Anti-counterfeit packaging market

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 corrugated packaging market

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 blow-molded plastics market

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 contract packaging market

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 it’s 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.

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Macroeconomic outlook

**US gross domestic product**

- **GDP ($ in trillions)**
- **YoY percent growth (Adj. for inflation)**

**US Treasury yield curve**

- **Real yield (%)**
- **Nominal yield (%)**

**US unemployment rate**

- **Initial jobless claims**
- **Unemployment rate (%)**

**ISM non-manufacturing index and consumer confidence index**

- **ISM Non-manufacturing**
- **Consumer Confidence**

Raw material pricing

**Plastic resin price index**

- **Jan 2014 = 100**

- **PP**
- **PET**
- **PS**
- **HDPE**

**Pulp, paper & allied products price index by commodity**

- **Wood Pulp**
- **Paperboard**
- **Recycled Paperboard**
- **Corrugated Containers**

*An ISM Non-manufacturing Index value above 50 signals economic expansion.*
## Packaging sector breakdown and trading statistics

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of companies</th>
<th>% of 52 Week high</th>
<th>Median revenue CAGR (3 Yr)</th>
<th>Median LTM EBITDA</th>
<th>Median EBITDA margin</th>
<th>Median Enterprise value ($M)</th>
<th>EV/Revenue</th>
<th>EV/EBITDA</th>
<th>EV/EBITDA</th>
<th>NTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic</td>
<td>8</td>
<td>75.6%</td>
<td>6.8%</td>
<td>$762.6</td>
<td>15.3%</td>
<td>$6,450.6</td>
<td>1.5x</td>
<td>10.1x</td>
<td>9.8x</td>
<td></td>
</tr>
<tr>
<td>Diversified Packaging</td>
<td>7</td>
<td>71.6%</td>
<td>4.4%</td>
<td>615.8</td>
<td>13.2%</td>
<td>5,361.1</td>
<td>1.2x</td>
<td>8.9</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>Paper and Paperboard</td>
<td>18</td>
<td>63.3%</td>
<td>2.5</td>
<td>680.0</td>
<td>15.5%</td>
<td>5,443.5</td>
<td>0.9x</td>
<td>6.2</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>Metal and Glass</td>
<td>3</td>
<td>73.0%</td>
<td>6.1%</td>
<td>1,599.0</td>
<td>15.1%</td>
<td>14,760.9</td>
<td>1.4x</td>
<td>9.2</td>
<td>8.8</td>
<td></td>
</tr>
</tbody>
</table>

Packaging index         36  72.3%  5.2%  $721.3  15.2%  $5,947.1  1.3x  9.1  x  8.8x

## Public comparables four-year stock market performance

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

---

## Select Packaging M&A transactions

<table>
<thead>
<tr>
<th>Date</th>
<th>Target/acquiror</th>
<th>Business description</th>
<th>Enterprise value (EV)</th>
<th>EV/EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td><strong>Caraustar Industries, Inc.</strong>&lt;br&gt;Greif Packaging LLC</td>
<td>Caraustar I 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.</td>
<td>$1,800.0</td>
<td>10.3 x</td>
</tr>
<tr>
<td>Dec-18</td>
<td><strong>Plaskolite, LLC</strong>&lt;br&gt;PPC Partners</td>
<td>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.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Nov-18</td>
<td><strong>Best Label Company, Inc.</strong>&lt;br&gt;Resource Label Group, LLC</td>
<td>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.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Nov-18</td>
<td><strong>KapstonePaper and Packaging Corporation</strong>&lt;br&gt;WestRock Company</td>
<td>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.</td>
<td>5,035.9</td>
<td>12.5</td>
</tr>
<tr>
<td>Oct-18</td>
<td><strong>Englander dZignPak LLC</strong>&lt;br&gt;Packaging Corporation of America</td>
<td>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.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## Annual Packaging M&A transaction volume

![Annual Packaging M&A transaction volume graph](https://example.com/graph.png)

