Turbulent Waters for Ocean Carriers and Ports

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Tampa, Florida
NYK Ports, LLC

Who we are….

- Over 7.5 million man hours per year with our ILA and ILWU partners handling Container, Cruise Passengers, Automobiles, Heavy Lift and Bulk
Turbulent Waters for Ocean Carriers and Ports

‘Vessel overcapacity, slower trade and plummeting freight rates are creating serious financial challenges for ocean carriers and increasing pressures on ports and terminal operators to reduce their costs. Carriers are implementing sweeping new changes to alliances, mergers and acquisitions and increased vessel scrapping. Panelists will discuss strategies for managing in this new environment.’

1. 2016 – how did it go?
2. The Headlines we saw
3. 2017 – looking into the crystal ball
4. Touch some of the macro challenges that exist and what may happen
5. A bit about how a marine terminal operator will face these challenges

GOOD?
The Year in Review - 2016

Growth….

US 2016 Real GDP Growth of about 1.9% in 2016

The Nations top ports mainly saw growth….though not uniformly

<table>
<thead>
<tr>
<th>Port Complex</th>
<th>2015</th>
<th>2016</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA/LB</td>
<td>15,352,527</td>
<td>15,631,955</td>
<td>1.8%</td>
</tr>
<tr>
<td>NY/NJ</td>
<td>6,371,720</td>
<td>6,244,168</td>
<td>-2.0%</td>
</tr>
<tr>
<td>Norfolk</td>
<td>1,454,748</td>
<td>1,503,886</td>
<td>3.3%</td>
</tr>
<tr>
<td>Savannah</td>
<td>3,667,439</td>
<td>3,609,521</td>
<td>-1.6%</td>
</tr>
<tr>
<td>Charleston</td>
<td>1,916,381</td>
<td>1,943,171</td>
<td>1.4%</td>
</tr>
<tr>
<td>Seattle/Tacoma</td>
<td>3,529,441</td>
<td>3,615,752</td>
<td>2.4%</td>
</tr>
<tr>
<td>Oakland</td>
<td>2,277,521</td>
<td>2,369,641</td>
<td>3.9%</td>
</tr>
<tr>
<td>Houston</td>
<td>2,130,540</td>
<td>2,182,720</td>
<td>2.4%</td>
</tr>
<tr>
<td>Baltimore</td>
<td>840,314</td>
<td>870,115</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

We’re also experiencing growth, both as a result of GDP growth but also a factor of some of the business shifting with new alliances….

Source: various Port Authority websites
The Year in Review - 2016

As a stevedore and marine terminal operator, the well being of our customers is the key to our success and a determinant of our strategy….2016 has brought about much change.

- China’s mega shipping group is now official...JOC, Feb.18, 2016
- The Panama Canal Expands...WSJ, Jun. 26, 2016
- Hanjin Bankruptcy Hits West Coast Ports...WSJ, Oct. 13, 2016
- For Container Ships, A Grim View...WSJ, Nov. 1, 2016
- Hapag-Lloyd Board Approves Merger with UASC of Dubai...WSJ, Jun. 28, 2016
- Japan Shipping Lines Consolidate...WSJ, Oct. 31, 2016
- Maersk Line to Buy German Shipping Line Hamburg Sud in $4 Billion Deal...WSJ, Dec. 1. 2016
- CMA CGM completes takeover of NOL..., JOC, Sept. 5, 2016
- France’s CMA CGM Seeks to Sell Overseas Port Assets of Neptune Orient Lines...WSJ, Sept. 6, 2016
- Globalization Is Here to Stay, Says Panama Canal CEO...WSJ, Oct. 26, 2016
- Hapag-Lloyd Board Approves Merger with UASC of Dubai...WSJ, Jun. 28, 2016
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- Maersk Line to Buy German Shipping Line Hamburg Sud in $4 Billion Deal...WSJ, Dec. 1. 2016
- Globalization Is Here to Stay, Says Panama Canal CEO...WSJ, Oct. 26, 2016
- Korea Extends Aid Package to Hyundai Merchant Marine...WSJ, Jan. 25, 2017

….2017 will see the implementation of that change.
The Crystal Ball - 2017

What we see.....
Trending
A changing view toward global trade?

• Global trade will pick up in 2017, but downside risks have risen*

• Trans-Pacific Trade: growth expected, however, the policies are unclear at the moment….though we see imports and exports as being beneficial to our business. Regardless of how things change, improvements are needed in the supply chain.

• Infrastructure will continue to age, but opportunity exists and planning underway…

• Liner Alliances will settle into a new rhythm and customers will demand cost effective transport and efficient land side operations, MTO’s, stevedores and ports will adapt

• Changes to the terminal operator landscape; mergers, alliances?

• Further port mergers and/or consolidations?

