## Table of Contents

<table>
<thead>
<tr>
<th>Investment Thesis</th>
<th>Competitive Landscape</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Overview &amp; History</td>
<td>SWOT Analysis</td>
</tr>
<tr>
<td>Leadership</td>
<td>Technical Analysis</td>
</tr>
<tr>
<td>Strategy</td>
<td>Valuation/Models</td>
</tr>
<tr>
<td>Segments &amp; Supply Chain</td>
<td>Recommendation</td>
</tr>
</tbody>
</table>
Ball Corporation
Investment Thesis

- Positioned for Growth in Domestic and Global Markets
- Shifting Consumer Preference to Aluminium Packaging
- Focused on Expanding the Aerospace Segment
- Determined to Continue Innovation into Sustainable Products
Ball Corporation
Company Overview

Aerospace
- Provider of national defense hardware and civil and operational space hardware in the U.S.

Beverage Packaging N.A.
- Provides aluminium packaging for Canada, Mexico, and the United States

Beverage Packaging E.U.
- Includes 20 facilities throughout Europe including Russia
- Expanded by Rexam Acquisition

Beverage Packaging S.A.
- Provides South America with aerosol & beverage packaging with S.A. distribution and packaging centers

Aerosol & Beverage Packaging AMEA
- Provides the Middle East, India, and Asia with aerosol & beverage packaging excluding China
- Covers all Aerosol
Ball Corporation
Company History

Founded in 1880 by the Ball Brothers
Listed on the NYSE in 1973

Ball Corporation Timeline

2009
Ball becomes largest supplier of can beverages

2011
Ball acquires Aerocan

2015
Ball acquires two Sonoco plants

2016
Ball acquires Rexam PLC
Ball Corporation
Leadership

John A Hayes
- Chairman, President & CEO

Scott C Morrison
- SVP, CFO

Daniel W Fisher
- SVP, COO, Bev. Packaging

Robert E Strain
- SVP, President Aerospace
**We Know Who We Are**
- Uncompromising Integrity
- Being Close to Our Customer
- Behaving Like Owner
- Focusing on Attention to Details

**We Know Where We Are Going**
- Maximizing value
- Expanding products and capabilities
- Aligning Ourselves
- Broadening our geographic reach
- Leveraging our know-how

**We Know What is Important**
- Customer Focus
- Operational Excellence
- Innovation and Business Development
- People and Culture
- Sustainability
Ball Corporation
Company Segments

Beverage Packaging North America

- Beverage Packaging N.A. accounts for 39.8% of net sales
- 24 manufacturing plants
  - 30% Specialty
  - 70% Standard
- Capability to make over 32 can sizes
- New Goodyear, Arizona plant in 2018
Beverage Packaging Europe

- Accounts for 22.5% of net sales
- 20 Manufacturing plants
  - Product Mix
    - 38% Specialty
    - 62% Standard
- Capability to produce 16 sizes in Europe and 7 in Russia
Ball Corporation
Company Segment

- Accounting for 14.6% of net sales
- 13 Manufacturing plants
  - Product Mix
    - 48% Specialty
    - 52% Standard
- Capability to produce 7 can sizes

Beverage Packaging South America
Aerospace

- 7 Aerospace locations focusing on projects for the U.S. government
  - Evolved into a systems provider, along with its role as a secondary parts supplier
  - Aerospace Segment accounting for 10.3% of net sales
- Sales growth 20.7% in 2018 and in 20.1% in the previous year.
Ball Corporation
Revenue Breakdown

- Food & Aerosol Packaging
- Other
- Beverage Packaging S.A.
- Aerospace
- Beverage Packaging Europe
- Beverage Packaging N.A.
Ball Corporation
Supply Chain Breakdown

Suppliers

Customers
Ball Corporation
Competitive Landscape

- Designs, manufactures, and sells packaging products for consumer goods through international plants.
  - Headquartered in Philadelphia, PA

Ball Corporation
- Manufacture consumer goods packaging products that markets its products in North America.
  - Headquartered in Stamford, CT

