Challenges for ‘Green Financing’ of Maritime Equipment

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Green Policy Initiatives

International Maritime Organisation (IMO)

- **2020 Sulphur cap** in fuel: < 3.5% → < 0.5% (ECA incl. CHN: 0.1%)
- **Ballast Water Treatment Convention**: until Sep. 2024
- **Green House Gas emissions**: at least 50% ↓ by 2050 compared to 2008
  - Average Carbon Intensity: at least 40% ↓ by 2030, and 70% ↓ by 2050

Poseidon Principles

  - Founding 11 banks include ABN Amro, Citi, Credit Agricole CIB, DNB, DVB, ING…
  - For Target of ‘IMO GHG’ and ‘Paris Agreement’ (Increase limit 2°C of pre-industrial level)
  - Assess Climate Alignment Ship Finance Portfolios, Publish the results
Current Choices of Market for Compliance

Current Common Cases

- Compliant Fuels
  - Minor Capital Expenditure
  - Immediate Solution

- Ballast Water Treatment Systems
  - > 28,000 ships to be equipped within 5 year time (Sep. 2024)

- Exhaust Gas Cleaning Systems (Scrubber Retrofit)
  - No Change in Fuel (HSFO 3.5%)
  - Lower Capital Investment than LNG

- Liquefied Natural Gas (LNG Powered Conversion)
  - Regulatory Certainty
    - SOx 90%↓, Nox 80%↓, CO2 20%↓
Further Choices of Market for Compliance

Alternative Energy

- Biofuel
  - Replaceable & Mixable with existing fossil fuels
  - No major technical changes to the existing engine

- Ammonia
  - Safer than gasoline
  - Easy to liquefy, store and transport

- Methanol
  - Minor Modifications to the existing equipment
  - Refueling infrastructure cost lower than LNG

- Hydrogen
  - Core eco-friendly technology in the future
  - Requires further R&D investment
General Challenges for Green Financing

Structural & Economical Uncertainty

Q Lack of technological & commercial experience in the industry
  e.g.) Scrubber: not yet fully operated through dry-dock intervals → repair & replacing cost?
  LNG: Significant loss of cargo-space, Large difference of regional price → unstable profitability?

Q Insufficient infrastructure
  e.g.) Scrubber: Limitation of production capacity, lack of shipyard slot for installation
  LNG: Lack of bunkering infrastructure

Q Additional investments during cyclical downturn and under overcapacity
  e.g.) Scrubber: U$7~10mil per ship / LNG U$25~30mil per ship
  Spread between HSFO~LSFO : additional U$200~250 per ton
Specific Issues of Uncertainty

How to Structure Financial Terms and Conditions

Q) Shorter than useful life; but useful life of equipment?
   ➤ Scrubber: No hands-on data collected yet reflecting harsh environment of ocean

Q) Longer than payback period; but payback of equipment?
   ➤ Depending on unknown price differential in future

14K TEU with cargo loss

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Source: 2018 Marine Money Busan, by HGS
6 Specific Issues of Uncertainty

Q) ‘Non Asset Backed Finance’ unlike normal ship finance
   ► Equipment: Not detachable from vessel → very difficult for setting up a separate ‘equipment-mortgage’
   ► New ‘vessel-mortgage’ would be also very difficult because 1st priority vessel-mortgage would have been already there

Q) Clash between new mortgage and existing 1st mortgage?
   ► Eligible ‘vessel life’ for retrofit: As remaining economic life of vessel should be longer than useful life of equipment, the vessels which are eligible for retrofit would be up to around 10 years old
     e.g.) Economic life of Vessel: 15 yrs / Scrubber: 5 yrs
         Oldest vessel for retrofit: 10 yrs old (+ 5 yrs of scrubber = 15 yrs)
   Those vessels (0~10 yrs) are likely to be still under ‘new ship building loan’ (Max repayment period in SSU of OECD: 12 yrs)
Specific Issues of Uncertainty

Q) With existing banks?
- Increase existing loan: if all syndicated loan banks agree with the increase 
  1st priority mortgage possible
- Add separate additional loan-tranche: if only some of existing banks participate 
  2nd ranking mortgage under approval by all existing banks?

Q) With new banks?
- Separate unsecured Facility: No mortgage, Corporate – Credit Based Financing
- All New Facility: Refinancing of existing vessel loan + financing of retrofit (conversion) 
  1st priority mortgage possible
  But, time consuming, complex discussion with multiple parties
Specific Issues of Uncertainty

Limited number of yard slots available before Policy Deadline

Yards

1) Normally, new building projects preferred by yards
   ► Size of project, Profitability, Operating Period… matter

2) Original builder preferred by ship owners
   ► Original builders are more likely chosen to avoid incompletion risk, and sudden procedural & technological delay in field

Summary

Challenges → Risk ↑ → Cost ↑ (Interest Rate)

Greener Industry, but Green Financing will come with a PRICE
Policy Suggestion
(For ‘export credits’ to overcome challenges)

Introduction of reasonable market measures as ‘common-approach’ on a policy level in OECD (i.e. through SSU)

1) ‘Green’ Premium Benchmark
   - Considering favourable environment attributes (not only by credit rating)

2) Flexible profile for repayment of principal and payment of interest
   - Equal instalments of repayment of principal and payment of interest combined
   - Transparent Irregular instalments
   - Fixed Interest scheme (e.g. CIRR)

3) Tailor made further new rules based on also ‘level-playing-field’
   - New maximum support rules for ‘tenor’, ‘percentage of cover (LTV)’…
Thank you