Announced: November 2016		**Observations/Rationale:**
Target:	NOVOLEX Wind Point Partners & TPG Growth Hartsville, SC	Novolex is a leading manufacturer of paper and plastic bags serving retail, grocery, food service, hospitality, institutional, and industrial markets. The Carlyle Group (NASDAQ: CG) is a global alternative asset manager investing across four segments: Corporate Private Equity, Real Assets, Global Market Strategies and Investment Solutions.
Acquirer:	THE CARLYLE GROUP New York, NY	

Key Metrics:

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

- Carlyle was attracted to the ability to further Novolex's proven acquisition strategy, which has been a key pillar in the Company's historical growth strategy
- Carlyle was further drawn to Novolex's market leading position in several end-markets, including the attractive food & beverage segment
- Key benefit of Carlyle's investment is its global platform and ability to provide resources to assist in executing Novolex's growth strategy of expanding its North American operations into the global marketplace

Announced: August 2016		**Observations/Rationale:**
Target:	AEP INDUSTRIES INC. (Formerly publicly traded) Montvale, NJ	AEP Industries (AEP) manufactures and markets a diverse line of flexible plastic packaging products for consumer, industrial, and agricultural applications. AEP's products include custom films for sheeting, tubing, and bags; films that protect items stored outdoors or in transit, such as boats and cars; and shrink films, barrier films, and overwrap films. Berry Global Group ("Berry"), manufactures and distributes value-added plastic consumer packaging and engineered materials products in the United States, Canada, Mexico, South America, Europe and Asia. Berry operates through three segments: Health, Hygiene & Specialties; Consumer Packaging; and Engineered Materials.
Acquirer:	Berry Evansville, IN	

Key Metrics:

Implied Enterprise Value ($M):	$730
EV/LTM Revenue:	0.67x
EV/LTM EBITDA:	6.8x

- The acquisition meaningfully expands Berry's Engineered Materials (EM) Segment (~40% EBITDA increase); highly complementary geographic footprint, product portfolio and customer base provides attractive upside for the combined company
- Berry was attracted to the opportunity to deepen relationships with the combined customer base through its expanded North American footprint and complementary production capabilities
- The transaction is expected to generate roughly $80 million in synergies; significant proportion of synergies attributable to procurement savings resulting from a meaningfully expanded polyethylene purchasing base

Announced: August 2016		**Observations/Rationale:**
Target:	FORT DEARBORN COMPANY (KRG Capital Partners) Elk Grove, IL	Fort Dearborn Company manufactures and supplies decorative labeling solutions inclusive of roll-fed, pressure sensitive, cut and stack, and shrink sleeve labels. Fort Dearborn serves the food and beverage, household products, nutraceuticals, paint and coatings, personal care, and private label / retail end-markets. Advent International is a global venture capital and private equity firm focused on several end-markets including business and financial services, healthcare, industrial, retail, consumer, and TMT (technology, media, and telecommunication).
Acquirer:	Advent International GLOBAL PRIVATE EQUITY New York, NY	

Key Metrics:

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

- Advent's organic growth strategy focuses on expanding Fort Dearborn's labeling capabilities to increase its presence in the higher growth segments of the labeling sector (e.g., pressure sensitive, shrink sleeve)
- Fort Dearborn participates in the large, highly fragmented labels market; industry consolidation represents a core tenet of Advent's growth strategy and provides an opportunity for Advent to infuse incremental capital to accelerate Fort Dearborn's revenue growth through strategic acquisitions