*Source: The Economist
Infrastructure Investment
How will infrastructure funding be allocated nationwide?

**Infrastructure spending is needed and link our terminals/ports to the Nation:**

- Access channels - Savannah
- Bridges and tunnels – Baltimore Rail Tunnel
- Interstate Highways – Florida Interstates connected to ports
- Inland navigation – Mississippi River and Great Lakes

- The Administration has indicated a desire to improve infrastructure but precise details are now known

**How could it look?**

- Public Private Partnership (Public debt at all time high)….
  - There has been interest in this model and it is used in certain sectors…bridges and highways
  - Further use in ports?

- … or Federal Investment Programs? TIGER (like), VIP, Build USA Act or other?
The Alliances

Shifting tide of liner alliances….impacts to terminals?

• 3 big teams have emerged in the Ocean Alliance, THE Alliance and 2M

• Each have their strong trade lanes

• The real challenge, however, is probably related to vessel size

Note: Korea Line now branded SM Line
Alliance and Vessel Impacts

Ship sizes will continue to challenge ports and infrastructure

• EVOLUTION OF CONTAINERSHIP SIZE

<table>
<thead>
<tr>
<th>Year</th>
<th>Ship Name</th>
<th>TEU Capacity</th>
</tr>
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<tbody>
<tr>
<td>1968</td>
<td>Encounter Bay</td>
<td>1,530</td>
</tr>
<tr>
<td>1972</td>
<td>Hamburg Express</td>
<td>2,950</td>
</tr>
<tr>
<td>1980</td>
<td>Neptune Garnet</td>
<td>4,100</td>
</tr>
<tr>
<td>1984</td>
<td>American New York</td>
<td>4,600</td>
</tr>
<tr>
<td>1996</td>
<td>Regina Maersk</td>
<td>6,400</td>
</tr>
<tr>
<td>1997</td>
<td>Susan Maersk</td>
<td>8,000+</td>
</tr>
<tr>
<td>2002</td>
<td>Charlotte Maersk</td>
<td>8,890</td>
</tr>
<tr>
<td>2003</td>
<td>Anna Maersk</td>
<td>9,000+</td>
</tr>
<tr>
<td>2005</td>
<td>Gjertrud Maersk</td>
<td>10,000+</td>
</tr>
<tr>
<td>2006</td>
<td>Emma Maersk</td>
<td>11,000+</td>
</tr>
<tr>
<td>2012</td>
<td>Marco Polo (CMA CGM)</td>
<td>16,000+</td>
</tr>
<tr>
<td>2013</td>
<td>Maersk McKinney Møller</td>
<td>18,270</td>
</tr>
<tr>
<td>2014/15</td>
<td>CSCL Globe/MSC Oscar</td>
<td>19,000+</td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td>22,000</td>
</tr>
</tbody>
</table>

Container-carrying capacity has increased by approximately 1,200% since 1968.

Source: Walter Kemmsies, JLL
Intermodal Reach?
Shift in ports intermodal market reach from USWC to USEC

Source: Surface Transportation Board, Moffatt & Nichol, JLL.
What’s next in the ports?
Grey Ports/Terminals?

- SFCT and Pomtoc approved to jointly negotiate service contracts with liner alliances
- NW Seaport Alliance: Seattle-Tacoma working together to maximize the utility of their terminal assets
- Southern California; exemplary of multiple terminals linked to alliances.
- Will additional MTO’s and Port Authorities look to do the same?

US Regulators Approve Miami Terminal Alliance...JOC, Dec. 30, 2016

California Ports Spending Millions to Protect Share...JOC, Jan. 25, 2017
How to manage through change?
Some concepts that we consider……

• Focus on safely increasing productivity

• Incremental use of technology

• Data sharing among stakeholders
  • Liner to Terminal
  • Terminal to BCO
  • Terminal to Trucking Companies and Rail Providers
  • Terminal to Port & Port to Port

• Peak Productivity Demand with large ships
  • Pre-Planning from origin
  • Technology assist in cranes to improve consistency
Conclusions?
The big points……

- Mergers and Acquisitions in the Liner industry….likely to continue, and may occur in the Terminal Business….perhaps even mergers in the ports?

- New Alliances…..they are defined and will stabilize leading to a focus on port/terminal performance….

- Near term US growth but uncertainty over trade rhetoric….

- Demand for infrastructure spending…..

- Demand for improved efficiency……

- *Global growth to accelerate from an estimated 1.7% in 2016 to 2.8% in 2017 and 2.7% a year on average in 2018-21. This forecast is already relatively cautious about prospects for global trade.

- Near term US growth with uncertainty over trade rhetoric but positivity overall

*Source: The Economist
Keep moving forward…..
That is all we can do

Thanks for listening and enjoy Tampa Questions?