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Scrubbers or Low Sulphur Fuels?
IMO regulations to reduce sulphur emissions first adopted in 1997 and came into force in 2005 and ever since then have progressively tightened.

- Current sulphur cap: **3.5% m/m**

- **From 1st January 2020** the sulphur cap will be:
  - **0.5% m/m** for vessels operating globally and
  - **0.1% m/m** for vessels operating in specific designated Emission Control Areas (ECAs)
What are the Sulphur Cap Regulations?

- Applies to all vessels registered with Flag States that have accepted the regulations and all waters belonging to Port or Costal States that have ratified Annex VI of the International Convention for the Prevention of Pollution from ships.

- New sulphur cap will or is likely to affect 70,000 ships worldwide – DNV GL.
Lower Sulphur Fuels e.g. LNG, CNG/blended fuels

Or

Exhaust Gas Cleaning Systems (Scrubbers) to reduce the sulphur content in emissions
Who bears the costs of compliance?

1. Ship owners - so that their ships can be permitted to sail and can continue trading

2. Port Authorities - by lowering port dues for green ships and therefore tax payers absorb part of the costs

3. Split between the supplier of the technology/compliant fuel and the ship owner – A question for the future?
• Out of the hands of the average ship owner/operator
• Lack of availability of compliant fuels all over the world
• The lower the sulphur content, the higher the cost of the bunker fuel – compliant fuel may on average cost US$ 200 more per tonne.
• The high demand and lack of fuel industry preparedness (lower supply) for these new fuel requirements will cause the fuel prices to be extremely high
• Alternatively, if LNG is to be used, ships would require additional equipment on board including piping and machinery – i.e. capital to convert ordinary vessels to LNG fuelled vessels is quite high.
Challenges to Scrubbers

- Costs of installing these scrubbers are high – estimated to be around USD 1-3 million for new builds and USD 4-4.5 Million for retrofits
- Ships will need to be dry docked for around 2 weeks for the scrubber to be installed – losing out on trading time
- Ship structures may need to be significantly altered during this process – fit for purpose might be affected
- Additional costs will be incurred on crew to operate these scrubbers
- Older ships that do not have much time left to trade that retrofit scrubbers may not be able to make up their investment on the scrubber
Financing of scrubbers on ships - relatively simple, if vessels are not already mortgaged.

Challenges that ship owners will face if the ships are already mortgaged:

- Restrictions in existing finance documents
- General principle that once equipment is installed on a ship, it forms a part of the ship itself
- Junior lenders for scrubbers will need to negotiate inter-creditor terms with senior lenders- time, cost, security
Some Possible Financing Solutions

- Retention of title to scrubbers by the financier and lease to the owners, Put Option

- Scrubber financier provides capital through sub participation of existing loans – *Pari Passu* security

- Set Off Rights vs Scrubber Loan Payments – Scrubber Financier as Charterer

- “Pay As You Save” Models – A motivation for all stakeholders involved
Some recent examples

- Wartsila and Clean Marine Energy align to offer ship owners “scrubber finance” – repay the cost of scrubber system installation via a fuel adder

- Goldman Sachs seeks to help ship owners finance the installation of scrubbers by partially pre-financing scrubber installations and helping them secure additional funding from their habitual credit providers

- BNP Paribas provides first green loan (USD 40 million) to a shipping company in Asia Pacific to Quantum Pacific Shipping for scrubbers
“If you fail to plan, you are planning to fail”
- Benjamin Franklin

OFF TO THE PANEL..........