



Packaging Quarterly update

Q4 2018

Packaging trends

Anti-counterfeit packaging market¹

The global anti-counterfeit packaging market is expected to grow at a CAGR of about 12 percent during the forecast period 2018-2023. Anti-counterfeit packaging is an additional measure taken by businesses to maintain the authenticity and safety of their goods. Anti-counterfeit technologies are supported by many favorable government policies in the food & beverage and pharmaceutical packaging sectors.



Global blow-molded plastics market³

The global blow-molded plastics market is forecast to grow at a CAGR of 4 percent from 2018 to 2022. A key market growth driver, is the rising adoption of and increased demand for PET and bio-PET packaging solutions. Quickly growing demand for water bottles and packed beverages is also expected to contribute to the blow-molded plastics market growth. The global water market is expected to grow over 32 percent from \$207.8 billion in 2017 to \$274.8 billion in 2022.

Global corrugated packaging market²

The global market for corrugated packaging is predicted to grow at an annualized rate of 4 percent, to reach an expected value of \$173.6 million in the year 2020. Due to its low cost and easy handling, corrugated packaging is used for shipments throughout various industries. The rapid shift towards e-commerce and internet shopping is driving significant market growth.

Global contract packaging market⁴

The global contract packaging market is expected to grow to \$57.9 billion in 2025 from \$31.3 billion in 2018, representing a CAGR of 9.1 percent. Currently, the Food and Beverage Industry is the primary end-market for the contract packaging industry. The Pharmaceutical industry is expected to drive industry growth due to stringent government regulation. Most pharmaceutical companies outsource the packaging of their products to contract packaging businesses that can meet the high government standard facility requirements.

In the news

December, 2018 – Greif, Inc. (NYSE: GEF, GEF.B) (Greif) announced that it has entered into a definitive agreement to acquire Caraustar Industries, Inc. (Caraustar) in a cash transaction valued at \$1.8 billion. This acquisition is expected to generate annual run-rate cost synergies of approximately \$45 million within 3 years of closing, derived from the combination of back office savings, transportation optimization, recycled fiber savings, operational improvements, and other procurement-related activities.⁵

December, 2018 – DS Smith plc has announced its plans to sell its plastics division. According to the director of corporate affairs, Greg Dawson, the Company launched a strategic review of the business in June, through which it generated “a significant amount of interest.” The business has been valued by the market at around £500 million (\$637 million).⁶

October, 2018 – Graphic Packaging International, LLC (Graphic Packaging) has completed the acquisition of substantially all the assets of the foodservice business of Letica Corporation, a subsidiary of RPC Group PLC. The acquisition will expand Graphic Packaging’s customer base, grow its geographic footprint, and allow the Company to meet the incremental demand for paper cups resulting from the ongoing shift out of polystyrene foam.⁷

October, 2018 – Deloitte Corporate Finance LLC acted as exclusive financial advisor to Waco, Texas-based Englander dZignPak, LLC, an established provider of displays and retail and industrial packaging, in its sale to Packaging Corporation of America, an Illinois-based corrugated packaging products provider.

In this update:

- Packaging trends
- Economic outlook
- Industry analysis
- Select M&A transactions
- Appendix

This update will focus on news and trends in the following areas:

- Anti-counterfeit packaging
- Corrugated packaging
- Blow-molded plastics
- Contract packaging

Who we are:

Deloitte Corporate Finance LLC is a leading global middle market M&A adviser. The firm’s professionals have extensive knowledge in the Packaging space and use their experience to help clients create and act upon opportunities for liquidity, growth, and long-term advantages.

