World Corrugated Boxes

Industry Study with Forecasts for 2017 & 2022

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Global demand to rise 4.2% annually through 2017

World demand for corrugated boxes is forecast to increase 4.2 percent per year to 234 billion square meters in 2017, slightly outpacing real (inflation-adjusted) gains in GDP. Growth factors include rising industrial activity, particularly in the manufacturing sector, which often requires corrugated packaging to protect and transport goods. In addition, ongoing developments in small flute and high-quality graphic board will allow corrugated boxes to penetrate traditional folding carton applications, especially in the developed world. Greater interest in corrugated packaging as a point-of-sale display in retail applications will also boost demand for value-added boxes.

Asia/Pacific, Africa/Mideast regions to lead gains

The fastest increases in demand for corrugated boxes will occur in developing regions; the Asia/Pacific region and the Africa/Mideast region will both outpace the global average. India and China will see the fastest gains as a result of strong growth in industrial output and consumer product markets. China, which surpassed the US as the world’s largest corrugated box market in 2011, will account for almost half of the increase in global demand over the forecast period. Advances will be supported by greater urbanization and industrialization, expanding international trade and rising consumer income levels.

Recycled board to continue supplanting virgin kraft

Global containerboard demand growth will trail that of box production due to trends toward the use of higher-performance, lighter containerboard. In addition, recycled board will continue to capture market share at the expense of virgin kraft and semichemical corrugated medium (fluting) through 2017. Advances for recycled board will be bolstered by consumer, industry, and regulatory pressures for environmentally friendly products and practices; rising virgin board prices; and rapid demand growth in Asia and the Africa/Mideast region, which are heavily reliant on recycled liner and fluting.

Nonfood nondurables to be fastest growing market

Food and beverages will remain the leading market for corrugated boxes in 2017, accounting for 43 percent of global demand. Advances will benefit from the increased use of corrugated boxes in the production of both fresh and processed food and beverages, particularly in the developing countries of the world. However, more rapid growth in demand is forecast for nonfood nondurables and other corrugated box markets, driven by an acceleration in global manufacturing activity and the rise of Internet-based shopping.

Gains will be driven by growth in manufacturing goods packaging, and by improvements in small flute and high-quality graphic board that will penetrate traditional folding carton applications.
Asia/Pacific

China: Corrugated Box Trends

Demand for corrugated boxes in China totaled 44.8 billion square meters in 2012, accounting for over one-half of regional consumption and nearly one-quarter of the world market. Through the forecast period, demand is expected to register annual advances of 7.8 percent to 65.3 billion square meters in 2017. This represents a deceleration from the double-digit annual increases seen over the 2007-2012 period, but it is still among the fastest growth rates in the world. Demand is supported by a robust economy, rapidly developing consumer product markets, and improvements in product quality as the Chinese government and offshore-based multinationals invest in modern production equipment.

In addition, China engages heavily in foreign trade, which benefits many types of packaging materials, including corrugated boxes. The country’s rapidly developing e-commerce market, already the largest in the world, is anticipated to continue to grow in popularity, offering the potential for further box growth based on the web-based shopping industry. However, competition from plastic packaging will limit gains to some degree.

China was the world’s largest manufacturer of corrugated boxes in 2012, producing 45.3 billion square meters. This represents 51 percent of the regional total. China will continue to benefit from significant investment in efficienct production lines and improve the quality of domestic output. Large vertically integrated firms are becoming more dominant, although medium and small independent firms represent almost 50 percent of corrugated box shipments. Through 2017, China’s corrugated box shipments are forecast to rise at an annual rate of 7.8 percent, slowing from the 2007-2012 pace but well above the Asia/Pacific (and global) average.

Table IV-6

WORLD NONFOOD NONDURABLES CORRUGATED BOX DEMAND
(billion square meters)

<table>
<thead>
<tr>
<th>Item</th>
<th>2002</th>
<th>2007</th>
<th>2012</th>
<th>2017</th>
<th>2022</th>
</tr>
</thead>
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<tr>
<td>World PCE (bil 2011$) sq meters/000$ PCE</td>
<td>340</td>
<td>417</td>
<td>473</td>
<td>568</td>
<td>689</td>
</tr>
<tr>
<td>World Nonfood Nondurables Boxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North America:</td>
<td></td>
<td></td>
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<td>Canada &amp; Mexico</td>
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<td>Western Europe</td>
<td>9.6</td>
<td>10.2</td>
<td>9.9</td>
<td>10.6</td>
<td>11.5</td>
</tr>
<tr>
<td>Asia/Pacific:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>5.2</td>
<td>8.9</td>
<td>14.8</td>
<td>21.8</td>
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<td>Japan</td>
<td>3.8</td>
<td>3.9</td>
<td>3.9</td>
<td>4.0</td>
<td>4.2</td>
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<td>Other Asia/Pacific</td>
<td>5.8</td>
<td>8.1</td>
<td>10.3</td>
<td>13.5</td>
<td>17.7</td>
</tr>
<tr>
<td>Other E. Europe</td>
<td>2.2</td>
<td>2.8</td>
<td>3.5</td>
<td>4.2</td>
<td>5.1</td>
</tr>
<tr>
<td>% nonfood nondurables</td>
<td>32.5</td>
<td>31.3</td>
<td>31.5</td>
<td>31.8</td>
<td>32.2</td>
</tr>
</tbody>
</table>