- **Undisclosed**
- **Disclosed**

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>177</td>
<td>53</td>
<td>160</td>
<td>171</td>
<td>174</td>
<td>59</td>
<td>148</td>
<td>151</td>
<td>162</td>
<td>107</td>
<td>31</td>
<td>13</td>
</tr>
</tbody>
</table>

[1] Q4 2018 | Packaging

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# Public comparables analysis

<table>
<thead>
<tr>
<th>(in millions)</th>
<th>% of 52 week high</th>
<th>LTM revenue</th>
<th>Revenue CAGR (3 Yr)</th>
<th>LTM EBITDA</th>
<th>EBITDA margin (&quot;EV&quot;)</th>
<th>Enterprise value (&quot;EV&quot;)</th>
<th>EV/Revenue EBITDA EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amcor Limited (ASX:AMC)</td>
<td>86.0%</td>
<td>$9,319.1</td>
<td>(1.0)%</td>
<td>$1,306.5</td>
<td>14.3%</td>
<td>$14,540.6</td>
<td>1.6x 10.9x 9.9x</td>
</tr>
<tr>
<td>Avery Dennison Corporation (NYSE:AVY)</td>
<td>72.6</td>
<td>7,125.6</td>
<td>5.2</td>
<td>928.4</td>
<td>13.0</td>
<td>9,413.2</td>
<td>1.3 10.1 9.7</td>
</tr>
<tr>
<td>Berry Global Group, Inc. (NYSE:BERRY)</td>
<td>77.0</td>
<td>7,869.0</td>
<td>17.3</td>
<td>1,339.0</td>
<td>17.0</td>
<td>11,704.4</td>
<td>1.5 8.7 8.1</td>
</tr>
<tr>
<td>Brady Corporation (NYSE:BRC)</td>
<td>91.8</td>
<td>1,176.9</td>
<td>0.9</td>
<td>182.7</td>
<td>15.5</td>
<td>2,142.8</td>
<td>1.8 11.7 11.5</td>
</tr>
<tr>
<td>CCL Industries Inc. (TSX:CCL)</td>
<td>73.4</td>
<td>3,916.9</td>
<td>20.7</td>
<td>762.2</td>
<td>19.5</td>
<td>7,967.4</td>
<td>2.0 10.5 10.5</td>
</tr>
<tr>
<td>Intertape Polymer Group Inc. (TSX:ITP)</td>
<td>74.1</td>
<td>1,002.8</td>
<td>8.4</td>
<td>124.6</td>
<td>12.4</td>
<td>1,208.8</td>
<td>1.2 9.7 8.2</td>
</tr>
<tr>
<td>RPC Group Plc (LSE:RPC)</td>
<td>74.8</td>
<td>5,048.3</td>
<td>39.2</td>
<td>762.0</td>
<td>15.1</td>
<td>4,903.9</td>
<td>1.0 6.4 6.5</td>
</tr>
<tr>
<td>Wipro Ltd. (TSX:WSKP)</td>
<td>94.0</td>
<td>889.8</td>
<td>3.7</td>
<td>197.7</td>
<td>22.2</td>
<td>1,993.8</td>
<td>2.2 10.1 10.1</td>
</tr>
</tbody>
</table>

**Diversity (Packaging)**
- Median: 76.6% 15.3% 1.5x 10.1x 9.8x
- Mean: 80.4% 16.1% 1.6x 9.8x 9.3x

**Diversified Packaging**
- Median: 71.6% 13.0% 1.1x 9.1x 9.1x
- Mean: 66.7% 13.3% 1.2x 8.7x 8.4x

**Paper and Pulp Board**
- 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**
- Median: 73.0% 15.1% 1.4x 9.2x 8.6x
- Mean: 77.7% 15.2% 1.5x 9.6x 8.8x

