Overview of minor bulks – waste, fly ash and aggregates

Oct 2024

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Agenda

A	Importance of minor bulk
B	Ferrous waste
C	Fly ash
D	Aggregates
E	Handysize and Supramax
F	Freight cost

Maritime Research

Rigorous analysis – Practical advice

Shipping cycle

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Shipping cycle

Dry bulk shipping is highly cyclical. China's entry to the WTO and commodity boom created a spike in demand, which caused a super cycle from 2004 to 2008. The global financial crisis in 2009 and the excess supply of vessels dragged the charter rates to a historical bottom in 2016

Dry bulk business cycle

Dry bulk shipping cycle: Baltic Dry Index

Source: Drewry

Key takeaway

- The dry bulk market saw a supercycle between 2004 and 2008, fuelled by China's entry into the WTO and subsequent commodity boom. This led to overbuilding of vessels, which created excess supply and led to very low freight rates in the following decade.
- A slow recovery started in late 2017. The Covid-19 pandemic-induced lockdowns led to port congestions in major dry ports. This led to an increase in the charter rates of dry bulk vessels since 1Q21.
- The dramatic increase in rates has been moderating as the operating inefficiencies normalise.
- The decline in utilisation caused earnings to fall in 2023.

Why is minor bulk important

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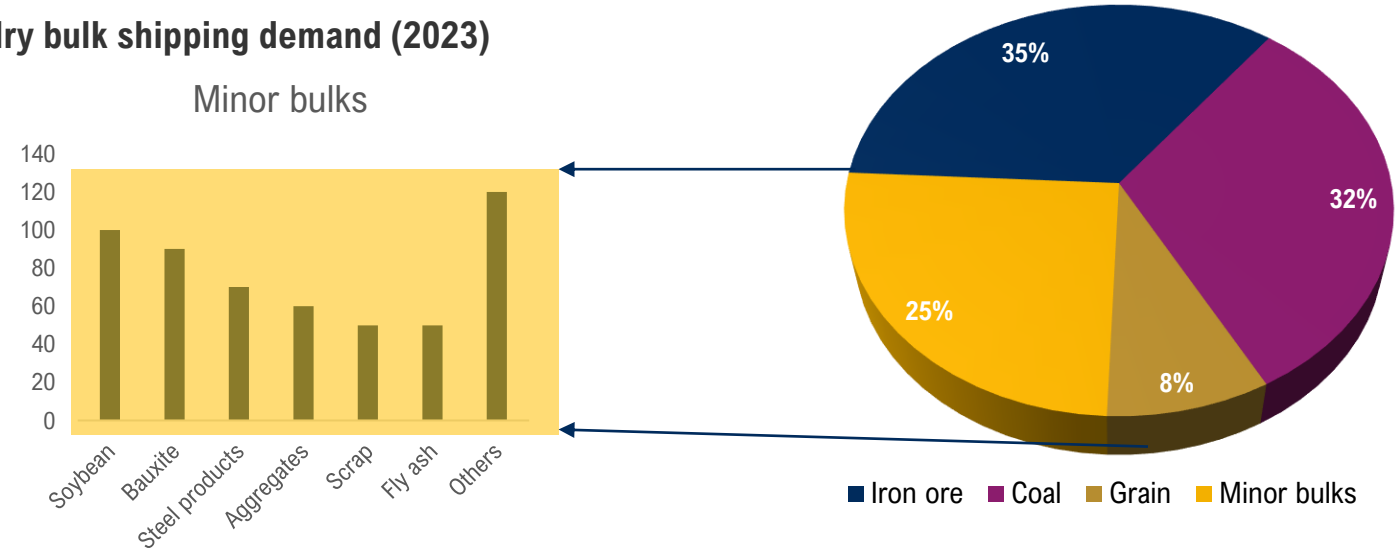
Key drivers

Dry bulk shipping industry transports raw materials (mineral ores and semi-finished products) over long distances. The interplay of the demand for various commodities (mineral ores and semi-finished products) and the supply of vessels determines the earnings in dry bulk shipping. The market is highly liquid and its earnings are highly volatile.

Share in dry bulk shipping demand (2023)



Key downstream drivers of dry bulk shipping demand

Commodities	Main Demand Driving Sector
Iron Ore	Steel industry
Coal	Power generation, steel industry
Grain	Human consumption, industrial food
Minor Bulk such as Steel products, Bauxite, Fertiliser, Soybean, Raw sugar (comprising over 40 commodities).	Various industries, renewable power generation, steel production, human consumption, industrial food, etc.