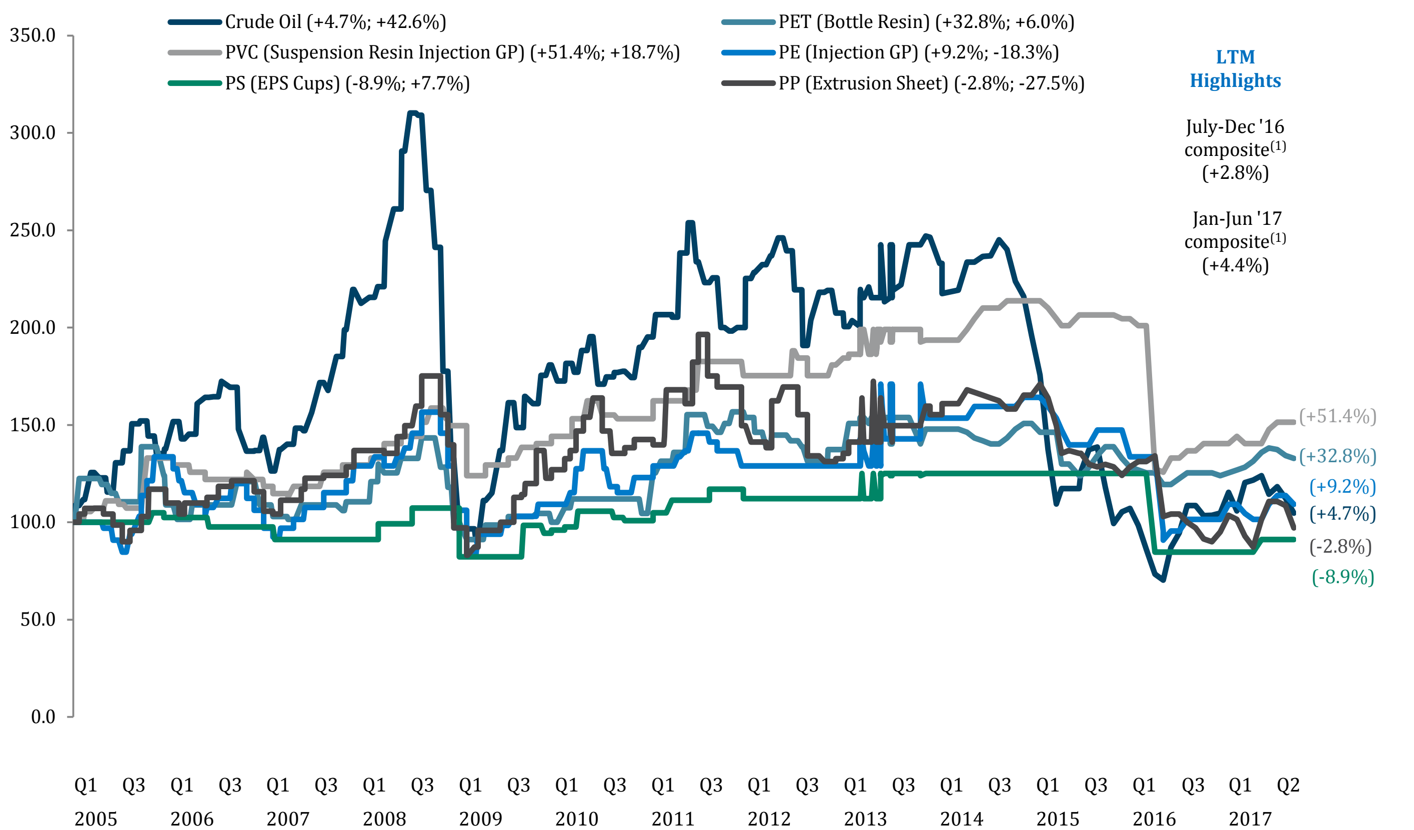
Current Industry Trends

Resin Prices Trends

Resin prices dropped, on average, 5.7% during the first half of 2016, before rising 3% during the second half of the year. In 2017 thus far, resin prices have continued to increase, up 4% from the beginning of the year. Most analysts believe that incremental capacity in the United States will result in a gradual decline in resin prices over time.