World Corrugated Box Demand

Chart IX-1

WORLD CORRUGATED BOX MARKET SHARE
(191 billion square meters, 2012)
Carter Holt Harvey Limited
173 Captain Springs Road
Te Papapa, Auckland 1142
New Zealand
64-9-633-0600
http://www.chh.com

Annual Sales: US$2.6 billion (estimated)
Employment: 8,300 (estimated)
Key Products: containerboard and corrugated boxes

Carter Holt Harvey (CHH) is a diversified firm involved in the forestry, wood products, pulp and paper, and packaging industries. The privately held company is a wholly owned subsidiary of Rank Group Investments Limited (New Zealand), a private equity firm. CHH operates through three divisions: Pulp and Paper, Packaging, and Building Supplies.

The Company participates in the world corrugated box industry through the Pulp and Paper division and the Packaging division. The Pulp and Paper division produces a range of kraft and recycled containerboard for conversion into industrial packaging, as well as pulp and chemical byproducts. Containerboard products from the division, which are marketed under the CHH FUSION brand name, include HIGOLD unbleached kraft liner, GRAPHIX white top kraft liner, ECOKRAFT dual kraft and recycled liner, ECOFLEX recycled corrugating medium, and CLIMATE semi chemical medium designed for use in high humidity, cool store environments.

Containerboard products are manufactured by the Pulp and Paper division at mills in Tasman, Kinleith, and Penrose, New Zealand.

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World Food Containers
World demand for food containers is forecast to rise 4.5 percent annually to $139 billion in 2017. While the US remains by far the world’s largest user of food containers, the most significant growth will occur in India and China. Bags and pouches will remain the largest category based on their light weight, portability and convenience. This study analyzes the $111.4 billion world food container industry, with forecasts for 2017 and 2022 by product, market, world region, and for 22 countries. The study also evaluates company market share and profiles industry players.

Foodservice Disposables
US demand for foodservice disposables is forecast to climb 3.6 percent per year to $19.7 billion in 2017. Packaging products such as containers and lids and domes will achieve the fastest gains and will remain the largest category. Eating and drinking places will remain the dominant market while the retail and vending segment will grow the fastest. This study analyzes the $16.5 billion US foodservice disposables industry, with forecasts for 2017 and 2022 by product and market. The study also evaluates company market share and profiles industry players.

Meat, Poultry & Seafood Packaging
Demand for meat, poultry, and seafood packaging is forecast to increase 3.2 percent annually to $9.7 billion in 2017. Flexible packaging will outpace rigid, based on solid prospects for pouches and high barrier film. Poultry will be the fastest growing packaging application based on poultry’s low cost and good nutritional profile. This study analyzes the $8.2 billion US meat packaging industry, with forecasts for 2017 and 2022 by technology, product, application, and market. The study also evaluates company market share and profiles industry players.

Food Containers: Rigid & Flexible
US food container demand will rise 2.9 percent per year to $27.6 billion in 2017. The plastic container, and bag and pouch segments will grow the fastest based on further inroads into paperboard, metal, and glass containers. The best market prospects include snack foods, sauces and condiments, dairy products, and meat and related products. This study analyzes the $24 billion US rigid and flexible food container industry, with forecasts for 2017 and 2022 by type and market. The study also evaluates company market share and profiles industry players.

Rigid Bulk Packaging
US demand for rigid bulk packaging will rise 3.9 percent yearly to $7.0 billion in 2017, led by RIBCs and material handling containers. Chemicals and pharmaceuticals, and plastic, rubber and fiber markets will drive gains in the dominant nondurables segment. Among container materials, plastic will grow the fastest. This study analyzes the $5.7 billion US rigid bulk packaging industry, with forecasts for 2017 and 2022 by material, product and market. The study also considers market environment factors, evaluates company market share and profiles industry players.

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