---

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

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<table>
<thead>
<tr>
<th>Target/acquirer</th>
<th>Sub-sector</th>
<th>Announce date</th>
<th>Close date</th>
<th>LTM revenue</th>
<th>LTM EBITDA</th>
<th>Enterprise value</th>
<th>Enterprise EBITDA</th>
<th>EV/</th>
<th>EV/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carusar Industries, Inc.</td>
<td>Paper Packaging</td>
<td>Dec-18</td>
<td>Pending</td>
<td>1,376.0</td>
<td>174.0</td>
<td>7.9</td>
<td>1,800.0</td>
<td>1.3</td>
<td>10.3</td>
</tr>
<tr>
<td>Sept-Ivy Containerboard LLC</td>
<td>Paper Packaging</td>
<td>Oct-18</td>
<td>Dec-18</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>300.0</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pollock Investments Inc.</td>
<td>Rigid Plastic</td>
<td>Nov-18</td>
<td>Dec-18</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Thermoforming Systems LLC</td>
<td>Packaging Equipment</td>
<td>Nov-18</td>
<td>Nov-18</td>
<td>260.0</td>
<td>9.3</td>
<td>28.0</td>
<td>82.5</td>
<td>0.3</td>
<td>8.9</td>
</tr>
<tr>
<td>Best Label Company, Inc.</td>
<td>Rigid Plastic</td>
<td>Nov-18</td>
<td>Nov-18</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>KapStone Paper and Packaging Corporation</td>
<td>Paper Packaging</td>
<td>Jan-18</td>
<td>Nov-18</td>
<td>3,315.7</td>
<td>404.1</td>
<td>8.2</td>
<td>5,035.9</td>
<td>1.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Fabrika Hartije a.d./Avala Ada a.d., Beograd</td>
<td>Paper Packaging</td>
<td>Oct-18</td>
<td>Nov-18</td>
<td>N/A</td>
<td>N/A</td>
<td>NA</td>
<td>150.5</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Bleached Kraft Pulp Mill of CVG, Inc.</td>
<td>Paper Packaging</td>
<td>Oct-18</td>
<td>Oct-18</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Expera Specialty Solutions, LLC</td>
<td>Paper Packaging</td>
<td>Jul-18</td>
<td>Oct-18</td>
<td>721.0</td>
<td>66.0</td>
<td>10.9</td>
<td>615.0</td>
<td>0.9</td>
<td>9.3</td>
</tr>
<tr>
<td>Englander dZignPak LLC</td>
<td>Corrugated Packaging</td>
<td>Oct-18</td>
<td>Oct-18</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Manuli Stretch S.p.A.</td>
<td>Protective Packaging</td>
<td>Oct-18</td>
<td>Oct-18</td>
<td>0.2</td>
<td>0.0</td>
<td>31.1</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Transparent Container Co., Inc.</td>
<td>Containers and Packaging</td>
<td>Oct-18</td>
<td>Oct-18</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Substantially All The Assets Of The Foodservice Business Of Letica Corporation</td>
<td>Foodservice Packaging</td>
<td>Aug-18</td>
<td>Oct-18</td>
<td>110.0</td>
<td>N/A</td>
<td>N/A</td>
<td>95.0</td>
<td>0.9</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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

- Austin Foam Plastics, Inc. has been acquired by Sealed Air Corporation
- ACH Foam Technologies has been acquired by APG
- Atlas Roofing Corporation (a subsidiary of Hood Companies, Inc.) has been acquired by ACH Foam Technologies
- Englander has been acquired by Packaging Corporation of America
- IPA (a subsidiary of JPL Inc.) has been acquired by One Fifty One plc
- Macro Plastics, Inc. has been acquired by Sonoco Products Co.
- Plastic Packaging Inc. has been acquired by Orora
- IntegraColor Ltd. has been acquired by Orora
- AGI-Shorewood Group has sold its European Beauty and Personal Care Folding Carton Operations to ASG
- Greif, Inc. has sold its Multiwall Bag business to AGI-Shorewood Group
- Multi Packaging Solutions has been acquired by IntegraColor
- Industrial Opportunity Partners, LLC has been acquired by IntegraColor
- Industrial Opportunity Partners, LLC has been acquired by IntegraColor
- MeadWestvaco Corporation has sold its European Beauty and Personal Care Folding Carton Operations to ASG
- MeadWestvaco Corporation has sold its European Tobacco and General Packaging Folding Carton Operations to ASG
Sources cited

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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.

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