Resin Prices

(Index Price vs. Jan-05; vs. Jan-16)



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

(1) Composite represents index of all five resin types shown here

Public Packaging Company Valuations by Sector

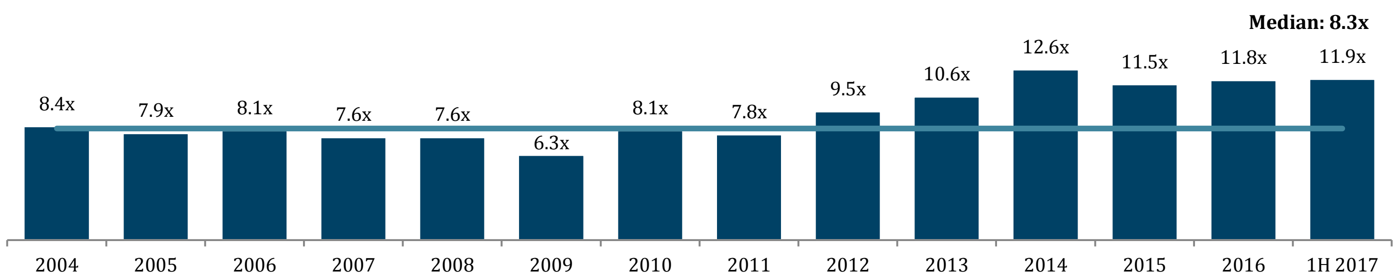
Flexible Packaging

Select Comparable Public Company Metrics

($ in millions)		LTM Financials		LTM Margins			Valuation				
Company	Stock Price Change Since 06/30/16	Revenue	EBITDA	Gross Profit	EBITDA	OCF Margin(1)	Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/ EBITDA
Amcor Limited	11.8%	$9,101.0	$1,511.7	21.0%	16.6%	11.1%	$14,399.2	$19,014.7	2.09x	12.6x	2.9x
Bemis Company, Inc.	(10.2%)	$4,022.7	$562.8	20.5%	14.0%	8.3%	$4,252.7	$5,755.1	1.43x	10.2x	2.6x
Intertape Polymer Group Inc.	17.0%	$779.3	$100.7	20.3%	12.9%	4.5%	$1,123.2	$1,330.4	1.71x	13.2x	1.3x
Mondi plc	41.0%	$7,691.5	$1,660.9	43.7%	21.6%	10.8%	$12,654.5	$14,506.6	1.89x	8.7x	1.1x
Sealed Air Corporation	(2.6%)	$6,836.0	$1,065.4	37.0%	15.6%	11.8%	$8,764.5	$12,662.2	1.85x	11.9x	3.9x
Mean	**11.4%**	**$5,686.1**	**$980.3**	**28.5%**	**16.1%**	**9.3%**	**$8,238.8**	**$10,653.8**	**1.79x**	**11.3x**	**2.4x**
Median	**11.8%**	**$6,836.0**	**$1,065.4**	**21.0%**	**15.6%**	**10.8%**	**$8,764.5**	**$12,662.2**	**1.85x**	**11.9x**	**2.6x**

(1) Operating cash flow (OCF) calculated as EBITDA less capital expenditures
Sources: Capital IQ, FactSet, and William Blair as of June 30, 2017

Valuation Multiples – LTM EBITDA



Rigid Packaging

Select Comparable Public Company Metrics

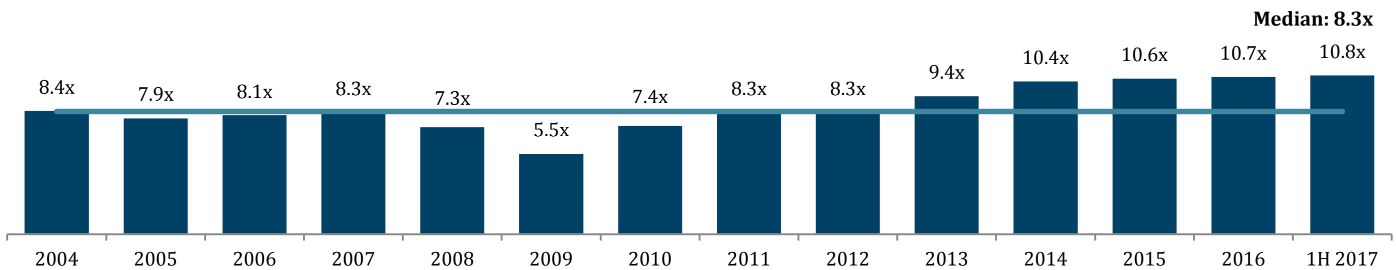
($ in millions)