Source: Drewry

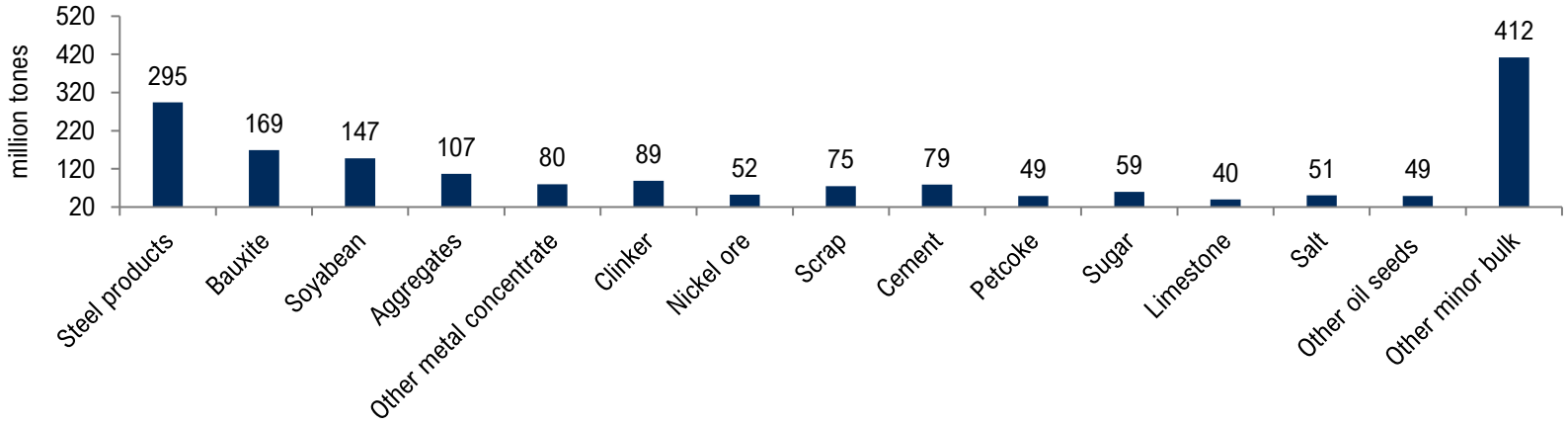
Key takeaway

- The marine industry provides the only practicable and cost-effective means of transporting large volumes of basic commodities and finished products over long distances.
- Dry bulk cargoes consist primarily of the major and minor bulk commodities.
- The dry bulk shipping industry is characterised by high liquidity and high earnings volatility.
- Iron ore contributes the most to the dry bulk shipping demand, with a share of 35%, followed by coal at 32%.