Contacts

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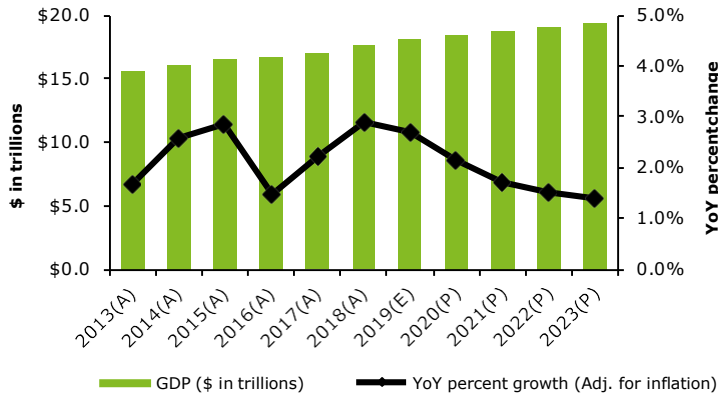
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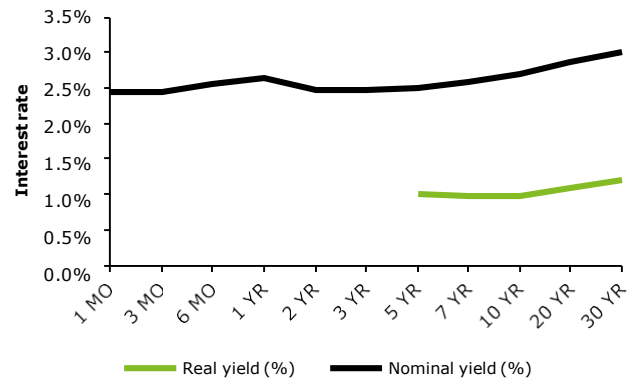
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Macroeconomic outlook

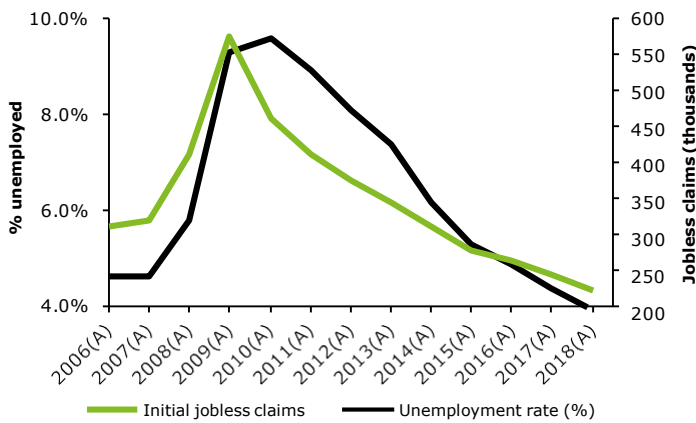
US gross domestic product¹



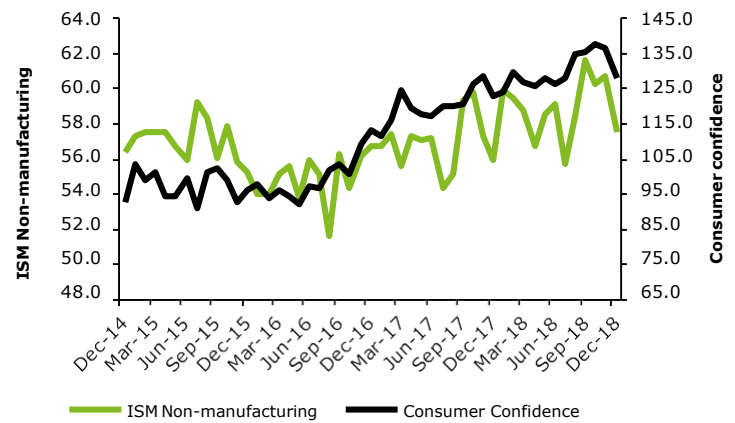
US Treasury yield curve² (nominal vs. real)



US unemployment rate³



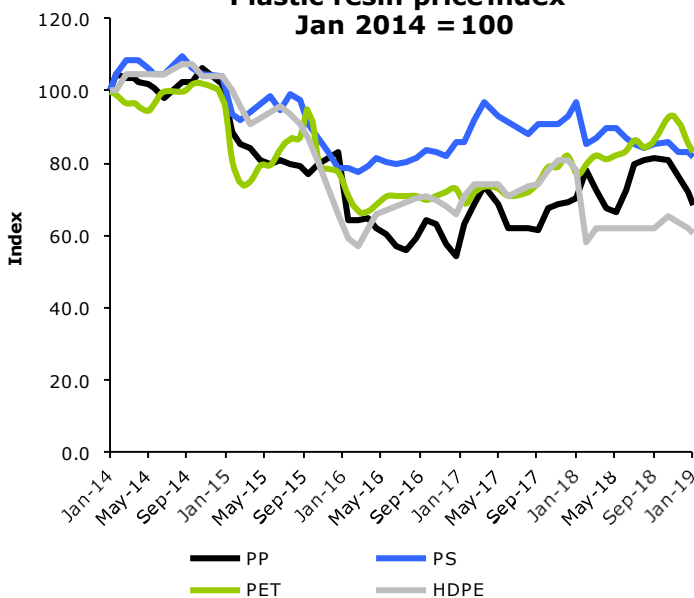
ISM non-manufacturing index and consumer confidence index⁴



