Paper versus Plastic in Packaging

US Industry Study with Forecasts for 2014 & 2019

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### Table of Contents

#### EXECUTIVE SUMMARY

#### MARKET ENVIRONMENT

- General .................................................. 4
- Macroeconomic Outlook ............................. 5
- Demographic & Household Trends ............... 9
- Consumer Income & Spending ........................ 11
- Retail Sales ............................................... 13
- Manufacturing Outlook ......................... 16
- Nondurable Goods ........................................ 19
- Food Industry Outlook ............................... 22
- Beverage Outlook ........................................ 22
- Chemicals & Other Nondurables .................. 25
- Durable Goods ........................................... 27
- Historical Market Trends ............................. 28
- Raw Material Pricing Trends ......................... 31
- Paper & Paperboard ....................................... 32
- Plastic .................................................... 34
- Environmental & Regulatory Considerations .... 36
- Recycling Trends ........................................ 39

#### PACKAGING OVERVIEW

- Competitive Packaging Variables ................. 42
- Performance ............................................ 45
- Pricing ................................................... 46
- Aesthetics & Marketing Value ....................... 46
- Packaging Types ......................................... 47
- Rigid Containers ......................................... 49
- Folding & Other Cartons ............................. 53
- Protective Packaging .................................. 54
- Bottles .................................................... 55
- Tubs & Cups ............................................... 57
- Trays ....................................................... 57
- Drums ...................................................... 58
- Other Rigid Containers ................................ 59
- Flexible Packaging ...................................... 60
- Bags & Wraps ............................................ 63
- Retail Bags & Sacks ..................................... 64
- Protective Packaging .................................... 65
- Shipping Sacks .......................................... 66
- Pouches .................................................. 67
- Packaging Materials ..................................... 69
- Competitive Growth ..................................... 71
- Paper Packaging ......................................... 77
- Plastic Packaging ......................................... 82

#### COMPETITIVE PRODUCT PACKAGING

- General .................................................... 88
- Meat, Poultry & Seafood ............................. 90
- Flexible Packaging ..................................... 93
- Trays ....................................................... 94
- Rigid Containers ......................................... 96
- Paper ....................................................... 98
- Milk ....................................................... 101
- Plastic ..................................................... 104
- Paperboard ............................................... 108
- Dairy Products ........................................... 110
- Rigid Containers ......................................... 113
- Flexible Packaging ...................................... 116
- Pouches .................................................. 117
- Paper ....................................................... 119
- Fruit Beverages ........................................... 121
- Plastic ..................................................... 124
- Bottles .................................................... 126
- Pouches & Cans .......................................... 128
- Paper ....................................................... 129
- Laundry Detergents .................................... 131
- Plastic ..................................................... 133
- Paperboard ............................................... 135
- Baked Goods ............................................. 136
- Plastic ..................................................... 138
- Flexible Packaging ...................................... 139
- Rigid Containers ......................................... 141
- Paper ....................................................... 142
- Egg Cartons ............................................... 143
- Plastic ..................................................... 144
- Molded Pulp ............................................... 146
- Candy & Confections ..................................... 148
- Paper ....................................................... 151
- Plastic ..................................................... 154
- Flexible Packaging ...................................... 154
- Rigid Containers ......................................... 156
- Paper ....................................................... 157
- Pet Food .................................................... 159
- Paper ....................................................... 161
- Frozen Food ............................................... 162
- Paper ....................................................... 165
- Rigid Containers ......................................... 166
- Trays ....................................................... 168
- Flexible Packaging ...................................... 169
- Plastic ..................................................... 170
- Flexible Packaging ...................................... 170
- Trays ....................................................... 172
- Pouches .................................................. 174
- Foodservice .............................................. 175
- Paper ....................................................... 177
- Rigid Containers ......................................... 178
- Flexible Packaging ...................................... 180
- Plastic ..................................................... 182
- Dry Food ................................................... 184
- Paper ....................................................... 186
- Plastic ..................................................... 188