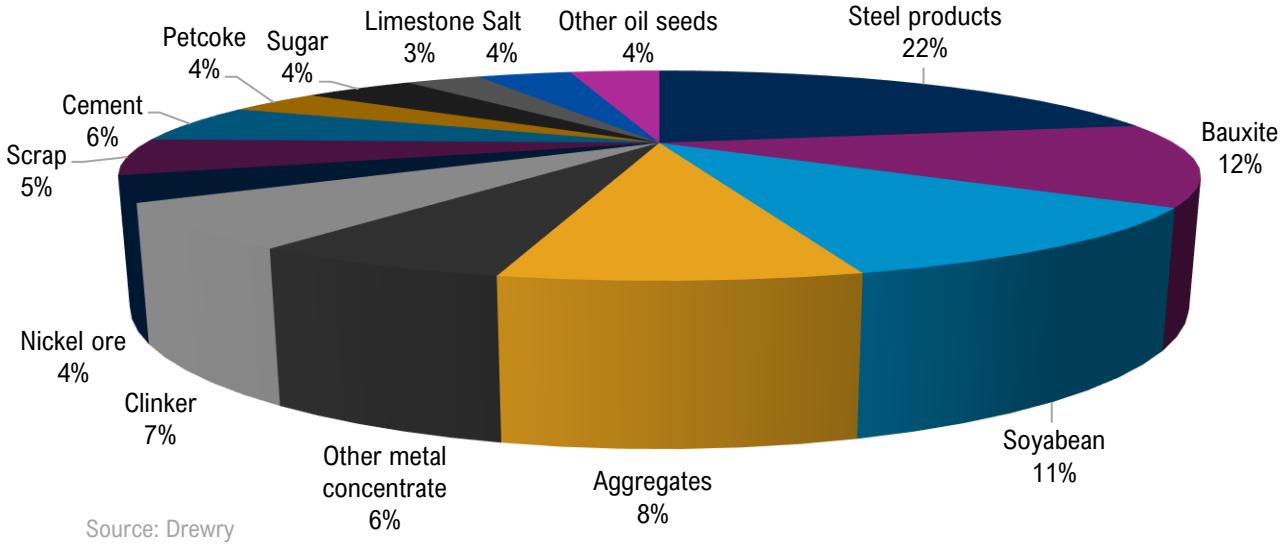
Minor bulk shipping

Steel products, bauxite, soybean, nickel ore, aggregates and limestone are the largest minor bulk commodities.

Top 15 minor bulk commodities trade volume (2022)



Share of top 15 minor bulk commodities (2022)