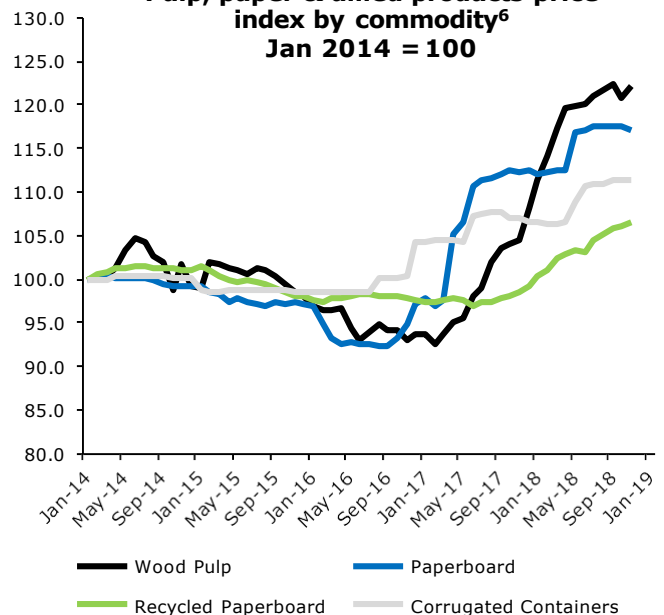
*An ISM Non-manufacturing Index value above 50 signals economic expansion.