Company	Stock Price Change Since 06/30/16	LTM Financials Revenue	LTM Financials EBITDA	LTM Margins Gross Profit	LTM Margins EBITDA	OCF Margin(1)	Valuation Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/ EBITDA
AptarGroup, Inc.	9.8%	$2,347.7	$487.4	35.3%	20.8%	13.8%	$5,422.6	$5,919.3	2.52x	12.1x	1.0x
Berry Plastics Group, Inc.	46.7%	$6,571.0	$1,176.0	19.8%	17.9%	14.1%	$7,382.8	$13,175.8	2.01x	11.2x	4.9x
RPC Group plc	(6.2%)	$3,577.9	$500.0	51.3%	14.0%	7.4%	$4,038.9	$5,400.0	1.51x	10.8x	2.8x
Silgan Holdings Inc.	23.5%	$3,772.8	$573.7	15.7%	15.2%	9.4%	$3,504.7	$5,326.2	1.41x	9.3x	6.3x
Sonoco Products Co.	3.5%	$4,728.9	$650.0	19.3%	13.7%	9.4%	$5,110.0	$6,174.7	1.31x	9.5x	1.7x
Mean	**15.5%**	**$4,199.6**	**$677.4**	**28.3%**	**16.3%**	**10.8%**	**$5,091.8**	**$7,199.2**	**1.75x**	**10.6x**	**3.3x**
Median	**9.8%**	**$3,772.8**	**$573.7**	**19.8%**	**15.2%**	**9.4%**	**$5,110.0**	**$5,919.3**	**1.51x**	**10.8x**	**2.8x**