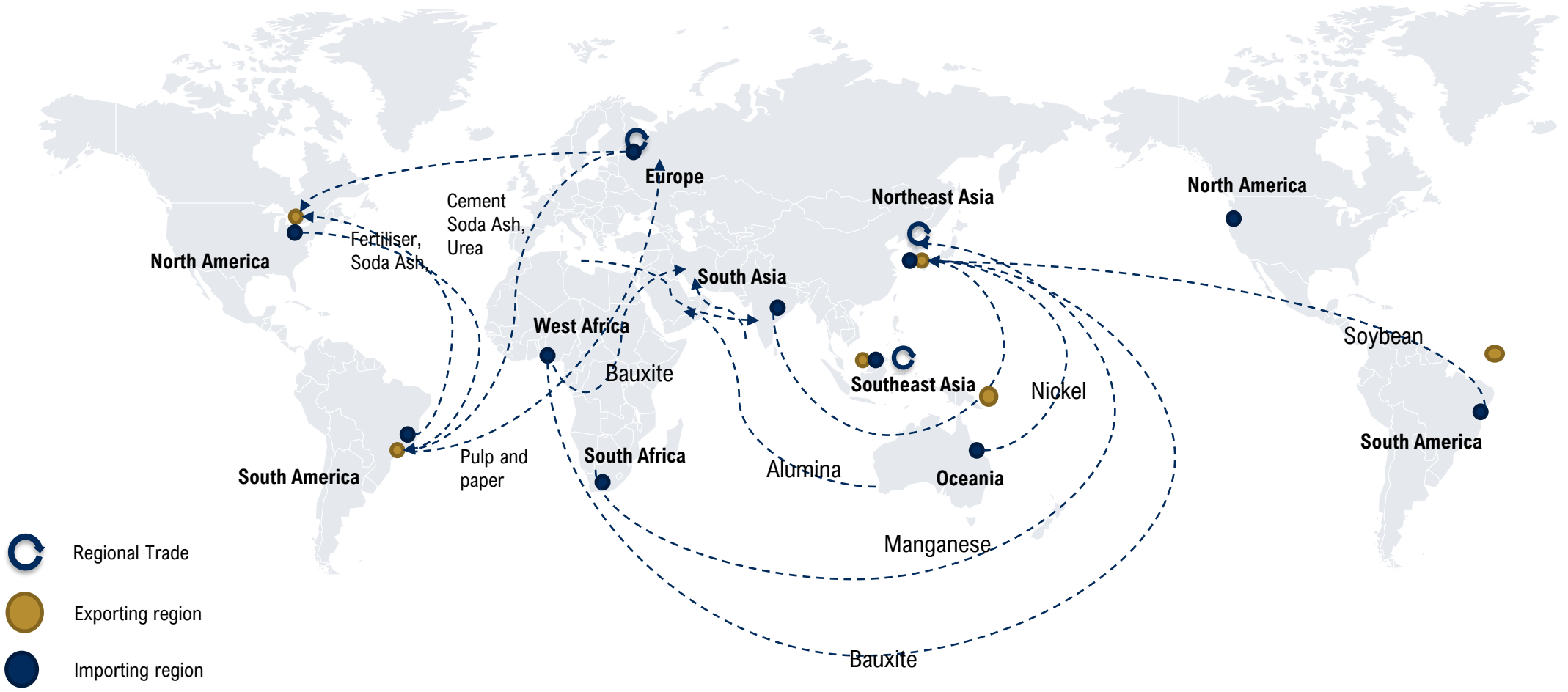
Source: Drewry

Key takeaways

- Over 40 commodities have been included in the minor bulk category. These cargoes are predominantly carried by dry bulk vessels but in many cases these are also shipped by containerships or multipurpose vessels. Some of the low-value minor bulk commodities like aggregates, sand etc, are also carried by small flat-top barges in regional trade.
- Various industries determine minor bulk commodity demand. Therefore, growth in demand tends to correlate positively with global GDP.
- Steel products, bauxite, soybean, nickel ore, aggregates and limestone are the largest minor bulk commodities.

Minor bulk (>40 commodities) is geographically broad-based

Minor bulk consists of numerous types of dry bulk commodities, including bauxite, iron and steel, nickel ore and manganese ore, which are generally transported by vessels smaller than Panamaxes. South America, Guinea and Australia are emerging as essential exporters of minor bulk, mainly driven by the export of nickel ore, lithium, copper and bauxite.



Note: The global trade map represents main trade routes. It is not meant to be exhaustive