#### COMPETITIVE SHIPPING & RETAIL PRODUCTS

- General .................................................... 196
- Drums ..................................................... 198
- Plastic ..................................................... 201
- Characteristics ......................................... 203
- Producers ................................................ 204
- Fibre ....................................................... 204
- Characteristics ......................................... 207
- Producers ................................................ 208
- Retail Bags & Sacks ..................................... 209
- Plastic ..................................................... 211
- Paper ....................................................... 216
- Protective Packaging ................................... 219
- Paper ....................................................... 222
- Plastic ..................................................... 224
- Shipping Sacks .......................................... 228
- Paper ....................................................... 231
- Characteristics ......................................... 233
- Producers ................................................ 235
- Plastic ..................................................... 236
- Characteristics ......................................... 238
- Producers ................................................ 239

#### INDUSTRY STRUCTURE

- General .................................................... 241
- Market Leaders .......................................... 242
- Plastic ..................................................... 245
- Flexible Packaging ...................................... 245
- Rigid Packaging ......................................... 248
- Paper ....................................................... 251
- Shipping & Retail Products ......................... 253
- Acquisitions & Divestitures ......................... 255
- Manufacturing & Product Development ........ 258
- Marketing & Distribution ............................. 263
- Competitive Strategies ................................ 264
- Cooperative Agreements .............................. 267

#### COMPANY PROFILES

- Advance Polybag ........................................ 271
- Amcor Limited .......................................... 272
- Bemis Company ......................................... 277
- Berry Plastics ............................................ 282
- Bryce Corporation ....................................... 286
- Caraustar Industries .................................... 287
- Consolidated Container ............................... 288
- Constar International ................................... 289

(continued on following page)
Table of Contents

COMPANY PROFILES
(continued from previous page)

Dart Container.................................................. 291
DuPont (EI) de Nemours................................. 292
Duro Bag Manufacturing................................. 295
Exopack Holding............................................... 297
Graham Packaging............................................ 300
Graphic Packaging............................................ 302
Greif Incorporated............................................. 306
Hilex Poly Company.......................................... 308
Hood Companies................................................. 309
Huhtamaki Oy.................................................... 311
International Paper.......................................... 314
Koch Industries............................................... 316
MAUSER AG...................................................... 318
MeadWestvaco Corporation............................. 320
Packaging Dynamics......................................... 323
Plastipak Holdings............................................ 325
Printpack Incorporated..................................... 327
Reynolds Group............................................... 329
Rio Tinto Group............................................... 338
Rock-Tenn Company......................................... 339
Sealed Air....................................................... 343
Silgan Holdings............................................... 348
Smurfit-Stone Container................................. 350
Solo Cup.......................................................... 352
Sonoco Products.............................................. 354
Tekni-Plex Incorporated................................. 359
Tetra Laval International................................. 361
Weyerhaeuser Company................................. 363
Other Companies in the US Industry.................. 364

List of Tables/Charts

EXECUTIVE SUMMARY
1 Summary Table................................................. 3

MARKET ENVIRONMENT
1 Macroeconomic Indicators............................... 8
2 Population & Households................................ 11
3 Personal Consumption Expenditures............... 13
4 Retail Sales..................................................... 15
5 Manufacturers’ Shipments............................. 17
6 Nondurable Goods Shipments......................... 19
7 Food Shipments.............................................. 22
8 Beverage Shipments.................................... 25
9 Durable Goods Shipments.............................. 28

COMPETITIVE PRODUCT PACKAGING
1 Competitive Plastic Packaging Demand, 2009 ......... 90
2 Meat, Poultry & Seafood Market for Competitive Packaging...... 93
3 Milk Market for Competitive Paper & Plastic Packaging...... 104
4 Plastic Milk Packaging Demand.......................... 108
5 Paperboard Milk Carton Demand....................... 110
6 Dairy Product Market for Competitive Paper & Plastic Packaging...... 113
7 Fruit Beverage Market for Competitive Paper & Plastic Packaging...... 124
8 Plastic Fruit Beverage Packaging Demand.............. 125
9 Paperboard Fruit Beverage Container Demand........ 131
10 Laundry Detergent Market for Competitive Paper & Plastic Packaging...... 133
11 Baked Goods Market for Competitive Paper & Plastic Packaging...... 138
12 Competitive Paper & Plastic Egg Carton Demand........ 144
13 Plastic Egg Carton Demand............................ 146
14 Molded Pulp Egg Carton Demand....................... 148
15 Candy & Confection Market for Competitive Paper & Plastic Packaging...... 151
16 Pet Food Market for Competitive Paper & Plastic Packaging...... 159
17 Frozen Food Market for Competitive Paper & Plastic Packaging...... 165
18 Foodservice Market for Competitive Paper & Plastic Packaging...... 177
19 Dry Food Market for Competitive Paper & Plastic Packaging...... 186
20 Soy & Other Nondairy Beverage Market for Competitive Paper & Plastic Packaging...... 195

