Identifying private sector business partners session – laying the groundwork with an industry overview

AAPA maritime Economic Development Seminar – Portland Oregon
12 July 2011
Brief industry overview

- Shipping and vessel development’s impact on ports
- Industry performance and forecasts
- Mergers & acquisitions privatisation
- What has the recession changed?
- Ten years back; ten years forward
- Infrastructure investment panorama
Changing the dynamics of the supply chain…

SHIPPING AND VESSEL DEVELOPMENT’S IMPACT ON PORTS

12 July 2011

AAPA Maritime Economic Development
## Changes impacting ports

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>World port teu throughput</td>
<td>211m</td>
<td>476m (525m ‘08)</td>
</tr>
<tr>
<td>Container share - general cargo market</td>
<td>52%</td>
<td>67%</td>
</tr>
<tr>
<td>Largest container ship</td>
<td>7,060 teu</td>
<td>14,770 teu</td>
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</tbody>
</table>

**Impact:**

- More infrastructure to increase capacity, velocity and throughput to service larger ships - on the same footprint
- Increased intermodal capability through the supply chain and logistics corridors
- Need to address ecological and congestion issues resulting from port usage in their respective hinterlands

Source: Drewry
Vessel size development – the big ships are still coming
Impact of 2009 – rationalising the world fleet

**Cause**
- Increased scrapping of smaller vessels
- Slow steaming, here to stay
- Large order-book remains, mostly ships of 10,000 teu+ size

**Effect**
- Growth in the average size of global fleet, more port side capacity
- More intermediary warehousing through the supply chain
- Deeper hinterland capability requiring more logistics dedicated property assets
Container ship orderbook

10,000 teu+ order book (number of ships)

Source: Drewry
Container ship order book

- Total order book by teu size range (% of teu capacity)
- 54% are ‘Big Ships’

Source: Drewry
Gantry crane order book

Around 300 cranes currently on order – approximately half are 20 rows outreach or more

Source: Drewry
Big ship economics

• Work as part of a global network - need to reach deep into the hinterland to be financially viable

• Inflexible - could be serious liability in a downturn; the bigger the ship the larger the risk

• Increased time in port can quickly outweigh economies of scale; limited in number of port of calls

• Need deeper water, bigger cranes, longer berths, bigger container yards, in short – more port infrastructure and land in the port and throughout the logistics chain

All require ports and supply chains designed to handle their capacity, requiring massive capital
Major changes in some regions

INDUSTRY PERFORMANCE & FORECASTS
Container port volume decline/growth by world region 2009 and 2010 (%)

Source: Drewry
Forecast container port volume growth by world region 2011 (%)

Source: Drewry
Future demand growth rates – Drewry/Aegir view

- 2011: +8% globally
- 2012-2016: +7-8% p.a. growth globally
- Significant regional variations:
  - Fastest growing regions (> 5% p.a.): Far East, South East Asia, Indian Subcontinent, Middle East, Africa, Eastern Europe
  - Regions growing less quickly (+/- 5% p.a.): North Europe and North America

Competition to become more acute in N America
Liner shipping facing challenges (again)

- Vessel order book remains substantial
- Maersk raises stakes again with 18,000 teu vessel order
- Ship capacity plentiful, slow steaming here to stay
- Freight rates are under pressure
- Shortest business cycle the liner industry has ever seen?

<table>
<thead>
<tr>
<th>Year</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>US$19 billion loss</td>
</tr>
<tr>
<td>2010</td>
<td>US$17 billion profit</td>
</tr>
<tr>
<td>2011</td>
<td>Break-even?</td>
</tr>
</tbody>
</table>

Source: Drewry
Reviving and far from exhausted…

MERGERS, ACQUISITIONS & PRIVATISATION
M&A/privatisation activity in the port sector reviving

- Dragados - JP Morgan/Noatum
- DPW Australia – Citi Infrastructure Investors buys 75%
- Port of Brisbane - GIP & partners win with A$2.1bn bid
- TCP Paranagua - Advent allegedly buys 50% for US$300m
- Forth Ports – UK£750m Arcus bid accepted
- Eilat, Israel – Privatisation process under way
- Piraeus and Thessaloniki port companies – Greek government set to sell stakes