Berry Corporation
- Manufactures plastic products and containers for customers worldwide.
  - Headquartered in Evansville, IN.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Current Price</th>
<th>Market Cap (MM)</th>
<th>P/E</th>
<th>DSO</th>
<th>Div. Yield</th>
<th>Debt/Equity</th>
<th>Leverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLL</td>
<td>$71.66</td>
<td>$23,445.5</td>
<td>36.40</td>
<td>44.29</td>
<td>0.84%</td>
<td>194.6</td>
<td>4.89</td>
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<tr>
<td>CCK</td>
<td>$75.67</td>
<td>$10,256.7</td>
<td>20.05</td>
<td>44.96</td>
<td>N/A</td>
<td>927.6</td>
<td>10.61</td>
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<tr>
<td>SLGN</td>
<td>$31.725</td>
<td>$3,514.1</td>
<td>14.76</td>
<td>62.07</td>
<td>1.39%</td>
<td>261.5</td>
<td>5.37</td>
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<tr>
<td>BERY</td>
<td>$46.04</td>
<td>$6,095.4</td>
<td>18.30</td>
<td>50.57</td>
<td>N/A</td>
<td>702.4</td>
<td>8.00</td>
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</table>
# Ball Corporation

**SWOT Analysis**

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>● Good market share in all areas &amp; low cost producer</td>
<td>● Choppy aerospace segment</td>
</tr>
<tr>
<td>● Excellent free cash flow conversion</td>
<td>● High inventory turnover</td>
</tr>
<tr>
<td>● Defensive product portfolio outperforms during recessions</td>
<td>● Limited (but growing) EM exposure</td>
</tr>
<tr>
<td>● Revenue diversification by being involved in different segments</td>
<td>● NA beverage is flat volume market in longer-run</td>
</tr>
<tr>
<td>● Successful track record with mergers and acquisitions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>● Acceleration in share repurchase</td>
<td>● Consolidation of customers</td>
</tr>
<tr>
<td>● Redeployment of proceeds from divested Chinese beverage can operations</td>
<td>● Volume growth in Europe and Brazil</td>
</tr>
<tr>
<td>● Aluminum aerosol business is a solid platform for global expansion</td>
<td>● Sustained growth trajectory in aerospace segment</td>
</tr>
<tr>
<td>● Sustainable initiatives drive organic growth volume</td>
<td>● Ability to find return oriented projects</td>
</tr>
<tr>
<td></td>
<td>● Exposure to aluminium prices and currency risk</td>
</tr>
</tbody>
</table>
### Valuation Overview

#### School of Business

#### Investment Program

#### Ball Corporation

**Enterprise Value**

<table>
<thead>
<tr>
<th>Multiplier</th>
<th>8.0x</th>
<th>8.5x</th>
<th>9.0x</th>
<th>9.5x</th>
<th>10.0x</th>
</tr>
</thead>
<tbody>
<tr>
<td>WACC</td>
<td>5.8%</td>
<td>6.3%</td>
<td>6.8%</td>
<td>7.3%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Exit Value</td>
<td>5.8%</td>
<td>6.3%</td>
<td>6.8%</td>
<td>7.3%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

**Implied Equity Value and Share Price**

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tbody>
<tr>
<td>Terminal Value</td>
<td>$18,365.5</td>
<td>$6,729.0</td>
<td>0.0</td>
<td>104.0</td>
<td>721.0</td>
<td>$11,636.5</td>
<td>$79.74</td>
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<tr>
<td>Present Value of Terminal Value</td>
<td>$13,693.8</td>
<td>74.6%</td>
<td></td>
<td></td>
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</tbody>
</table>

**Terminal Value**

- Terminal Year EBITDA (2023E) and (2019) = $2,109.3
- Exit Multiple = 9.0x
- Discount Factor = 0.72
- Implied Perpetuity Growth Rate = 0.5%

**Implied EBITDA**

- Enterprise Value = $18,365.5
- LTM 800/200 EBITDA = 1,440.0
- Upside = 9.0x Implied EBITDA = 12.7x

**Year Assumptions**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Sales (% Growth)</td>
<td>NA</td>
<td>13.3%</td>
<td>21.2%</td>
<td>5.9%</td>
<td>-%</td>
<td>4.2%</td>
<td>3.5%</td>
<td>3.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>EBITDA / Sales (%)</td>
<td>80.5%</td>
<td>80.5%</td>
<td>79.4%</td>
<td>80.2%</td>
<td>79.0%</td>
<td>80.0%</td>
<td>80.0%</td>
<td>80.0%</td>
<td>80.0%</td>
</tr>
<tr>
<td>SG&amp;A (%)</td>
<td>5.0%</td>
<td>4.4%</td>
<td>4.7%</td>
<td>4.1%</td>
<td>4.5%</td>
<td>4.3%</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Depreciation &amp; Amortization (% sales)</td>
<td>3.6%</td>
<td>5.0%</td>
<td>6.6%</td>
<td>6.0%</td>
<td>6.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Capital Expenditures (% sales)</td>
<td>6.8%</td>
<td>8.7%</td>
<td>5.1%</td>
<td>7.8%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
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<tr>
<td>Tax Rate</td>
<td>25.2%</td>
<td>24.7%</td>
<td>22.4%</td>
<td>19.2%</td>
<td>22.5%</td>
<td>22.5%</td>
<td>22.5%</td>
<td>22.5%</td>
<td>22.5%</td>
</tr>
<tr>
<td>Working Capital (% sales)</td>
<td>1.3%</td>
<td>3.4%</td>
<td>(3.1%)</td>
<td>(5.5%)</td>
<td>(9.8%)</td>
<td>(9.3%)</td>
<td>(7.7%)</td>
<td>(6.9%)</td>
<td>(6.9%)</td>
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Sensitivity Analysis

