Carrier Capacity and Commitment

Susan Beaver & Caleb Warner
July 29, 2013
Who We Are – RockTenn

<table>
<thead>
<tr>
<th>Overview</th>
<th>One of North America’s leading integrated manufacturers of corrugated and consumer packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>$9.2 billion (LTM 1Q FY2013)</td>
</tr>
<tr>
<td>Employees</td>
<td>26,000</td>
</tr>
<tr>
<td>Production</td>
<td>9.3 million tons of mill capacity</td>
</tr>
<tr>
<td></td>
<td>100 billion square feet of converting production</td>
</tr>
<tr>
<td></td>
<td>Approximately 60% integrated</td>
</tr>
<tr>
<td>Locations</td>
<td>213 operating facilities, primarily in North America</td>
</tr>
</tbody>
</table>

LTM 1Q FY2013
Net Sales: $9.2 billion

- Corrugated Packaging: 66%
- Consumer Packaging & Recycling: 34%

LTM 1Q FY2013
Segment Income: $741 million

- Corrugated Packaging: 53%
- Consumer Packaging & Recycling: 47%

(1) Excludes $6.7 million of post-closure losses at Matane and $0.4 million of acquisition inventory step-up expense
RockTenn’s Core Business Principles

RockTenn will be the most respected company in our business by:

♦ Providing superior paperboard, packaging and marketing solutions for consumer products companies at very low costs
♦ Investing for competitive advantage
♦ Maximizing the efficiency of our manufacturing processes by optimizing economies of scale
♦ Systematically improving processes and reducing costs throughout the company
♦ Seeking acquisitions that can dramatically improve the business
### Who We Are

#### Containerboard Mills
- 2nd largest North American producer of containerboard
- Largest producer of white top linerboard
- 4,500 employees
- 13 mills in the U.S. and Canada
- Approximately 70% integrated
- All North American mills are certified to the SFI Fiber Sourcing standard and Triple Chain-of-Custody (SFI,FSC and PEFC) certified

#### Recycling
- One of the largest paper recyclers in North America managing over 8 million tons of recycled fiber annually
- Net sales of $1.15 billion (LTM Q1 FY 2013)
- 850 employees
- 32 U.S. recycling plants
- Trading operations headquartered in Atlanta
- 3 international trading offices
- Manage 100% RockTenn fiber supply and marketing

#### Consumer
- 2nd largest North American producer of coated recycled paperboard (CRB)
- Net Sales approximately $925 million (LTM 1Q FY2013)
- 11 mills in the U.S.
- Approximately 45% integrated
- All wholly-owned North American mills are certified to the SFI Fiber Sourcing standard and Triple Chain-of-Custody (SFI,FSC and PEFC) certified

#### Corrugated Packaging
- 2nd largest North American producer of corrugated packaging
- 2nd largest North American
- Net Sales of approximately $6.2 billion (LTM 1Q FY2013)
- 15,780 employees
- 101 converting facilities throughout U.S., Canada, Mexico
- Products include:
  - Corrugated containers
  - Preprint linerboard
  - Retail ready packaging
  - Food service packaging
- All North American mills are certified to the SFI Fiber Sourcing standard and Triple Chain-of-Custody (SFI, FSC and PEFC) certified
RockTenn and OTM

- Upgraded to version 6.2.8 on June 8, 2013
- For 11 US corrugated mills, orders are planned for outbound rollstock shipments and inbound recycle shipments
- 150 active carriers
- Plan orders into shipments on receipt
  - Orders can create one or many shipments
- Tender via EDI and e-mail
- Receive shipment status updates via EDI from carriers
- Receive shipment status updates from internal systems
- Receive actual shipment data, re-rate and settle without invoices from carriers
- Return shipment cost data to upstream systems for use in product invoicing
## Carrier Capacity & Commitment: OTM Options

<table>
<thead>
<tr>
<th>Definition</th>
<th>Pros/Cons</th>
<th>RockTenn Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capacity Management</strong></td>
<td>Maximum number of shipments per carrier in a defined time period</td>
<td>Ensures that carriers will not be overwhelmed with shipments</td>
</tr>
<tr>
<td><strong>Commitment Count</strong></td>
<td>Minimum number of shipments per carrier in a defined time period</td>
<td>Prioritizes Commitment Count carriers before lowest cost</td>
</tr>
<tr>
<td><strong>Commitment Allocation</strong></td>
<td>Shipments spread over carriers by lane by defined percentage</td>
<td>Splits the lane volume across carriers Can be problematic if volume is volatile</td>
</tr>
</tbody>
</table>
RockTenn’s Business Requirements

♦ Driven by Logistics Operations and Procurement

♦ Business Goals

– Improve capacity and service while remaining cost neutral
– Be a more shipper friendly company
– Allocate a specific number of shipments per day per carrier
– Improve tender acceptance percentage
– Reduce number of spot shipments
– Better alignment of logistics operations and procurement
– First right of refusal for preferred carriers regardless of cost
Current Configuration – Capacity Limits

♦ Capacity Limits
  – Prevents any single carrier from being flooded with shipments
    • Daily volume is volatile as it is driven by customer demand
  – May vary by day, carrier, and location
  – Effective during tender process rather than when shipments are built
  – Can be executed without bulk planning

♦ Rate Quality Factor
  – Used to prefer capacity carriers over non-capacity carriers
Current Configuration – Capacity Limits