Source: Drewry
M&A/privatisation activity in the port sector reviving

- APM Terminals – Yantian, Poti (Georgia), Santos (BTP), Dunkirk/Mobile share swap with CMA CGM
- ICTSI - Portland (Oregon), Rijeka, offer to acquire Portek
- 50% of NUTEP Novorossiysk sold for US$115m
- Adani Enterprises – Abbot Point coal terminal (Australia)
- Port of Gothenburg – Car and short sea RoRo terminal deals done, container terminal process under way
- Malta Freeport – Sale of minority stake by CMA CGM
- MSC terminals (TIL) – Potential sale of minority stake reported in press

Source: Drewry
## Privatisation potential – not exhausted yet?

<table>
<thead>
<tr>
<th>Terminal size band (teu throughput)</th>
<th>Total number of terminals</th>
<th>No. of terminals which are state owned *</th>
<th>State owned % of total terminals in size class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 100,000</td>
<td>594</td>
<td>307</td>
<td>52%</td>
</tr>
<tr>
<td>100-250k</td>
<td>256</td>
<td>62</td>
<td>24%</td>
</tr>
<tr>
<td>250-500k</td>
<td>160</td>
<td>34</td>
<td>21%</td>
</tr>
<tr>
<td>500k-1 million</td>
<td>126</td>
<td>23</td>
<td>18%</td>
</tr>
<tr>
<td>Over 1 million</td>
<td>112</td>
<td>20</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Global total</strong></td>
<td><strong>1248</strong></td>
<td><strong>446</strong></td>
<td><strong>36%</strong></td>
</tr>
</tbody>
</table>

* Excludes terminals owned or managed by state owned global operators such as PSA and DP World but includes terminals where the government has majority ownership. 500k+ basic threshold for institutional investors.

Source: Drewry
Container terminal valuations

• The days of valuations of port businesses at more than 20x EBITDA are over – at least for the time being
• 8-12x EBITDA is the ballpark now (but no substitute for a full DCF analysis)
WHAT HAS THE RECESSION CHANGED?

Moving towards a new paradigm…
What has the recession changed?

• Industry’s view on long term growth: volumes may go down (temporarily) as well as up!
• Greater focus on emerging markets by many international operators
• Excessive focus on very short term forecasting
• Valuation of ports and terminals - downwards
• Availability and cost of borrowing more challenging
• Removal of short term (and mad!) investors from the ports market
What has the recession **not** changed?

- Pressure on port capacity (for many world regions)
- The profitability of ports and terminals
- The challenging economics of liner shipping
- The ongoing trend towards ever larger container ships
Few changes is some areas, major in others…

TEN YEARS BACK AND FORWARD
10 years back, 10 years forwards – small or no change

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<th>2010</th>
<th>2020</th>
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<tr>
<td>Transhipment share</td>
<td>25%</td>
<td>28%</td>
<td>28%?</td>
</tr>
<tr>
<td>Empties share</td>
<td>~20%</td>
<td>~20%</td>
<td>~20%</td>
</tr>
<tr>
<td>Typical EBITDA margins (terminals)</td>
<td>20-40%</td>
<td>20-40%</td>
<td>20-40%</td>
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10 years back, 10 years forwards – big changes

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<td>7,060</td>
<td>14,770</td>
<td>20,000+?</td>
</tr>
<tr>
<td>Super post-Panamax gantries</td>
<td>20</td>
<td>~900</td>
<td>2,000+?</td>
</tr>
<tr>
<td>Market share top 4 terminal operators *</td>
<td>~25%</td>
<td>~48%</td>
<td>?</td>
</tr>
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* total teu basis
10 years back, 10 years forwards – big changes

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<td>Container share of general cargo mkt</td>
<td>48%</td>
<td>67%</td>
<td>72%</td>
</tr>
<tr>
<td>World port teu throughput</td>
<td>237m</td>
<td>542m</td>
<td>1.1bn?</td>
</tr>
<tr>
<td>Asian ports’ share of world teu</td>
<td>47%</td>
<td>55%</td>
<td>65%+</td>
</tr>
<tr>
<td>Chinese ports’ share of world teu</td>
<td>16%</td>
<td>29%</td>
<td>40%+</td>
</tr>
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*Source: Drewry*
2020 vision.....?

