GREENER SHIPPING SUMMIT 2021

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Green regulations. When will they actually affect ship financing?

Intermodal Shipbrokers,
November 9th 2021

Decarbonization Targets to alter the shipping market structure

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Shipowners faced with increased carbon risk from 2023 onwards in order to achieve carbon intensity and GHG emissions reduction targets:

Greenhouse Gas Strategy towards 2050:

40% and 70% Carbon Intensity Reduction by 2030 and 2050 respectively vs 2008

- Energy Efficiency Design Index for existing ships (EEXI) in 2023 - Technical Measure
- Mandatory Carbon Intensity Indicator (CII) in 2023 – Operational Measure. MEPC 76 intermediate step to reduce CO2 emissions per transport work by 11% by 2026 vs 2019 levels
- For ships that achieve a D rating for three consecutive years or an E rating, a corrective action plan needs to be developed as part of the SEEMP and approved.

Regulatory, market and finance risks:

Between 2023 and 2026 a two-tier freight and asset market will have developed – eco/alternative propulsion vessels and non-eco units that will require some form of retrofitting to compete to the new regulatory landscape otherwise they will be marginalized

Decarbonization Targets require Medium to High CAPEX Investments

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In the above context, potential Carbon Intensity Improvement Options include:

- Engine Power Limitation Device:
  Speed reduction – No CAPEX
  – Short term solution
- Hull Cleaning (Medium OPEX)
- Energy Efficiency Technologies
  (Sails, Kites, Rotors, Air Lubrication etc.)
  (Medium CAPEX/Medium OPEX)
- **Alternative Fuels:**
  *LNG or Ammonia (after 2024):
  (High CAPEX / High OPEX)
  *Drop-in Biofuels: (Low CAPEX / Low OPEX)
  *Fuel Cells: (High CAPEX)
  *Combination of strategies along with Carbon
  Capture and Storage (High CAPEX)

The alternative fuels option for retrofitting the existing fleet is more complex both technically and financially– older vessels less attractive to finance and potentially exposed to earnings discounts deterred from making capital intensive investments - but financing is needed for the highest fuel consumers -emitters to comply (chicken-egg problem)

Alternative Propulsion in the Orderbook increases but retrofit upgrades are key

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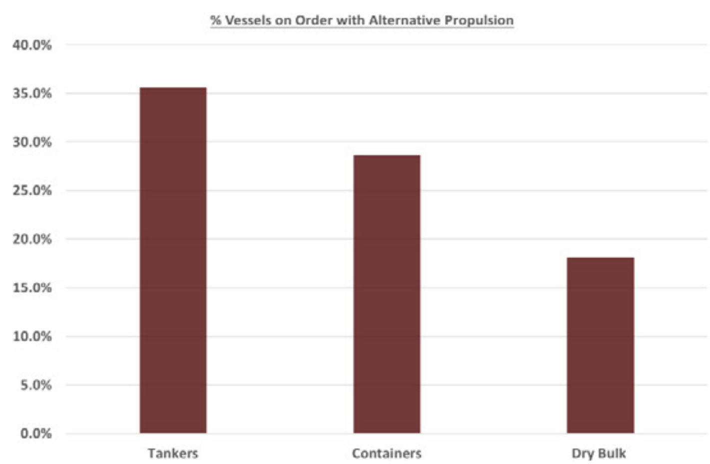

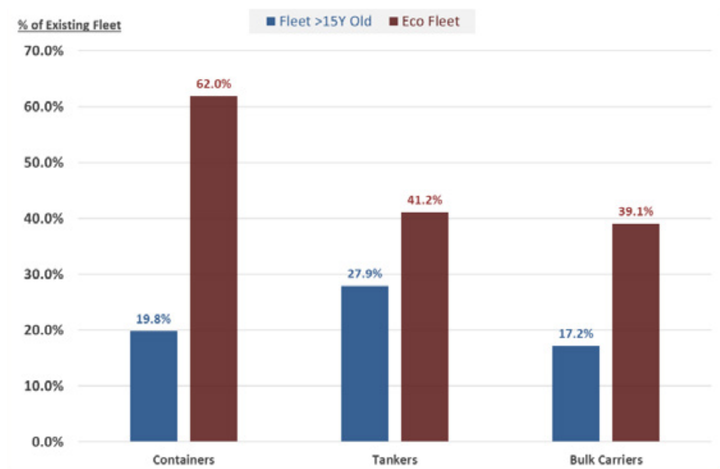

- Approx. 27.0% of the orderbook is alternative fuel propulsion based with focus on LNG
- Tankers and Containers running ahead in the alternative propulsion penetration in newbuilds

- Approx. 21.0% of the combined dry bulk, tankers and containers fleet is > 15Y old – demolition candidates over the next 5 years
- At least. 60.0% of the combined dry bulk, tankers and containers fleet will need to intensify efforts to be EEXI compliant and improve CII- dry bulk and tankers more exposed
- Slow steaming combined with scrapping: Effective vessels supply to decline materially- can the market afford it?

Funding as the Key Challenge in Decarbonizing Shipping

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- Complex environmental regulations create a shipping strategy stalemate and investors uncertainty

- Older fuel vessels are likely to be marginalized on limited access to capital – inflationary pressures on freight rates will be prolonged as effective fleet supply shrinks in favor of modern fuel efficient vessels - trade will have to eventually shrink

- Approx. $1.0 trillion will be needed to finance the required energy transition (R&D, testing of new technologies, modification of existing vessels, design and construction of new buildings and development of land infrastructure for new fuel types. (PwC)

The system transformation must begin now:

- Poseidon Principles in Development – Data collection required

- But Limited appetite from traditional banks to finance technology upgrades

- Increase in Alternative Financing, Export Credit Agencies and Leasing vs traditional secured debt financing further increases energy transition costs

- Stakeholders likely to form joint ventures and / or consolidate in order to have access to capital and share the risk and cost of new technologies

Thank you
for your attention

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