Raw material pricing

Plastic resin price index⁵ Jan 2014 = 100



Pulp, paper & allied products price index by commodity⁶ Jan 2014 = 100

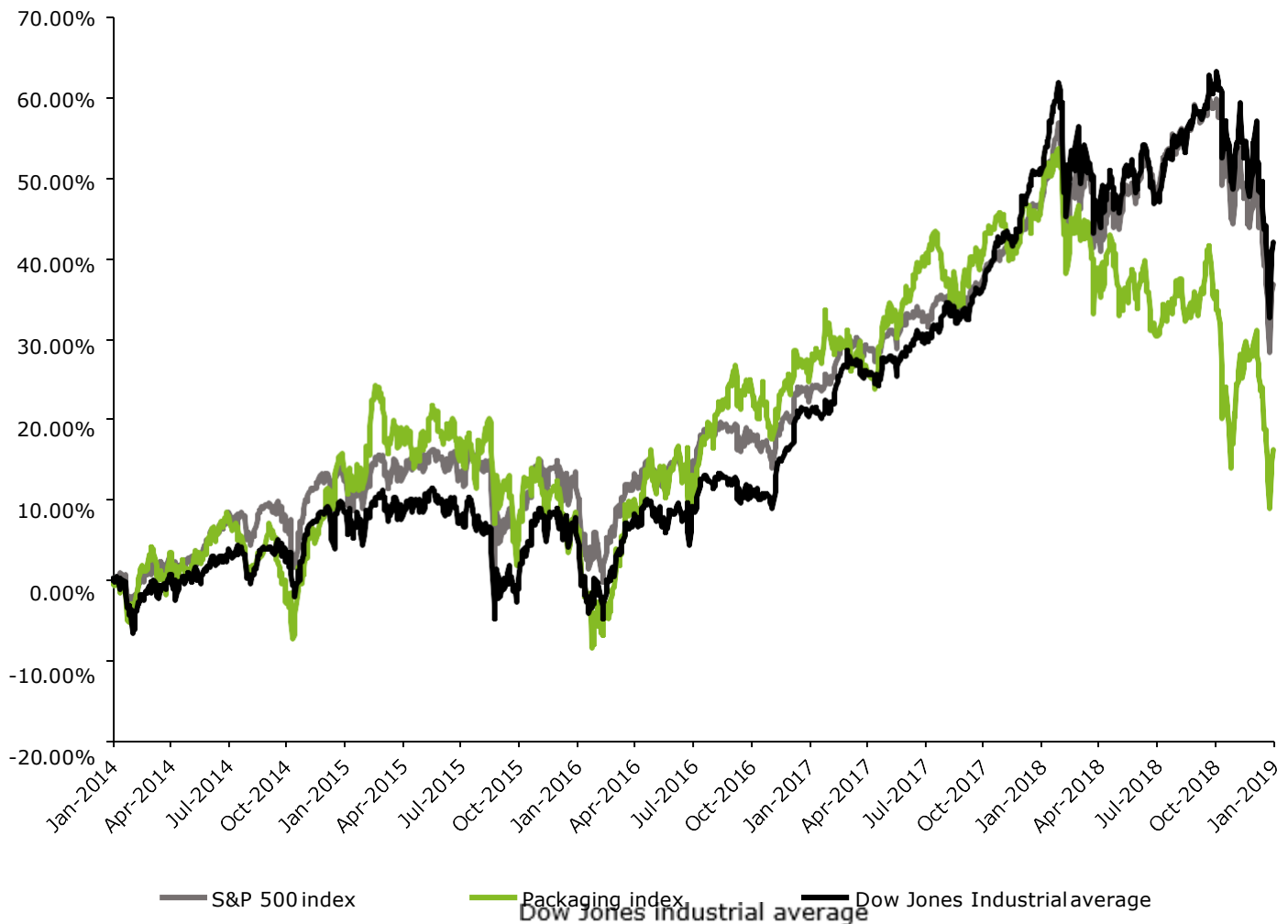


Packaging sector breakdown and trading statistics¹

Sector	Number of companies	% of 52 Week high	Median revenue CAGR (3 Yr)	Median LTM EBITDA	Median EBITDA margin	Median Enterprise value (\$M)	Last twelve months		NTM
							EV/ Revenue	EV/ EBITDA	EV/ EBITDA
Plastic	8	75.6%	6.8%	\$762.6	15.3%	\$6,450.6	1.5x	10.1 x	9.8x
Diversified Packaging	7	71.6	4.4	615.8	13.2	5,361.1	1.2	8.9	8.9
Paper and Paperboard	18	63.3	2.5	680.0	15.5	5,443.5	0.9	6.2	6.4
Metal and Glass	3	73.0	6.1	1,599.0	15.1	14,760.9	1.4	9.2	8.8
Packaging index	36	72.3%	5.2%	\$721.3	15.2%	\$5,947.1	1.3 x	9.1 x	8.8 x

Public comparables four-year stock market performance²

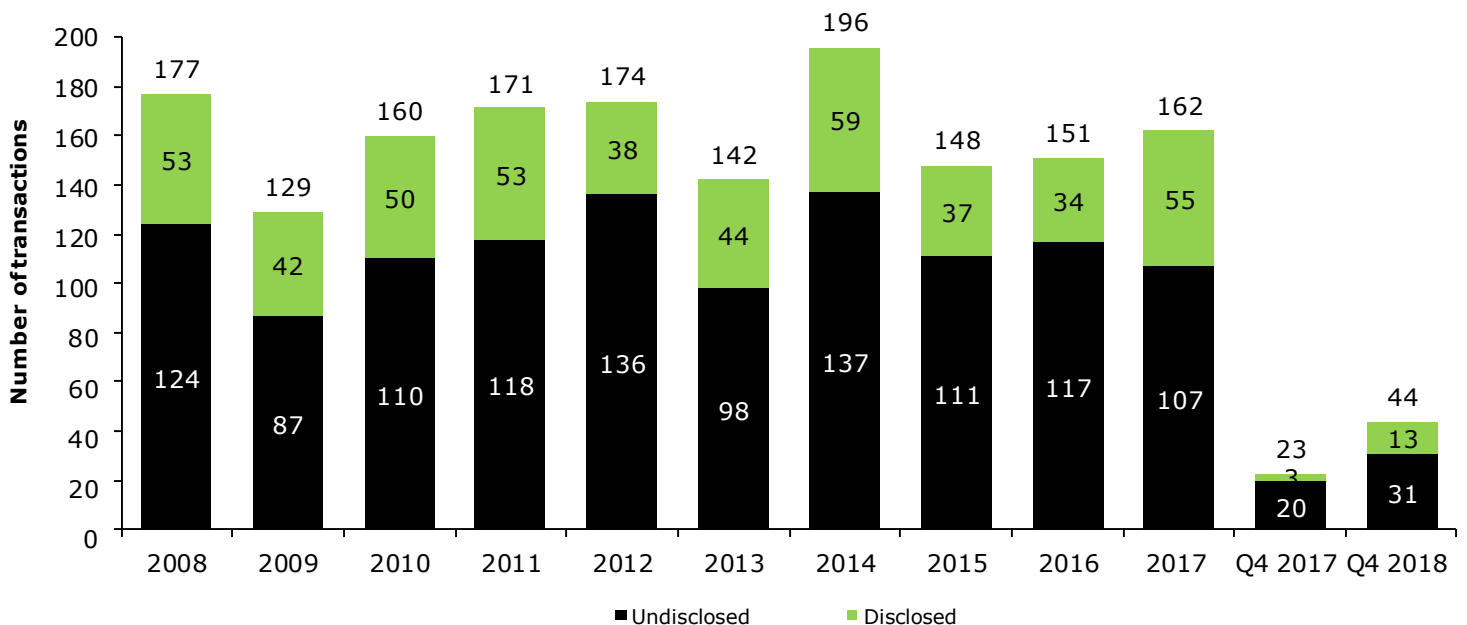
S&P 500 index	36.84 %
Dow Jones Industrial average	41.88 %
Packaging index	16.14 %