<table>
<thead>
<tr>
<th>WACC</th>
<th>Exit Multiple</th>
<th>6.0x</th>
<th>6.5x</th>
<th>9.0x</th>
<th>9.5x</th>
<th>10.0x</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.8%</td>
<td>17,530</td>
<td>18,327</td>
<td>19,125</td>
<td>19,922</td>
<td>20,720</td>
<td></td>
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<tr>
<td>6.3%</td>
<td>17,182</td>
<td>17,951</td>
<td>18,740</td>
<td>19,519</td>
<td>20,297</td>
<td></td>
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<tr>
<td>6.8%</td>
<td>15,944</td>
<td>17,504</td>
<td><strong>18,385</strong></td>
<td>19,126</td>
<td>19,867</td>
<td></td>
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<tr>
<td>7.3%</td>
<td>16,514</td>
<td>17,267</td>
<td>18,001</td>
<td>18,744</td>
<td>19,387</td>
<td></td>
</tr>
<tr>
<td>7.8%</td>
<td>15,193</td>
<td>15,919</td>
<td>17,546</td>
<td>18,372</td>
<td>19,098</td>
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</table>

<table>
<thead>
<tr>
<th>WACC</th>
<th>Exit Multiple</th>
<th>6.0x</th>
<th>6.5x</th>
<th>9.0x</th>
<th>9.5x</th>
<th>10.0x</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.8%</td>
<td>76.7</td>
<td>79.1</td>
<td>81.6</td>
<td>84.0</td>
<td>86.4</td>
<td></td>
</tr>
<tr>
<td>6.3%</td>
<td>75.6</td>
<td>78.0</td>
<td><strong>80.4</strong></td>
<td>82.8</td>
<td>85.1</td>
<td></td>
</tr>
<tr>
<td>6.8%</td>
<td>74.6</td>
<td>76.9</td>
<td><strong>78.2</strong></td>
<td>81.6</td>
<td>83.9</td>
<td></td>
</tr>
<tr>
<td>7.3%</td>
<td>73.6</td>
<td>75.9</td>
<td>78.1</td>
<td>80.4</td>
<td>82.7</td>
<td></td>
</tr>
<tr>
<td>7.8%</td>
<td>72.6</td>
<td>74.8</td>
<td>77.0</td>
<td>79.3</td>
<td>81.5</td>
<td></td>
</tr>
</tbody>
</table>

Analyst Recommendations

- Consensus Rating: ▼ 3.93
- Buys: 53.3% (8)
- Holds: 40.0% (6)
- Sells: 6.7% (1)

12M Tgt Px: 14/17
Last Price: 74.07
Pricing Currency: USD
Return Potential: 3.0%
LTM Return: 42.6%
Ball Corporation
Portfolio Var

Monte Carlo Simulation

**Base Case**
12.13% Return
- Mean Price: $82.27
- Median Price: $80.71

**Bull Case**
19.32% Return
- Mean Price: $87.85
- Median Price: $85.91
We propose buying 103 shares for roughly $72.68/share
Thank You!
Appendix
Ball Corporation
Company Segment

Aerosol & Beverage Packaging AMEA

- Accounts for 14.6% of net sales
- 6 Manufacturing plants
  - Including beverage packaging and Aerosol operations
- Capabilities to produce 9 can sizes
Ball Corporation
Geographical Analysis

Strong uptrend from all geographical segments with a larger, growing foreign presence

Years with lower revenue growth mainly caused by M&A activity
Appendix
The acquisition of Rexam should strengthen Ball's narrow economic moat and improve its bargaining power with global customers. Company employees own about 10% of Ball shares, and most employees are motivated by economic value-added metrics, which will help the company focus on increasing shareholder value. Ball's acquisition of Rexam could create enormous value for shareholders if it's able to achieve or exceed synergy targets.