Source: Drewry

Demand

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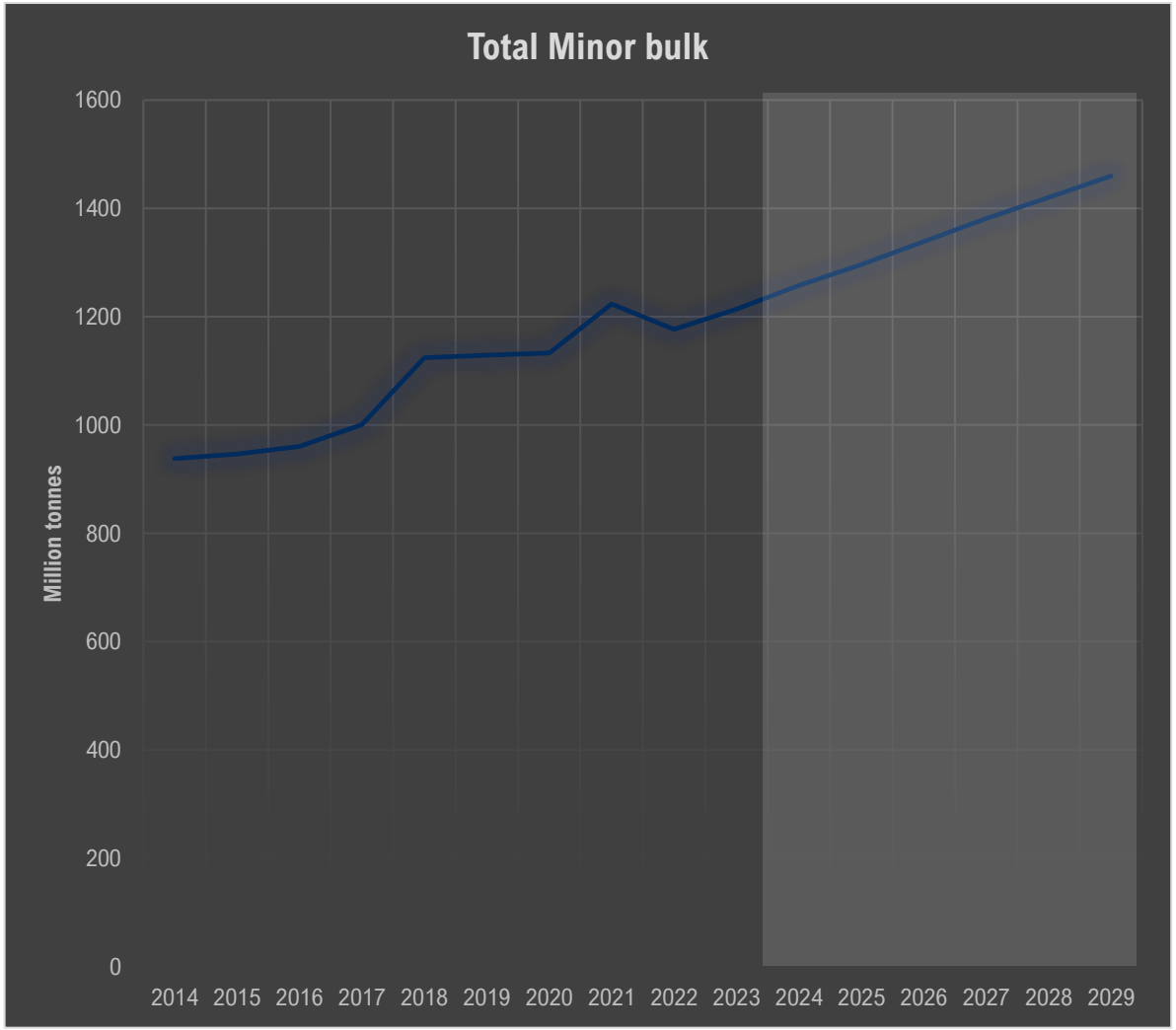
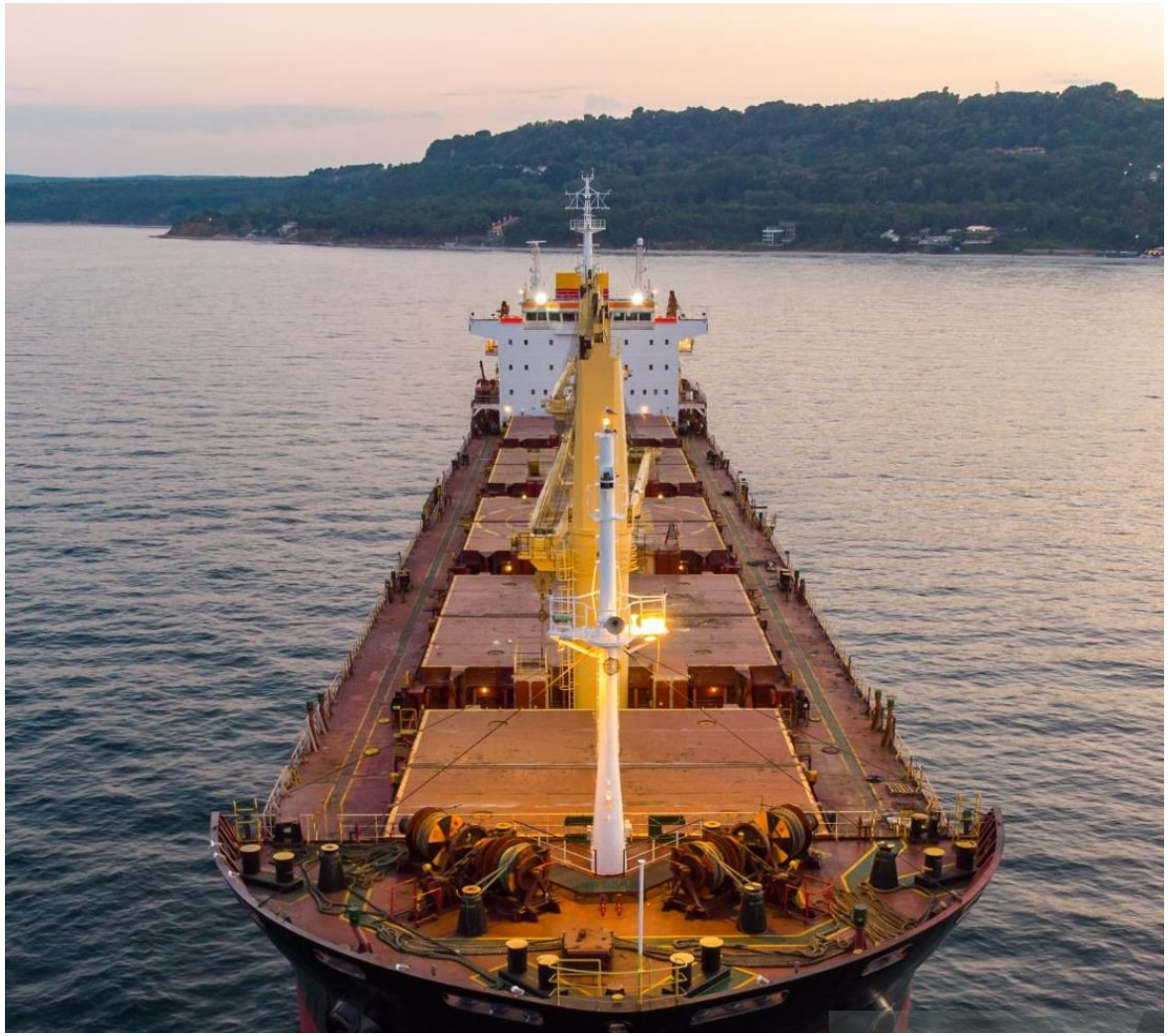
Total minor bulk trade forecast