Select Packaging M&A transactions^{1,2}

Date	Target/acquiror	Business description	Enterprise value (EV)	EV/ EBITDA
Pending	Caraustar Industries, Inc. Greif Packaging LLC	Caraustar Industries, Inc. manufactures and supplies recycled paperboard and converted paperboard products. The company provides consumer packaging products that include folding cartons and set-up boxes for foodservice, pharmaceutical and healthcare, toy and sporting goods, and various other markets. It also offers industrial products, supplies, and packaging solutions. In addition, the company offers recycling audits, pre and post-consumer materials, brokering services, mill procurement, etc.	\$1,800.0	10.3 x
Dec-18	Plaskolite, LLC PPC Partners	Plaskolite, LLC is North America's largest provider of transparent thermoplastic sheet products. Plaskolite's customized products are used in a wide variety of applications, including windows, doors, lighting, signs, point-of-purchase displays and bath products. Plaskolite serves a diverse customer base including distributors, OEMs and retailers.	N/A	N/A
Nov-18	Best Label Company, Inc. Resource Label Group, LLC	Best Label Company, Inc. offers flexographic printing services, and prints rotary letterpress and pressure sensitive labels. It produces labels for applications in various industries, such as food and beverage, health and beauty, pharmaceutical, nutraceutical, agriculture, marketing collateral, and direct mail and forms. Best Label Company, Inc. was founded in 1945 and is based in Cerritos, California.	N/A	N/A
Nov-18	Kapstone Paper and Packaging Corporation WestRock Company	KapStone Paper and Packaging Corporation produces and sells a range of containerboards, corrugated products, and specialty paper products. It offers containerboards consisting of linerboard and corrugated medium to manufacture corrugated containers for packaging products and corrugated products.	5,035.9	12.5
Oct-18	Englander dZignPak LLC Packaging Corporation of America	Englander dZignPak, headquartered in Waco, Texas is an established provider of a wide range of corrugated packaging and high-graphic point-of-purchase ("PoP") displays, retail packaging, and industrial packaging.	N/A	N/A