Source: Drewry
Need exponentially growing; capital increasingly private…

INFRASTRUCTURE INVESTMENT PANORAMA
Deepest contraction since the advent of commercial containerisation in 1956…

The global container port industry has shown resilience in the past with 1982 being the worst year before 2009; yet it grew at 4.2% then. 2009 was different though; but its turnaround indicates a resilient sector.

Source: Drewry
But the ‘silver lining’ is the port industry’s resiliency

By 2012 TEU traffic volumes will exceed 2008.

<table>
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<th>Year</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>5.2</td>
</tr>
<tr>
<td>2009</td>
<td>-10.3</td>
</tr>
<tr>
<td>2010</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>6.2</td>
</tr>
<tr>
<td>2012</td>
<td>6.7</td>
</tr>
<tr>
<td>2013</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Drewry

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Forecast global demand

Forecast global container port traffic

- Over 220 million teu

Source: Drewry
But, forecasted global terminal capacity doesn’t keep up

Source: Drewry

Capacity becomes an issue again
Infrastructure trends and opportunities

- OECD estimates **US$70 trillion required by 2030** for infrastructure development and improvement
- American Society of Civil Engineers state **US has US$2.2 trillion supply/demand infrastructure gap**; *American Recovery & Reinstatement Act* (ARRA) covered less than 5% of this
- Average size of infra fund now **US$3.3b** from **US$159m** in ’03; ‘**Dry Powder**’ for 2012 – **US$100b**
- Current financial crisis has resulted in less debt, opening door for more equity participation
- **Assets priced more realistically now**; lower return (IRR) expectations as well ie, 15%-18% from 18%-20% in the 2006-2008 period
Issues

• Financial crisis impact on ports sector – more realistic financial expectations from investors

• Port related infrastructure investments
  – Back to original attraction: hedge against inflation, long term growth prospects, high barriers to entry
  – Very resilient industry!
Opportunities for ports from infrastructure investors

- Illiquidity resulting from the downturn opens door for private capital into the sector.
- Less availability of debt opens door for more direct equity investment
- Emerging markets with capacity constraints should be good hunting grounds.
Comparative yields for infrastructure investments – ports still do all right

<table>
<thead>
<tr>
<th>Asset segment</th>
<th>Risk</th>
<th>Avg cash yield (yrs 1-5)</th>
<th>Avg leveraged IRR</th>
<th>Capital appreciation potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toll roads</td>
<td>Low</td>
<td>4%-9%</td>
<td>8%-12%</td>
<td>Limited</td>
</tr>
<tr>
<td>Seaports</td>
<td>Medium</td>
<td>4%-7%</td>
<td>15%-18%</td>
<td>Yes</td>
</tr>
<tr>
<td>Merchant power stations</td>
<td>High</td>
<td>4%-12%</td>
<td>15%-25%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: JP Morgan
Speakers

• Pierce Homer, **Transportation Director, Moffatt & Nichol**: Public sector perspective on supply chain partnerships

• Jonathan Red, **Partner – Global Logistics Development Partners**: What ports need to do to prepare for and attract private sector capital

• Nathaniel ‘Sam’ Ruda, **Director of Marine and Industrial Development/Port of Portland (OR)**: Evolution of strategic thinking process Portland took in deciding to lease T6

• Joseph Seliga Esq and Jeromy S Cannon, Esq – **Mayer Brown LLP**: How overall choice of P3 structure filters into a few key provisions in ultimate agreement (eg, T6 lease)
‘Navigating the World of Port Properties – To Maximise the Value of Ports’

Thank You

Aegir Port Property Advisers
Drewry Maritime Advisors