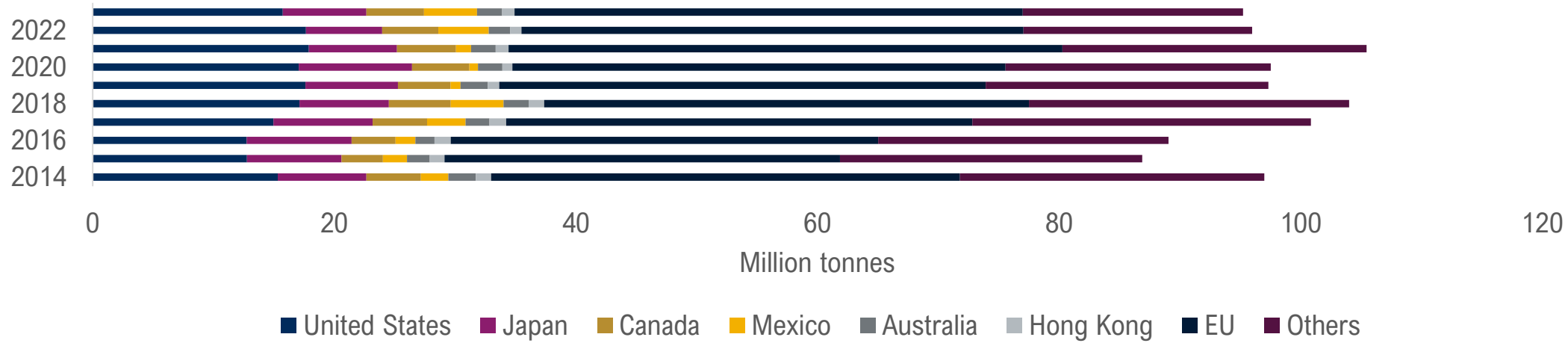




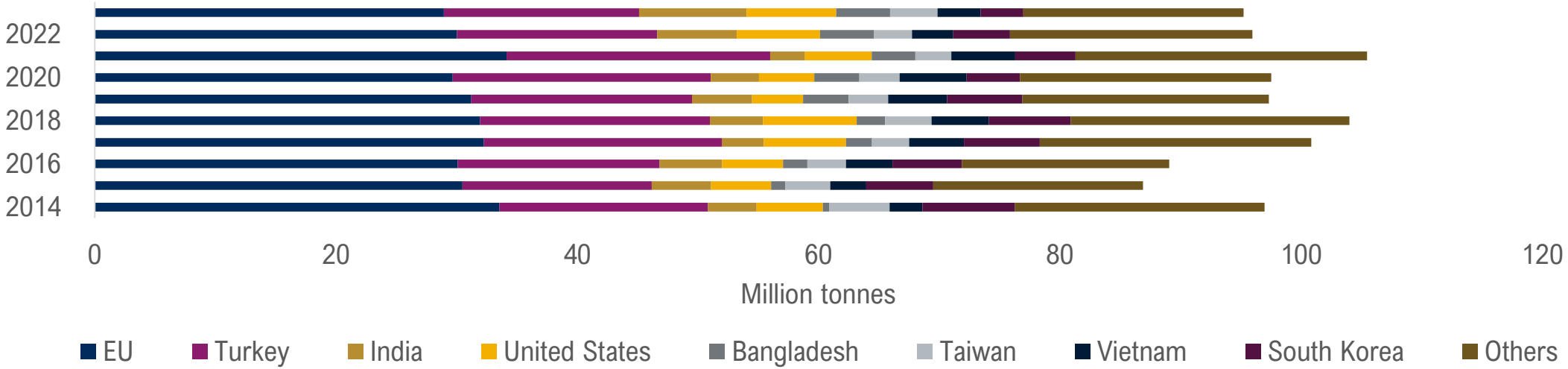
Source: Drewry

Scrap trade

Scrap exporters