Annual Packaging M&A transaction volume³



Appendix

Public comparables analysis¹

Company (ticker)	% of 52 Week high	LTM revenue	Revenue CAGR (3 Yr)	LTM EBITDA	EBITDA margin	Enterprise value ("EV") ⁽¹⁾	Last twelve months NTM		
							EV/ Revenue	EV/ EBITDA	EV/ EBITDA
<i>(\$ in millions)</i>									
Plastic									
Amcor Limited (ASX:AMC)	86.0%	\$9,319.1	(1.0)%	\$1,336.5	14.3%	\$14,540.6	1.6x	10.9x	9.9x
Avery Dennison Corporation (NYSE:AVY)	72.6	7,125.6	5.2	928.4	13.0	9,413.2	1.3	10.1	9.7
Berry Global Group, Inc. (NYSE:BERY)	77.0	7,869.0	17.3	1,339.0	17.0	11,704.4	1.5	8.7	8.1
Brady Corporation (NYSE:BRC)	91.8	1,176.9	0.9	182.7	15.5	2,142.8	1.8	11.7	11.5
CCL Industries Inc. (TSX:CCLB)	73.9	3,916.9	20.7	763.2	19.5	7,997.4	2.0	10.5	10.5
Intertape Polymer Group Inc. (TSX:ITP)	74.1	1,002.8	8.4	124.6	12.4	1,208.8	1.2	9.7	8.2
RPC Group Plc (LSE:RPC)	74.1	5,048.3	39.2	762.0	15.1	4,903.9	1.0	6.4	6.5
Winpak Ltd. (TSX:WPK)	94.0	889.8	3.7	197.7	22.2	1,993.8	2.2	10.1	10.1
Median	75.6%				15.3%		1.5x	10.1x	9.8x
Mean	80.4%				16.1%		1.6x	9.8x	9.3x
Diversified Packaging									
DS Smith Plc (LSE:SMDS)	51.3%	7,877.6	17.5%	\$983.6	12.5%	\$7,405.6	0.9x	7.5x	7.1x
Greif, Inc. (NYSE:GEF)	59.1	3,873.8	2.3	512.0	13.2	2,889.6	0.7	5.6	5.2
Huhtamäki Oyj (HLSE:HUH1V)	73.4	3,527.7	5.1	448.4	12.7	4,264.5	1.2	9.5	9.5
Orora Limited (ASX:ORA)	82.5	3,142.0	7.6	325.3	10.4	3,068.7	1.0	9.4	9.3
Sealed Air Corporation (NYSE:SEE)	69.9	4,700.2	(13.5)	795.9	16.9	8,831.9	1.9	11.1	10.2
Silgan Holdings Inc. (NasdaqGS:SLGN)	76.1	4,374.1	4.4	615.8	14.1	5,361.1	1.2	8.7	8.9
Sonoco Products Company (NYSE:SON)	90.5	5,334.3	2.1	723.5	13.6	6,461.1	1.2	8.9	8.3
Median	71.6%				13.0%		1.1x	9.1x	9.1x
Mean	68.7%				13.3%		1.2x	8.7x	8.4x
Paper and Paperboard									
Bio Pappel, S.A.B. de C.V. (BMV:PAPPEL *)	85.3%	\$1,382.9	19.2%	\$231.1	16.7%	\$594.5	0.4x	2.6x	0.0x
Cascades Inc. (TSX:CAS)	61.4	3,505.2	6.4	349.7	10.0	1,979.0	0.6	5.7	5.0
Clearwater Paper Corporation (NYSE:CLW)	48.2	1,732.2	(1.1)	185.1	10.7	1,121.4	0.6	6.1	7.3
Domtar Corporation (NYSE:UFS)	64.5	5,409.0	0.5	620.0	11.5	3,057.7	0.6	4.9	4.6
Empresas CMPC S.A. (SNSE:CMPC)	73.5	6,048.2	8.1	1,327.3	21.9	10,778.0	1.8	8.1	7.3
Graphic Packaging Holding Company (NYSE:GPK)	63.6	5,625.2	10.8	878.1	15.6	6,960.5	1.2	7.9	7.1
International Paper Company (NYSE:IP)	60.3	23,066.0	0.3	3,816.0	16.5	26,593.9	1.2	7.0	6.0
Mayr-Melnhof Karton AG (WBAG:MMK)	83.2	2,731.3	3.3	374.9	13.7	2,489.9	0.9	6.6	6.5
Mondi Limited (JSE:MND)	72.9	8,448.3	2.6	1,766.4	20.9	13,509.5	1.6	7.6	7.1
Nampak Limited (JSE:NPK)	77.4	1,225.2	0.0	179.9	14.7	1,082.3	0.9	6.0	6.3
Neenah, Inc. (NYSE:NP)	61.3	1,038.0	6.4	128.0	12.3	1,236.0	1.2	9.7	9.5
Packaging Corporation of America (NYSE:PKG)	63.6	6,952.4	6.3	1,463.7	21.1	10,033.1	1.4	6.9	6.8
P. H. Glatfelter Company (NYSE:GLT)	40.9	1,642.2	(0.9)	135.1	8.2	839.6	0.5	6.2	9.0
Sappi Limited (JSE:SAP)	77.2	5,806.0	2.5	740.0	12.7	4,600.2	0.8	6.2	5.5
Smurfit Kappa Group plc (ISE:SK3)	62.6	10,217.0	2.5	1,576.2	15.4	9,756.6	1.0	6.2	5.6
Stora Enso Oyj (HLSE:STERV)	55.1	12,066.9	0.8	1,960.0	16.2	11,957.1	1.0	6.1	5.6
Svenska Cellulosa Aktiebolaget SCA (publ) (OM:SCA B)	63.0	2,214.7	(44.3)	481.0	21.7	6,286.8	2.8	13.1	8.8
WestRock Company (NYSE:WRK)	52.8	16,285.1	13.5	2,829.6	17.4	15,329.4	0.9	5.4	4.5
Median	63.3%				15.5%		0.9x	6.2x	6.4x
Mean	64.8%				15.4%		1.1x	6.8x	6.2x
Metal and Glass									
Ball Corporation (NYSE:BLL)	90.2%	\$11,579.0	12.1%	\$1,894.0	16.4%	\$21,776.0	1.9x	11.5x	11.7x
Crown Holdings, Inc. (NYSE:CCK)	69.9	10,585.0	6.1	1,599.0	15.1	14,760.9	1.4	9.2	8.8
Owens-Illinois, Inc. (NYSE:OI)	73.0	6,954.0	4.3	988.0	14.2	8,065.0	1.2	8.2	6.0
Median	73.0%				15.1%		1.4x	9.2x	8.8x
Mean	77.7%				15.2%		1.5x	9.6x	8.8x