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

Sources: Capital IQ, FactSet, and William Blair as of June 30, 2017

Valuation Multiples – LTM EBITDA



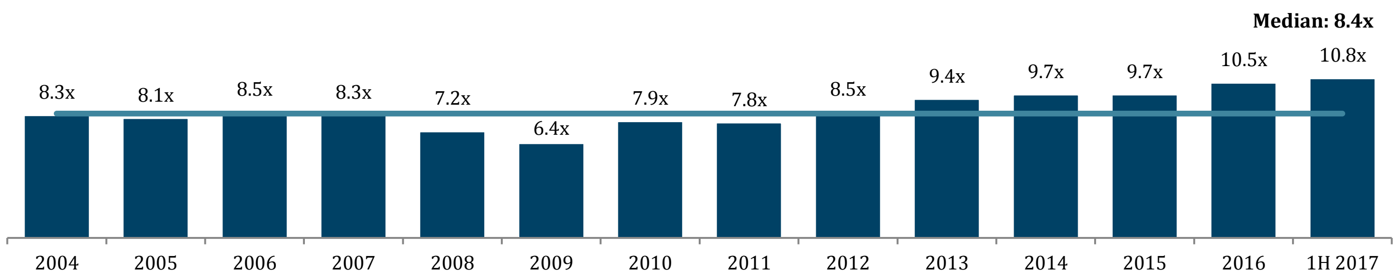
Labels

Select Comparable Public Company Metrics

($ in millions) Company	Stock Price Change Since 06/30/16	LTM Financials Revenue	EBITDA	LTM Margins Gross Profit	EBITDA	OCF Margin(1)	Valuation Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/ EBITDA
Avery Dennison Corporation	18.2%	$6,173.1	$834.1	27.9%	13.5%	9.2%	$7,826.0	$9,096.6	1.47x	10.9x	1.7x
CCL Industries Inc.	45.7%	$3,363.9	$768.7	29.7%	22.8%	12.9%	$8,852.9	$10,572.7	3.14x	13.8x	2.6x
Multi-Color Corp.	28.7%	$929.2	$171.7	20.9%	18.5%	12.0%	$1,383.3	$1,842.4	1.98x	10.7x	2.9x
R.R. Donnelley & Sons Company	(75.3%)	$6,939.8	$488.2	19.6%	7.0%	3.6%	$877.8	$2,774.4	0.40x	5.7x	5.4x
Mean	**4.3%**	**$4,351.5**	**$565.7**	**24.5%**	**15.5%**	**9.4%**	**$4,735.0**	**$6,071.5**	**1.75x**	**10.3x**	**3.1x**
Median	**23.5%**	**$4,768.5**	**$628.4**	**24.4%**	**16.0%**	**10.6%**	**$4,604.7**	**$5,935.5**	**1.73x**	**10.8x**	**2.7x**

(1) Operating cash flow (OCF) calculated as EBITDA less capital expenditures
Sources: Capital IQ, FactSet, and William Blair as of June 30, 2017

Valuation Multiples – LTM EBITDA



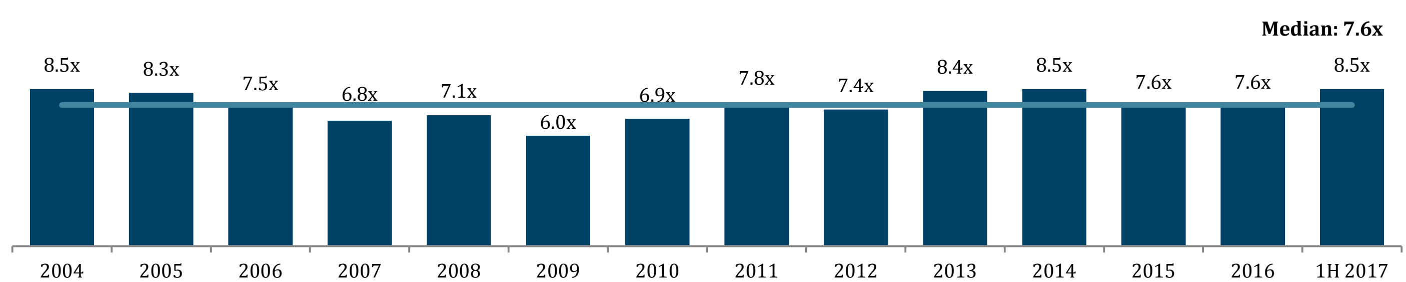
Paper Packaging

Select Comparable Public Company Metrics