COMPETITIVE SHIPPING & RETAIL PRODUCTS
1 Competitive Shipping & Retail Products Demand....... 198
2 Competitive Shipping Drum Demand, 2009............. 200
3 Plastic Shipping Drum Demand.......................... 203
4 Fibre Shipping Drum Demand........................... 207
5 Competitive Retail Bag & Sack Demand.................. 211
6 Plastic Retail Bag & Sack Demand....................... 215
7 Paper Retail Bag & Sack Demand........................ 218
8 Protective Packaging Market for Competitive Paper & Plastic Packaging...... 221
9 Competitive Shipping Sack Demand..................... 231
10 Paper Shipping Sack Demand............................ 233
11 Plastic Shipping Sack Demand........................... 238

INDUSTRY STRUCTURE
1 Selected Competitive Paper & Plastic Packaging Companies........ 243
2 Selected Acquisitions & Divestitures................... 257
3 Selected Cooperative Agreements....................... 269
Plastic’s share of competitive packaging markets will expand more slowly than in the 2004-2009 period due to the maturity of a number of applications controlled by plastic. 

Plastic to gain share over paper in select markets

In selected packaging markets where paper and plastic compete, plastic will increase its overall volume share as it makes further inroads into paper applications. Plastic’s share will expand more slowly than in the 2004-2009 period due to the maturity of a number of applications in terms of the share controlled by plastic. Nonetheless, material enhancements providing extended shelf life and increased durability, along with reduced material requirements and the addition of convenience features such as resealability and microwaveability, will fuel ongoing opportunities for plastic packaging. This study examines 17 selected packaging markets in which paper and plastic compete, except where plastic controls over 90 percent of volume demand.

Competitive plastic packaging to grow 2.3% yearly

Advantages of light weight, moisture resistance, good barrier properties, clarity and puncture resistance will enable plastic to outpace paper packaging through 2014 in nearly all competitive markets. Improvements in resealability, microwaveability and other characteristics will also continue to drive plastic expansion. Demand for plastic in competitive packaging markets is projected to increase 2.3 percent annually through 2014, an acceleration from the 2004-2009 period as manufacturing output improves from a depressed base in 2009. Plastic has continued to expand its share in a number of markets despite the volatility of resin prices in recent years. More moderate resin pricing through 2014 should make plastic even more competitive.

Competitive paper packaging to rise 1.0% yearly

Overall paper demand in competitive markets is expected to increase 1.0 percent annually through 2014, rebounding from the 2004-2009 pace due to an upswing in manufacturing activity and an improved outlook for consumer spending. Nonetheless, paper consumption in most markets will post limited gains or continue to decline through 2014. However, paper demand will expand at an above-average pace in the soy and other nondairy beverage, protective packaging and foodservice markets. Gains in the protective packaging and foodservice markets will be attributable to a recovery in the US economy and improved consumer spending. Paper packaging (e.g., gabletop and aseptic cartons) in soy and other nondairy beverages will expand its share due to a favorable consumption outlook along with the positioning of soymilk and similar beverages as natural products. Paper demand in the foodservice market will also be helped by efforts by foodservice establishments to convey a green image and restrictions on the use of polystyrene foam disposables in some communities.