Footnote:

(1) Enterprise value equals market value of equity plus net debt.

Recent transactions^{1,2}

Target/acquiror	Sub-sector	Announce date	Close date	LTM revenue	LTM EBITDA margin	LTM value ⁽¹⁾	EBITDA revenue	Enterprise EBITDA	Last twelve months	
									EV/	EV/
Caraustar Industries, Inc. Greif Packaging LLC	Paper Packaging	Dec-18	Pending	1,376.0		174.0	7.9	1,800.0	1.3	10.3
Catawba, South Carolina Paper and Pulp Mill of Resolute Forest Products Inc. New-Indy Containerboard LLC	Paper Packaging	Oct-18	Dec-18	N/A		N/A	N/A	300.0	N/A	N/A
Plaskolite, LLC PPC Partners	Rigid Plastic	Nov-18	Dec-18	N/A		N/A	N/A	N/A	N/A	N/A
Pollock Investments Inc. Landsberg Orora	Rigid Packaging	Nov-18	Nov-18	260.0		9.3	28.0	82.5	0.3	8.9
Thermoforming Systems LLC Davis-Standard, LLC	Packaging Equipment	Nov-18	Nov-18	N/A		N/A	N/A	N/A	N/A	N/A
Best Label Company, Inc. Resource Label Group, LLC	Rigid Plastic	Nov-18	Nov-18	N/A		N/A	N/A	N/A	N/A	N/A
KapStone Paper and Packaging Corporation WestRock Company	Paper Packaging	Jan-18	Nov-18	3,315.7		404.1	8.2	5,035.9	1.5	12.5
Fabrika Hartije a.d./Avala Ada a.d., Beograd NA Smurfit Kappa Group plc	Paper Packaging	Oct-18	Nov-18	N/A		N/A	NA	150.5	NA	
Bleached Kraft Pulp Mill of CVG, Inc. ND Paper LLC	Paper Packaging	Oct-18	Oct-18	N/A		N/A	N/A	N/A	N/A	N/A
Expera Specialty Solutions, LLC Ahlstrom Munksjo Oyj	Paper Packaging	Jul-18	Oct-18	721.0		66.0	10.9	615.0	0.9	9.3
Englander dZignPak LLC Packaging Corporation of America	Corrugated Packaging	Oct-18	Oct-18	N/A		N/A	N/A	N/A	N/A	N/A
Manuli Stretch S.p.A. Credito Fondiario S.p.A.; Oxy Capital Italia	Protective Packaging	Oct-18	Oct-18	0.2		0.0	31.1	N/A	N/A	N/A
Transparent Container Co., Inc. Rohrer Corporation	Containers and Packaging	Oct-18	Oct-18	N/A		N/A	N/A	N/A	N/A	N/A
Substantially All The Assets Of The Foodservice Business Of Letica Corporation Graphic Packaging International, LLC	Foodservice Packaging	Aug-18	Oct-18	110.0		N/A	N/A	95.0	0.9	N/A

Footnote:

(1) Enterprise value equals market value of equity plus net debt.