($ in millions)		LTM Financials		LTM Margins			Valuation				
Company	Stock Price Change Since 06/30/16	Revenue	EBITDA	Gross Profit	EBITDA	OCF Margin[1]	Market Cap	Enterprise Value	EV/LTM EBITDA	EV/LTM EBITDA	Net Debt/ EBITDA
Cascades, Inc.	93.1%	$4,136.0	$364.2	14.5%	8.8%	4.2%	$1,289.1	$3,384.3	0.82x	9.3x	5.1x
Graphic Packaging Holding Company	9.9%	$4,317.1	$737.3	16.9%	17.1%	10.1%	$4,279.5	$6,494.9	1.50x	8.8x	3.2x
Greif, Inc.	49.7%	$3,420.9	$476.0	33.6%	13.9%	4.4%	$2,770.5	$3,850.7	1.13x	8.1x	2.3x
International Paper Company	33.6%	$21,930.0	$3,940.6	19.2%	18.0%	33.2%	$23,374.1	$33,672.1	1.54x	8.5x	3.2x
KapStone Paper and Packaging Corporation	58.6%	$3,142.7	$430.8	19.4%	13.7%	4.3%	$1,996.8	$3,471.0	1.10x	8.1x	4.6x
Packaging Corporation of America	66.4%	$6,081.1	$1,217.1	14.5%	20.0%	25.0%	$10,407.7	$8,833.2	1.45x	7.3x	1.9x
Smurfit Kappa Group plc	41.4%	$8,343.0	$1,168.0	32.1%	14.0%	30.7%	$7,317.8	$9,522.1	1.14x	8.2x	2.6x
Universal Forest Products Inc.	(5.8%)	$3,404.5	$212.3	39.7%	6.2%	15.1%	$1,791.4	$2,044.0	0.60x	9.6x	1.1x
WestRock Company	45.8%	$14,800.0	$2,117.7	17.8%	14.3%	29.1%	$14,211.6	$19,584.8	1.36x	9.2x	3.0x
Mean	**43.6%**	**$7,730.6**	**$1,184.9**	**23.1%**	**14.0%**	**17.4%**	**$7,493.2**	**$10,095.2**	**1.18x**	**8.6x**	**3.0x**
Median	**45.8%**	**$4,317.1**	**$737.3**	**19.2%**	**14.0%**	**15.1%**	**$4,279.5**	**$6,494.9**	**1.14x**	**8.5x**	**3.0x**