♦ Planning Parameters
  – Set commitment parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default Value</th>
<th>Parameter Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLY COMMITMENT ON THE MOST SPECIFIC LANE</td>
<td>TRUE</td>
<td>TRUE</td>
</tr>
<tr>
<td>CARRIER CAPACITY WEIGHTING FACTOR</td>
<td>0.7</td>
<td>0.00</td>
</tr>
<tr>
<td>CARRIER RESOURCE REASSIGNMENT TYPE</td>
<td>0: If re-assign fails, do not re-plan</td>
<td></td>
</tr>
<tr>
<td>DECREASE COMMITMENT USAGE WHEN TENDER DECLINE</td>
<td>FALSE</td>
<td>TRUE</td>
</tr>
<tr>
<td>EVALUATE SPA FOR SHIPMENTS FROM SPLIT ORDERS</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>FAVOR HIGH DEFICIT SERVICE PROVIDER IN TRANS OPT</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>MODE PROFILE ID FOR CARRIER COMMITMENT</td>
<td>TL</td>
<td>TL</td>
</tr>
<tr>
<td>PLAN SHIPMENTS WITH CARRIER COMMITMENT</td>
<td>FALSE</td>
<td>TRUE</td>
</tr>
</tbody>
</table>

♦ Rate Quality Factors
  – Set on Rate Offerings to determine carrier order for tendering

♦ Time Period Definition
  – Set to Day of Week
OTM Set up Steps

♦ Define the lane
♦ Create capacity group ID’s
♦ Create capacity limits
  – When done thru UI, OTM automatically creates capacity usage
  – Define time window for limit
♦ Update rate offering with capacity group and check box to track capacity usage
On-going maintenance

♦ Update capacity limit
  - Increasing capacity presents no issues
  - Decreasing the existing limit is challenging
    • Set current limit to expire and create new limit
    • Manually update capacity usage table
    • Check box for override has no effect

♦ Remember to set up when adding new carriers, if applicable
Capacity Limit Issues

♦ Auto-numbering
  – Exceeded maximum threshold
  – Check capacity usage auto numbering rules

♦ Communication - Procurement, OTM, Carriers
  – What does the capacity limit mean?

♦ Changing carrier
  – If a carrier is at maximum capacity, the carrier will not display when changing Service Provider unless ignore constraints is enabled
  – OTM may change shipment date to accommodate capacity limit if the LPD (Late Pick Up Date) is not populated

♦ When expiring capacity, OTM asks “Do you want to deactivate commitments already in use?”
  – Can’t have overlapping usage
  – Doesn’t impact shipments that are already built
Commitment Allocation

- Commitment Allocation
  - Also known as SPA (Service Provider Allocation)
  - % by lane
  - Executed at time of shipment build
  - Should add up to 100%
  - Parameters can be configured as to how a tender decline is tracked against Commitment Allocation
Commitment Allocation Example

Example (with parameter ‘decrease commitment usage when tender decline’ set to true):

- Carrier A = 50%
- Carrier B = 50%
- Shipment 1 goes to A; A accepts; 100:0
- Shipment 2 goes to B; B accepts: 50:50
- Shipment 3 goes to A; A declines; shipment 3 proceeds to B 33:66
- Shipment 4 goes to A because they are under their 50%;
Commitment Allocation Issues

♦ Tender Declines
  – Carrier A has declined substantial number of loads. Carrier A will receive all tenders on lane in an attempt to reach % commitment due to parameter setting

♦ High volume on a lane for a time period may cause more loads to tender to a carrier than can handle

♦ Mode Profile must be defined in planning parameter set
Commitment Count

- Minimum number of loads per carrier per time period
- Executed at time of shipment build
- Highest priority is fulfilling commitment regardless of cost
Commitment Count Example

OTM determines the lowest cost solution while filling commitment

- 1st order is for lane A
  Carrier 3 is selected
- 2nd order is for lane B
  Carrier 1 is selected
- 3rd order is for lane C
  Carrier 2 is selected

<table>
<thead>
<tr>
<th>Commitment</th>
<th>Lane A</th>
<th>Lane B</th>
<th>Lane C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier 1</td>
<td>1</td>
<td>300</td>
<td>600</td>
</tr>
<tr>
<td>Carrier 2</td>
<td>1</td>
<td>550</td>
<td>700</td>
</tr>
<tr>
<td>Carrier 3</td>
<td>1</td>
<td>400</td>
<td>900</td>
</tr>
</tbody>
</table>

Low Cost: $1500  
Cost with Commitment: $1675
Commitment Count Issues

♦ Explaining how the process works is difficult
♦ In order to generate best cost solution, bulk planning is required
♦ Carrier may be flooded on high volume lanes
♦ Determining commitment count is difficult if your volumes fluctuate
♦ Insufficient volume on a lane will not fill commitments
  – Example: 10 commitment count and only 5 shipments
Overall Lessons Learned

♦ Business requirements need to be clearly defined
  – Is the goal to spread shipments across carrier base?
  – Is the goal to always award to lowest cost carrier?
  – Is the goal to guarantee loads per carrier?

♦ Definition of commitment
  – Procurement versus OTM
    • Actual pick up versus planned pick up

♦ Requires tuning and maintenance

♦ Education
  – Why is OTM working this way?
Questions?