Deloitte Corporate Finance dedicated Packaging team



Will Frame – Managing Director (Head of Paper, Plastics & Packaging)

Will Frame is the Americas leader for Deloitte Corporate Finance LLC (DCF). He also leads DCF's Industrial Products Group. Now based in Chicago, Will has worked professionally in the U.S., Europe, and Asia and specializes in leading complex cross-border M&A transactions.

Will has been a managing director with DCF in the US since October 2000. Prior to that he was an assistant director in the corporate finance division of Deloitte & Touche LLP in the United Kingdom.

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Bill Kerkam – Managing Director

Bill Kerkam is a managing director with Deloitte Corporate Finance LLC (DCF). Prior to joining DCF, Bill led and managed acquisition and divestiture activities for WestRock Company (NYSE: WRK) and MeadWestvaco (NYSE: MWV). His transaction experience in the packaging sector includes leading buy-side and sell-side assignments domestically and abroad, including Western and Eastern Europe, Asia and South America.

Previously, Bill worked for two nationally recognized investment banks focusing on sell-side advisory services to companies in the general manufacturing, services and distribution sectors.

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Select Recent DCF Packaging transactions

 <p>Austin Foam Plastics, Inc. has been acquired by  Sealed Air Corporation The undersigned acted as exclusive financial advisor to Austin Foam Plastics, Inc.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>ACH Foam Technologies has been acquired by  Atlas Roofing Corporation (a subsidiary of Hood Companies, Inc.) The undersigned acted as exclusive financial advisor to ACH Foam Technologies, Inc.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>Englander dZignPak LLC has been acquired by  PCA Packaging Corporation of America The undersigned acted as exclusive financial advisor to Englander dZignPak LLC</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>Macro Plastics, Inc. has been acquired by  IPL Inc. a subsidiary of  One Fifty One plc The undersigned acted as exclusive financial advisor to Macro Plastics, Inc.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>Plastic Packaging Inc. has been acquired by  Sonoco Products Co. The undersigned acted as exclusive financial advisor to Plastic Packaging Inc.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>IntegraColor Ltd. has been acquired by  Orora Limited The undersigned acted as exclusive financial advisor to IntegraColor Ltd.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>
 <p>AGI-Shorewood Group a portfolio company of ATLAS HOLDINGS Atlas Holdings LLC has divested its North American and Asian print and packaging business to  Multi Packaging Solutions The undersigned acted as exclusive financial advisor to AGI-Shorewood Group.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>El Dorado Paper Bag Mfg. Co., Inc. has been acquired by  Industrial Opportunity Partners, LLC The undersigned acted as exclusive financial advisor to El Dorado Paper Bag Mfg. Co., Inc.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>Greif, Inc. has sold its Multiwall Bag business to  Industrial Opportunity Partners, LLC The undersigned acted as exclusive financial advisor to Greif, Inc.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>MeadWestvaco Corporation has sold its European Beauty and Personal Care Folding Carton Operation to  AGI-Shorewood Group The undersigned acted as exclusive financial advisor to MeadWestvaco Corporation.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	 <p>MeadWestvaco Corporation has sold its European Tobacco and General Packaging Folding Carton Operation to  AR Packaging Group AB The undersigned acted as exclusive financial advisor to MeadWestvaco Corporation.</p> <p>Deloitte. Deloitte Corporate Finance LLC</p>	

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Deloitte Corporate Finance LLC (DCF)

DCF provides deal execution and lead financial advisory services to large corporate, middle market, private equity and venture capital firms. DCF and its affiliates maintain a presence in key US financial centers.

For additional information or to find out more about how DCF can assist the deal initiation and execution process, please contact one of our DCF managing directors:

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