Shifting International Trade Routes

15 January 2009
Agenda

Today’s Objectives
Economic Situation
Supply Chain Assessment
The Global Container Fleet
North American Container Market
Shifting Trade Patterns
Questions for the Container Shipping Industry
I. Today’s Objectives

Endeavor to provide a broad context for today’s program by:

✓ Reviewing the North American economic situation and short-term outlook

✓ Touching on the affects of today’s economy on shippers’ supply chains

✓ Assessing the status of the global and North American container markets

✓ Providing some observations Asia-North American container routing alternatives

Most importantly, finish on time!
II. Economic Situation
The Darkest Hour is.....
Just before things go pitch black!
US Market Fundamentals

• The consumer is two thirds or more of the US economy

• When consumers sneeze, the economy catches the flu
The consumer is under substantial pressure

Financial Bail Out
Looming Tax Increases
Credit Crunch
Weakening Dollar

Baby Boomers Retiring
Rising Health Care Costs
Energy Prices
Weak Housing Market
Rising unemployment

Consumer Spending
## The U.S. market fundamentals

<table>
<thead>
<tr>
<th>2002-2007</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Emergence of China</td>
<td>• Housing slump</td>
</tr>
<tr>
<td>• Cheap and plentiful money</td>
<td>• Financial crisis</td>
</tr>
<tr>
<td>• Housing boom fueled consumption and negative savings rate</td>
<td>• No money or unaffordable money</td>
</tr>
<tr>
<td>• Strong economic growth</td>
<td>• Unemployment</td>
</tr>
<tr>
<td>• Unbridled optimism</td>
<td>• Confidence crisis</td>
</tr>
<tr>
<td></td>
<td>• Spreading to the global economy</td>
</tr>
</tbody>
</table>
U.S. income and consumption levels have grown steadily while savings have declined


--- | --- | --- | ---
6.4% | 6.1% | -1.5%

Source: BEA; Norbridge analysis
U.S. employment is increasing and expected to peak in 2009

U.S. Unemployment Rate History and Projections

Source: US Dept. of Labor and The Federal Reserve Board
U.S. private inventories (non-government) have been growing steadily since 2003

U.S. Private Inventories (2000-2008)

Source: BEA
U.S. private fixed investment (non-residential) began to level off in 2008

Source: BEA
US Dollar’s Long-term Decline

- **Dollar down 39% vs Euro over 7 years**

Note: Noon buying rates.
Source: Federal Reserve Bank of New York.
US exports – A Modest Bright Spot

U.S. Exports

The US economy is projected to struggle in 2009 and into 2010

• **US recession** ...

- US recession expected to be relatively deep and long
- Consumption (70% of US GDP) expected to recover slowly
- Europe and Asia also impacted

[Graph showing change in real GDP from 2004 to 2011, with a bar for each quarter of 2008 indicating the meltdown.]

• **... Spreading worldwide**

  - US recession expected to be relatively deep and long
  - Consumption (70% of US GDP) expected to recover slowly
  - Europe and Asia also impacted

Source: BEA historical data; recent estimates for Q4 ’08; EIU forecasts (Dec ’08).
China dominates North American container trade

Size and Growth of North America Container Trade Regions (1997-2007)

Source: AAPA; Port Authorities; Norbridge research and analysis
China and India rapid GDP growth has come to at least a near-term end . . .

Year-over-Year China, Japan, India, and EU Historical and Projected GDP Growth

Source: Eurostat; World Bank, Global Insight, BEA
US imports from China are decelerating

- US import growth from China is down sharply

Y/Y Change on $ Value of Imports from China

2004: 29.4%
2005: 23.7%
2006: 18.3%
2007: 12.6%
2008 YTD: 6.4%

So How Full is the Glass?

**Hall Full**
- The severity of the challenges is universally recognized
- The Federal Government appears committed to turning the tide
  - Fed actions
  - Financial bail out???
  - Auto bail out????
  - Infrastructure spending
  - Acquiring toxic debt

**Half Empty**
- The lead indicators have probably not bottomed out
- Consumers are saving, not spending
- The Federal Government deficit spending will take time to make a difference
- Bankruptcies will continue
- Unemployment will rise
- It is not a question of if the economy will improve, but when
So when is when?

- 2009 will be a very difficult year
- The economy will likely to begin recovering in 2010
- It will likely be 2011 before the global economy and trade are back on the tracks
III. Supply Chain Implications
We live in challenging times

• Addressing risk in the global supply chain
• How to live with congestion, high fuel prices, driver shortages, volatile exchange rates, disease, political uncertainty
• Fuel, in the longer-term threatens to rewrite supply chain economics
Supply Chain Responses

Tough, shifting environment

Supply chain moves
- Sourcing
- Making
- Moving
- Integrating
## Twelve Key Responses

<table>
<thead>
<tr>
<th>Sourcing</th>
<th>Making</th>
<th>Moving</th>
</tr>
</thead>
</table>
| ✓ Balance supply and demand by world regions  
✓ Find sources closer to home  
✓ Seek situations where “far-shoring” still works  
✓ Mitigate risk | ✓ Maximize plant utilization  
✓ Move closer to market  
✓ Increase exports | ✓ Downshift modes—slower sailing  
✓ Revise DC network and flow paths  
✓ Create a more agile distribution system |

### Integrating

- ✓ Raise visibility and collaboration across the supply chain
- ✓ Promote sustainability that drives productivity
Agility is needed to confront today’s challenges

- Dual sourcing on key items
- Plant and DC redundancy
- Postponement strategies
- Ops analytical team
Global Container Fleet Trends
The increasing supply of large container ships poses challenges.