US Competitive Paper & Plastic Packaging Demand, 2009
(23.2 billion pounds)

Paper 53%
Plastic 47%
Plastic shipping drum demand is forecast to rise 3.5 percent per year to almost 18 million units in 2014, consuming 385 million pounds of resin. Gains will reflect a recovery in the manufacturing sector, especially the chemical industry, from the 2004-2009 performance based on a weak base in 2009. Opportunities for plastic drums will also be based on continuing material improvements and the ability of plastic drums to ship and store a wide array of materials, with the exception of substances (e.g., solvent-based liquids) that are incompatible with plastic. Further gains will be restricted by competition from RIBCs as well as the entrenched position of steel and fibre drums in certain applications. RIBCs offer a number of advantages over plastic drums, such as cost and space efficiency benefits in packaging large volumes.

Plastic drums offer a number of advantages that have spurred their use in many applications. For example, plastic’s corrosion resistance and barrier properties have made plastic drums particularly amenable to packaging chemicals and food products. In addition, the one-piece construction of tight-head plastic drums has made them suitable for the shipping and storage of hazardous wastes. Plastic drums are also lighter in weight than their steel counterparts, which substantially reduces freight costs. Moreover, plastic drums have greater impact resistance, durability and reusability than fibre alternatives. Other advantages of plastic drums include easy reconditioning and cleaning, and the ability to be stored outside without rusting, which is particularly beneficial when warehouse space is limited. Among the drawbacks of plastic drums is the inability to be stacked as high as steel drums (although multi-layer configurations that offer enhanced barrier properties enable stacking). Plastic drums are also heavier and more expensive than steel drums. While plastic drums meet the newer Department of Transportation (DOT)/UN safety standards, they are not approved for the transport and handling of many flammable materials.
Sample Profile, Table & Forecast

TABLE IV-17
FROZEN FOOD MARKET FOR COMPETITIVE PAPER & PLASTIC PACKAGING (million pounds)

<table>
<thead>
<tr>
<th>Item</th>
<th>1999</th>
<th>2004</th>
<th>2009</th>
<th>2014</th>
<th>2019</th>
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<tr>
<td>Frozen Food Shipments (bil 2005$)</td>
<td>1047</td>
<td>1113</td>
<td>1182</td>
<td>1270</td>
<td>1355</td>
</tr>
<tr>
<td>lbs pkg/000$ frozen food</td>
<td>22.6</td>
<td>22.3</td>
<td>22.9</td>
<td>25.7</td>
<td>28.2</td>
</tr>
<tr>
<td>Frozen Food Packaging Demand</td>
<td>1047</td>
<td>1113</td>
<td>1182</td>
<td>1270</td>
<td>1355</td>
</tr>
<tr>
<td>Paper:</td>
<td>810</td>
<td>829</td>
<td>855</td>
<td>897</td>
<td>937</td>
</tr>
<tr>
<td>Rigid Containers</td>
<td>441</td>
<td>458</td>
<td>475</td>
<td>498</td>
<td>515</td>
</tr>
<tr>
<td>Trays</td>
<td>164</td>
<td>186</td>
<td>198</td>
<td>213</td>
<td>229</td>
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<tr>
<td>Flexible Packaging</td>
<td>205</td>
<td>185</td>
<td>182</td>
<td>186</td>
<td>193</td>
</tr>
<tr>
<td>Plastic:</td>
<td>237</td>
<td>284</td>
<td>327</td>
<td>373</td>
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<tr>
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<td>136</td>
<td>143</td>
<td>152</td>
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<tr>
<td>Trays</td>
<td>72</td>
<td>89</td>
<td>106</td>
<td>125</td>
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<td>Pouches</td>
<td>37</td>
<td>59</td>
<td>78</td>
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<td>114</td>
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<tr>
<td>% paper</td>
<td>77.4</td>
<td>74.5</td>
<td>72.3</td>
<td>70.6</td>
<td>69.2</td>
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<tr>
<td>% plastic</td>
<td>22.6</td>
<td>25.5</td>
<td>27.7</td>
<td>29.4</td>
<td>30.8</td>
</tr>
</tbody>
</table>

“Demand for paper-based materials in frozen food packaging is forecast to climb 1.0 percent annually to nearly 900 million pounds in 2014. Paperboard trays will post above-average gains as a result of rising demand for susceptor trays with bread- and dough-based items such as pizza, pot pies and hand-held entrees, where more even microwave heating and crisping are needed. Paperboard’s favorable environmental profile will also boost demand for ...”

--Section IV, pg. 165
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