BSEA

BREAKWAVE ADVISORS

Maritime Decarbonization Monthly

July 2022

Thought of the Month:

"It's all about calculations when it comes to carbon emission schemes"

The Big Picture

The BIMCO Emission Trading Scheme Allowances Clause was published to allow shipowners and charterers to allocate which party is responsible for the emissions created by the voyage when operating under an emissions scheme, such as EU ETS. At the same time, the timing of applying EU ETS to shipping shifted one year forward and it is now scheduled to take effect on Jan. 1, 2024. The BIMCO clause will also be applicable to other emission trading systems coming into form. Several such systems are currently being developed in China, Japan, and the United Kingdom.

S&P Global Commodity Insights has announced that it will **introduce daily Platts price assessments for freight emissions** under the European Union Emissions Trading Scheme (ETS). The new assessments will show the cost of carbon dioxide emissions from fuel combustion for transporting crude or fuel oil on a midsize (Aframax) tanker across an initial four European shipping routes, starting Aug. 1.

What's New

London-based maritime industry information provider **Baltic Exchange** is developing a project to create a standardized emissions reference point and find an easier way to compare emissions between vessels. As of January 1, 2023, two new energy efficiency requirements will come into effect as part of global measures to reduce greenhouse gas emissions from shipping: the Energy Efficiency Existing Ship Index (**EEXI**) and the Carbon Intensity Indicator (**CII**). The main objective of the project is to establish a benchmark that will provide a valuable reference point for the shipping industry as the market seeks to address the cost of carbon emissions. So far, the project has produced some theoretical documents based on standard routes and vessel descriptions for dry and tanker shipping, which are now in a consultation phase.

Our View

A consortium of 13 maritime companies has just launched a collaborative platform to eliminate the practice of sailing fast and then waiting for long periods outside of ports, which currently causes unnecessary emissions and adds to port congestion. By tackling the rush to wait, their **Blue Visby** platform aims to reduce emissions from maritime journeys by 15%. Practical solutions, such as creating efficiencies using information to optimize ship operations, are a critical step for the industry to achieve its goals while working with the ships and technology currently in operation. We believe that seeing a large partnership tackle one of the largest operational inefficiencies within the shipping industry is a notable step towards the transition.

Industry Trends

Fuels

Sustainable fuels are expected to play an increasingly important role in the transportation sectors, including hard-to-abate sectors such as aviation and heavy-duty road transport. **McKinsey** foresees that the demand for sustainable fuels is expected to triple over the next 20 years. Sustainable fuels include biofuels such as hydrotreated vegetable oil (HVO), or bioethanol, and synthetic fuels (synfuels) such as ammonia or methanol.

- **The Singapore-based Global Centre for Maritime Decarbonization** (GCMD) led a consortium of 18 industry partners in a drop-in biofuel pilot project aimed at establishing a framework for ensuring supply chain integrity for current and future green marine fuels. The pilot project will commence on August 1, 2022 and is expected to take 12 to 18 months to complete. The ship owners, charterers, and operators participating in this pilot project represent approximately 2,300 vessels across the container, tanker, and bulker segments, and are responsible for transporting 8.4 million TEUs or 80.6 million DWT globally.

- **DHL Global Forwarding**, the air and ocean freight specialist of Germany's Deutsche Post DHL Group, has signed an agreement with compatriot liner shipping company **Hapag-Lloyd** for the use of advanced biofuels. The two companies share the vision of decarbonizing container shipping and logistics. With their project, they will demonstrate the scalability of sustainable transport solutions and the relevance of sustainable fuels in today's market.

Technology

- Existing **MAN** engines can now be retrofitted to become climate neutral. MAN PrimeServ, MAN Energy Solutions' after-sales brand, is now offering its customers the opportunity to retrofit older MAN 48/60 marine and power-plant engines to state-of-the-art MAN 51/60 types to prepare older engines already in service for future, climate-neutral operation. Converted engines will be technically equivalent to newly built MAN 51/60 units. As a further option, newly converted engines can be upgraded for operation with synthetic fuels for a low premium.