### Number of Vessels

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>4,600</td>
</tr>
<tr>
<td>On-Order</td>
<td>1,300</td>
</tr>
<tr>
<td>Laid-Up</td>
<td>210</td>
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</tbody>
</table>

### Vessel Capacity (TEUs, millions)

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>12.0</td>
</tr>
<tr>
<td>On-Order</td>
<td>6.5</td>
</tr>
<tr>
<td>Laid-Up</td>
<td>0.55</td>
</tr>
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Note: January 2009. Various sources.
Container shipping industry responses

- More partnering
- Slow steaming: originally to reduce fuel costs, now to absorb capacity
- Lay-ups
- Postponing deliveries
- New deployment strategies: potentially web networks with more port to port operations
North American Container Market
North American container traffic has reversed sharply

North America Ocean Container Traffic Growth (1997-2008E)

- 1997-2006 CAGR: 7.3%
- 2006-2007: 0.3%
- 2007-2008E: -5.8%

*Note: Excludes AK, HI, Guam and Puerto Rico (largely domestic) traffic
Source: AAPA; Port Reported Throughput; Norbridge Analysis
West Coast container imports are down

Major West Coast Port Container Traffic Growth
(YTD 2008 vs 2007)

Note: Seattle is January to October data (International containers only). Tacoma is January to November data (International full containers only). Vancouver is January to November. Los Angeles is January to November (full containers only). Oakland and Long Beach is January to October data (full containers only).

Source: Journal of Commerce; Port authorities; Norbridge analysis
East Coast container traffic: Mixed in 2008

Major East Coast Port Container Traffic Growth
(YTD 2008 vs 2007)

Note: Hampton Roads is imports and exports (January to October). New York-New Jersey is January to October. Montreal is January to November. Savannah is January to November. Halifax is January to June.

Source: Port authorities; Norbridge analysis
Are Trade Patterns Shifting?
There were 72 services between Asia/India and North American during 3Q08

<table>
<thead>
<tr>
<th>Year</th>
<th>Count of Services</th>
<th>Sum of Average Weekly TEUs</th>
</tr>
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<tbody>
<tr>
<td>2006</td>
<td>80</td>
<td>367,745</td>
</tr>
<tr>
<td>2007</td>
<td>80</td>
<td>365,510</td>
</tr>
<tr>
<td>2008</td>
<td>72</td>
<td>354,876</td>
</tr>
</tbody>
</table>

Source: Com Pair Q3 2006-2008
The Pacific Coast remains the dominant gateway for Asia-North American Traffic

North Asia/China Number of Services & Average Weekly TEU Capacity by Year by First North American Region of Call

<table>
<thead>
<tr>
<th>Year</th>
<th>Pacific</th>
<th>Atlantic</th>
<th>NAasia/China Pacific/Atlantic</th>
<th>Gulf/Atlantic</th>
<th>Gulf</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>194,806</td>
<td>183,815</td>
<td>79,595</td>
<td>4,717</td>
<td>2,924</td>
</tr>
<tr>
<td>2007</td>
<td>131,851</td>
<td>118,851</td>
<td>57,595</td>
<td>11,140</td>
<td>3,034</td>
</tr>
<tr>
<td>2008</td>
<td>55,873</td>
<td>55,756</td>
<td>27,730</td>
<td>5,011</td>
<td>2,989</td>
</tr>
</tbody>
</table>

Norbridge
In 2005, the U.S. container port industry was viewed as nearing capacity

- Trade was growing at 7+%
- LA/LB had experienced a “reported meltdown"
- The western U.S. railroads faced major bottlenecks: power, crews, track capacity
- Industry growth reportedly equated to one new container port per year
Since numerous projects have come on-line or are in progress

- Prince Rupert: Phase 1: 500K TEU
- Evergreen Tacoma
- Norfolk: New APMT terminal: 1M TEU
- Mobile: New term: 350K TEU
- Bayport Phase 1
- Lazaro Cardenas Phase I: 700K TEU
- Savannah CT-9
- Jacksonville MOL & Hanjin
- Tampa
- Evergreen Tacoma
- Norfolk New APMT terminal: 1M TEU
- Mobile: New term: 350K TEU
- Bayport Phase 1
- Lazaro Cardenas Phase I: 700K TEU
- Savannah CT-9
- Jacksonville MOL & Hanjin
- Tampa
There are numerous projects currently in the planning stage.

- **Prince Rupert:** Phase 2: 1.5M TEU
- **NYK, SSA Tacoma**
- **Long Beach New Pier S:** 198 Acres; TEU TBD
- **Los Angeles TraPac Redevelopment**
- **Lazaro Cardenas Fut. Phase:** 2M TEU
- **Vancouver Terminal II**
- **Melford, Nova Scotia 1.5M TEU**
- **Charleston, SC Navy Base Terminal 1.3M TEU**
- **Jacksonville Hanjin**
- **Tampa**
The North American rail industry continues to spend $4-$6 billion per year on infrastructure and capacity.
Asia-US Atlantic Trade

- 2008 volume of nearly five million TEU is a peak
- Handled by 15 major shipping lines through six major gateways
- Six strings of 10,000 TEU ships could handle what sixteen strings carry today
- Twelve strings could handle the 2018 volume at an average 5 percent growth per year
Container Shipping Industry Questions
• Will the US container trades return to 7% annual growth or is 4-5% the new norm?

• How will shippers’ supply chain strategies evolve?

• What will the container shipping industry look like in 2012?

• What will the North American rail network look like in 2014?