(1) Operating cash flow (OCF) calculated as EBITDA less capital expenditures
Sources: Capital IQ, FactSet, and William Blair as of June 30, 2017

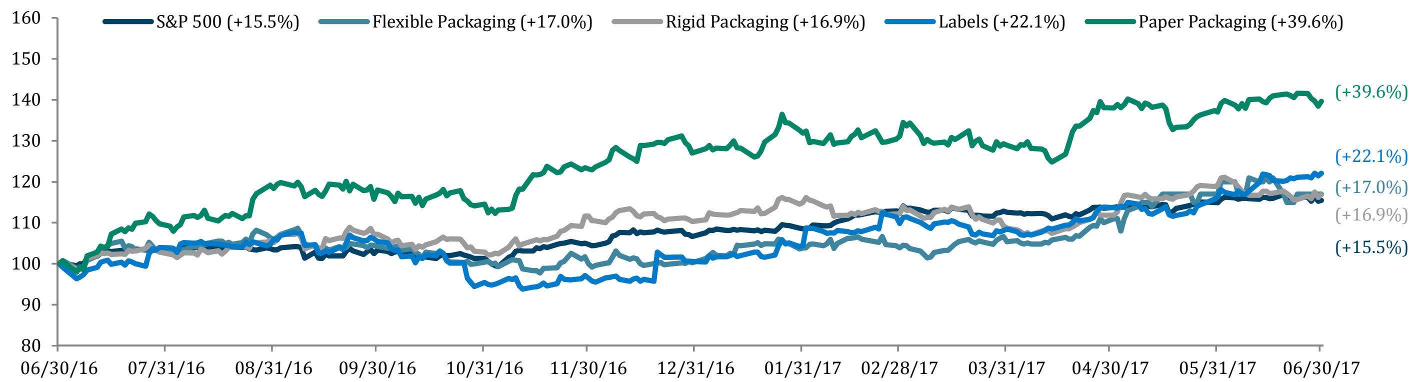
Valuation Multiples – LTM EBITDA



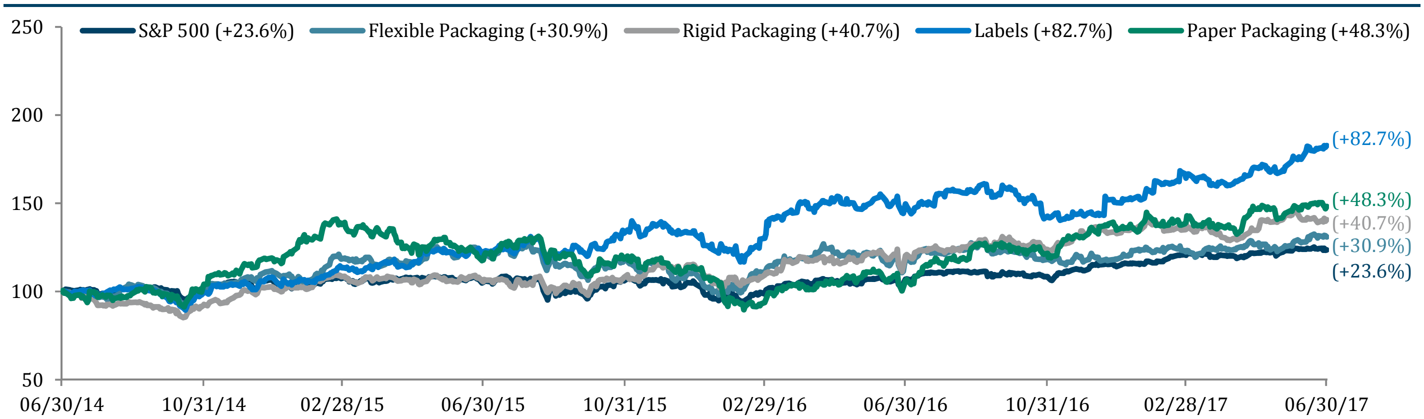
Indexed Share Price Performance

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 been positive, with all four of the groups significantly outperforming the S&P 500.

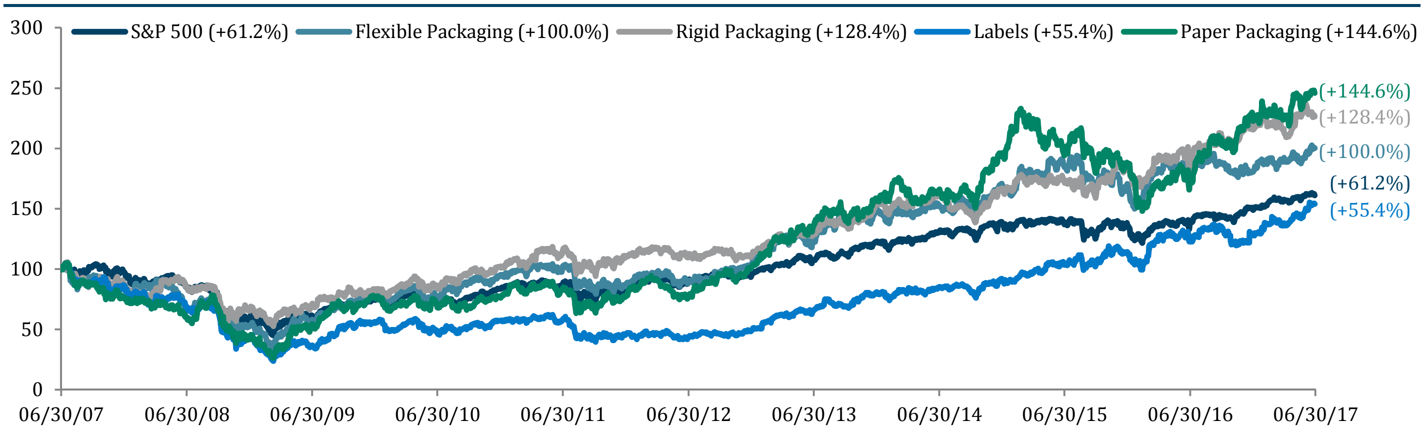
Indexed Stock Performance – Last 12 Months



Indexed Stock Performance – Last Three Years



Indexed Stock Performance – Last 10 Years



Source: FactSet as of June 30, 2017

Disclosure

About William Blair Investment Banking

William Blair's investment banking group enables corporations, financial sponsors, and owner/entrepreneurs around the world to achieve their growth, liquidity, and financing objectives.

Drawing on the collective intellectual capital and deep sector expertise of a global team that reaches across more than 15 cities on four continents, the investment banking group brings a rigorous and innovative approach to corporate board advisory projects, mergers and acquisitions, and equity and debt financing. From 2012 to 2016, the team advised on more than $230 billion in completed transaction volume.