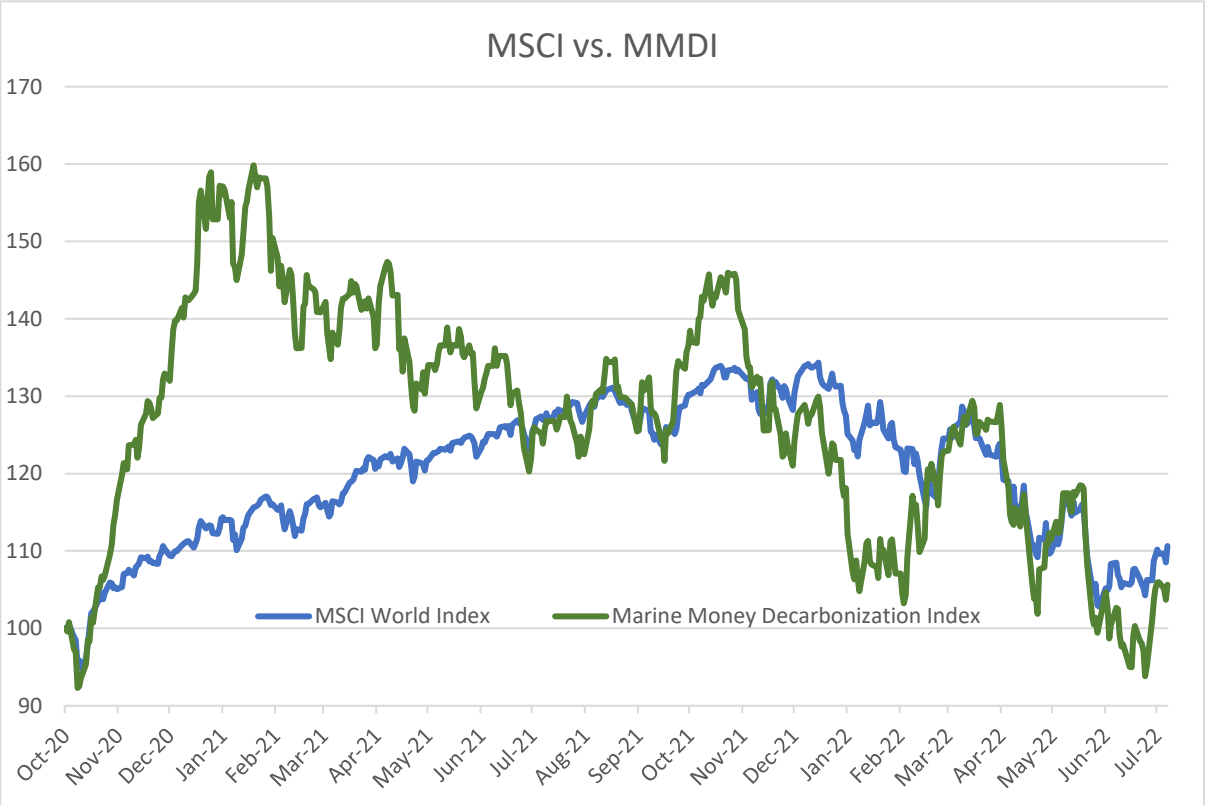
New Designs

- A methanol dual-fuel 300,000 dwt very large crude oil carrier (VLCC) has received approval in principle from the classification society **Korean Register** (KR). The **methanol dual-fuel VLCC**, which was developed under a joint project between KR and Hyundai Heavy Industries (HHI), is powered by methanol and marine gas oil (MGO). **KR** and **HHI** conducted a joint project to develop the vessel, overcoming technical challenges in designing **LCO2 carriers**, such as enlarging the size of the C-Type cargo tank to meet the market need to transfer a larger amount of CO2 to storage facilities.

- **Kawasaki Kisen Kaisha** ("K" LINE), one of the world's largest shipping companies, has confirmed orders for **three additional Seawing systems**, bringing to a total of five vessels that will use Airseas' innovative wind propulsion technology to reduce emissions.

Green Ships

- Brazilian mining company **Vale** has received approval in principle from the classification society DNV for the construction of multi-fuel tanks on iron ore carriers designed to use alternative, lower-carbon fuels for shipping.



Relevant Prices

Fuel Prices	Price	YOY
Crude Oil, Brent	109.93 $/bbl	44.5%
Natural Gas, Henry Hub	8.19 $/MMbtu	101.9%
LNG, Korea/Japan	41.54 $/MMbtu	175.4%
Coal, Rotterdam	330 $/mt	150.5%
VLSFO, Rotterdam	776 $/mt	48.4%
Methanol, China	37.83 $/mt	-2.1%
Palm Oil, Malaysia	39.14 $/mt	-6.8%

Stock Indices		
Marine Money Decarbonization Index	349	-10.4%

Carbon Emission Allowances		
EU Emission Allowances	79.83 $/kt	44.9%
UK Emission Allowances	95.27 $/kt	53.9%

Note: All prices as of last closing prior to the report; Sources: Bloomberg and Breakwave Advisors

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