Future Tendencies in the Global Shipbuilding Market

Workshop on Trends and Challenges in Shipbuilding
OECD Council Working Party on Shipbuilding (WP6)

Dr Adam Kent - Maritime Strategies International (MSI)
# Agenda

## Future tendencies in the global shipbuilding market

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<td>Vessel Demand – Structural Changes</td>
<td><strong>Dr Adam Kent</strong>&lt;br&gt;Managing Director&lt;br&gt;<a href="mailto:adam.kent@msiltd.com">adam.kent@msiltd.com</a>&lt;br&gt;+44 (0)20 7940 00740</td>
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<td>Supply Side Changes</td>
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A globally renowned, independent maritime consultancy firm specialising in model-based forecasting and structured quantitative analysis, supporting business decisions to shipping, offshore and allied industries.

1986
MSI founded from the spin-off of shipping analysis from Chase Econometrics.

1999
MSI launches container report and model service.

2004
MSI launches chemical tanker market service.

2005
MSI coverage extended to include additional sectors.

2015
MSI launches credit risk modelling (CRM) service.

2019
All MSI sector models moved to online platform.

1996
First multi-year consultancy contract signed with a government agency.

1999
MSI launches its shipbuilding industry report and model service.

2002-03
MSI sector coverage extended to LNG and LPG.

2004
MSI begins issuing certificated valuations to banks.

2009
Sector coverage extended to include offshore market.

2016
MSI launches FMV, the first online valuation platform offering future value assessments.
Vessel Demand – Structural Changes

Future tendencies in the global shipbuilding market
Incremental Cargo Demand

Average Growth

- 1995-1999
- 2000-2004
- 2005-2009
- 2010-2014
- 2015-2019
- 2020-2024

Bar chart showing the average growth for different cargo types across different periods.
Oil Dynamics Changing

Oil Production – Oil Consumption = Net Position

- In Deficit...
- ...now an increasing surplus

Net Position (MnTpa)

- East of Suez (Excluding Middle East)
- West of Suez

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Peak Iron Ore and Coal imports driven by:
1. Peak steel consumption reached in 2019
2. Domestic Iron Ore substitution reaching max.
3. Increasing % steel produced via EAF
4. Support for domestic coal producers
5. Renewable energy share increasing
6. Increasing energy efficiency
Container Trade
A new chapter has already started

![Graph showing trade to GDP ratio from 1981 to 2025. The graph indicates fluctuations in the ratio, with notable peaks and troughs. The periods are color-coded as follows: 1980's (yellow), 1990's (green), 2000's (light blue), 2010's (orange), and 2020-25 (dark red).]
Containership Vessel Cascade Changing Quickly

- 2015 Average Ship Size
- 2017 Average Ship Size
- Cascading Vessel Size

k TEU


0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

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LNG Exports by Region
Supply Side Changes

Future tendencies in the global shipbuilding market
Fleet Age Profile and Required Renewals

Share

100%

90%

80%

70%

60%

50%

40%

30%

20%

10%

0%

Bulker
LPG
FCC
Oil Tanker
LNG
Chemical
Cruisship
PCTC
MPP
RoRo
Reefer

25+ Yrs Old
20-24 Yrs Old
15-19 Yrs Old
10-14 Yrs Old
5-9 Yrs Old
0-4 Yrs Old

Youngest Fleet

Oldest Fleet
Earnings Outlook in Context

- '000 $/day

- 2022 Annual Average
- Current

- VLCC Tanker
- MR Tanker
- 20k SS Chemical
- 1.7k TEU FCC
- 4.4k TEU FCC
- 8k TEU FCC
- Handy Bulker
- Panamax Bulker
- Capesize
- MPP
- RoRo
- VLG
- SR LPG
- PCTC
- PSV
- AHTS

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Contracting Volumes to Improve (but Steady)
Big Vessels – Increasingly Dominant

Large = Crude Tanker 200+ k DWT, Bulker 150+ k DWT, Container 12,000+ TEU
Emissions – The New Challenge

Future tendencies in the global shipbuilding market
CO2 and GHG Mentions*

*Combined news article mentions in Tradewinds and Lloyds List
Where is the Current Asset Risk - Vessel Age or Elapsed Time?

IMO GHG Strategy

Reduce the average CO2 emissions per ‘transport work’ by at least 40%

Reduce total GHG emissions by at least 50%

Timeline

Vessel Newbuilding

Order at Yard

Delivered

5 years Old

10 years Old

15 years Old

20 years Old

25 years Old

Modern Vessel

5 years Old

10 years Old

15 years Old

20 years Old

25 years Old

Increased Risk of Obsolescence/Two Tier Market
• The Poseidon Principles are a framework for assessing and disclosing the climate alignment of ship finance portfolios.

• Signatories will, on an annual basis, measure the carbon intensity and assess climate alignment relative to established decarbonization pathways.

Current signatories:
Lessons to be Learned from New Technologies

# of Vessels

- X-DF
- Steam Turbine
- Motor Diesel
- MEGI
- Diesel Electric

- 30+ Yrs
- 25-29 Yrs
- 20-24 Yrs
- 15-19 Yrs
- 10-14 Yrs
- 5-9 Yrs
- 0-4 Yrs
- Orderbook
Global Energy Consumption – Reduction Scenario*

*IPCC SR1.5 scenario – Limiting warming to 1.5°C above preindustrial levels and related global emission pathways
Shipbuilding Evolution

Future tendencies in the global shipbuilding market
Yards When Last Order Placed

# Yards

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<tr>
<th>Year</th>
<th>Other</th>
<th>Western Europe</th>
<th>Eastern Europe</th>
<th>South Korea</th>
<th>Japan</th>
<th>China</th>
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Recent Wave of Yard Consolidation

Shipyard Country | Average Share* of Country Output* of “Super Yard”
--- | ---
Korea | 77%
China | 38%
Japan | 53%

* Over last 5 years
Development of Newbuilding Price

YoY % Change

- Costs YoY Change
- Price YoY Change
- Yard Forward Cover (RHA)

Years

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MSI’s expertise covers a broad range of shipping sectors, providing clients with a combination of sector reports, forecasting models, vessel valuations and bespoke consultancy services.

MSI’s team is comprised of professionals with extensive academic credentials, deep industry knowledge and many years experience of delivering successful client projects.

MSI balances analytical power with service flexibility, offering a comprehensive support structure and a sound foundation on which to build investment strategies and monitor/assess exposure to market risks.

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