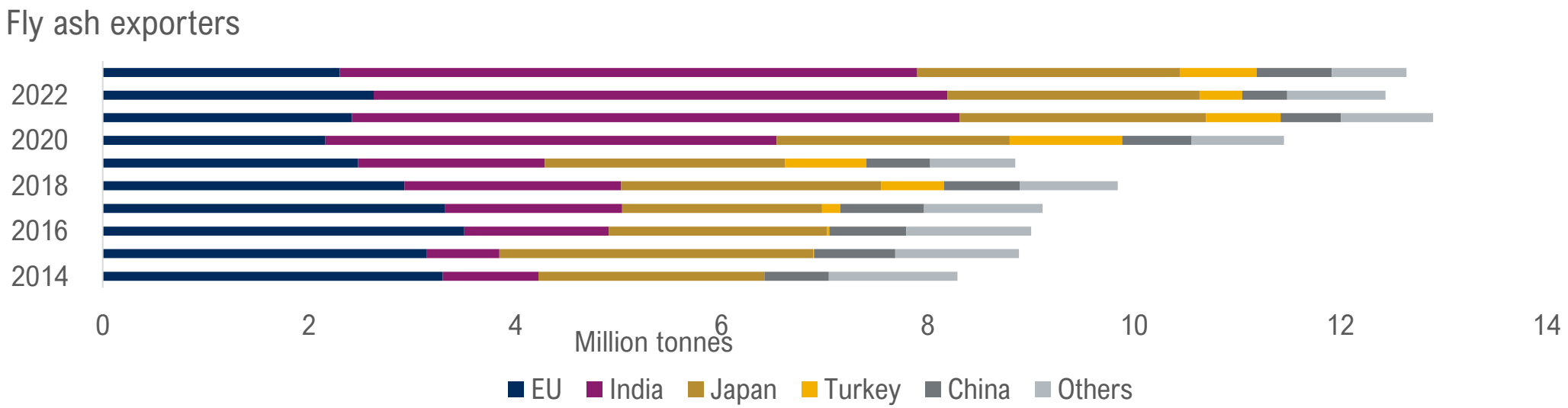


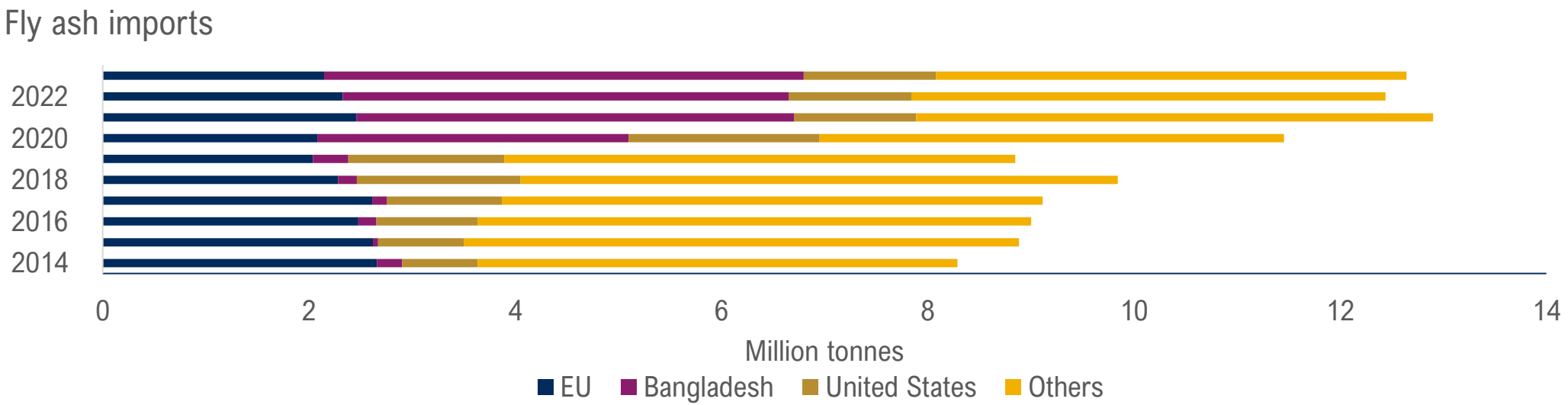
Scrap importers



Source: Drewry

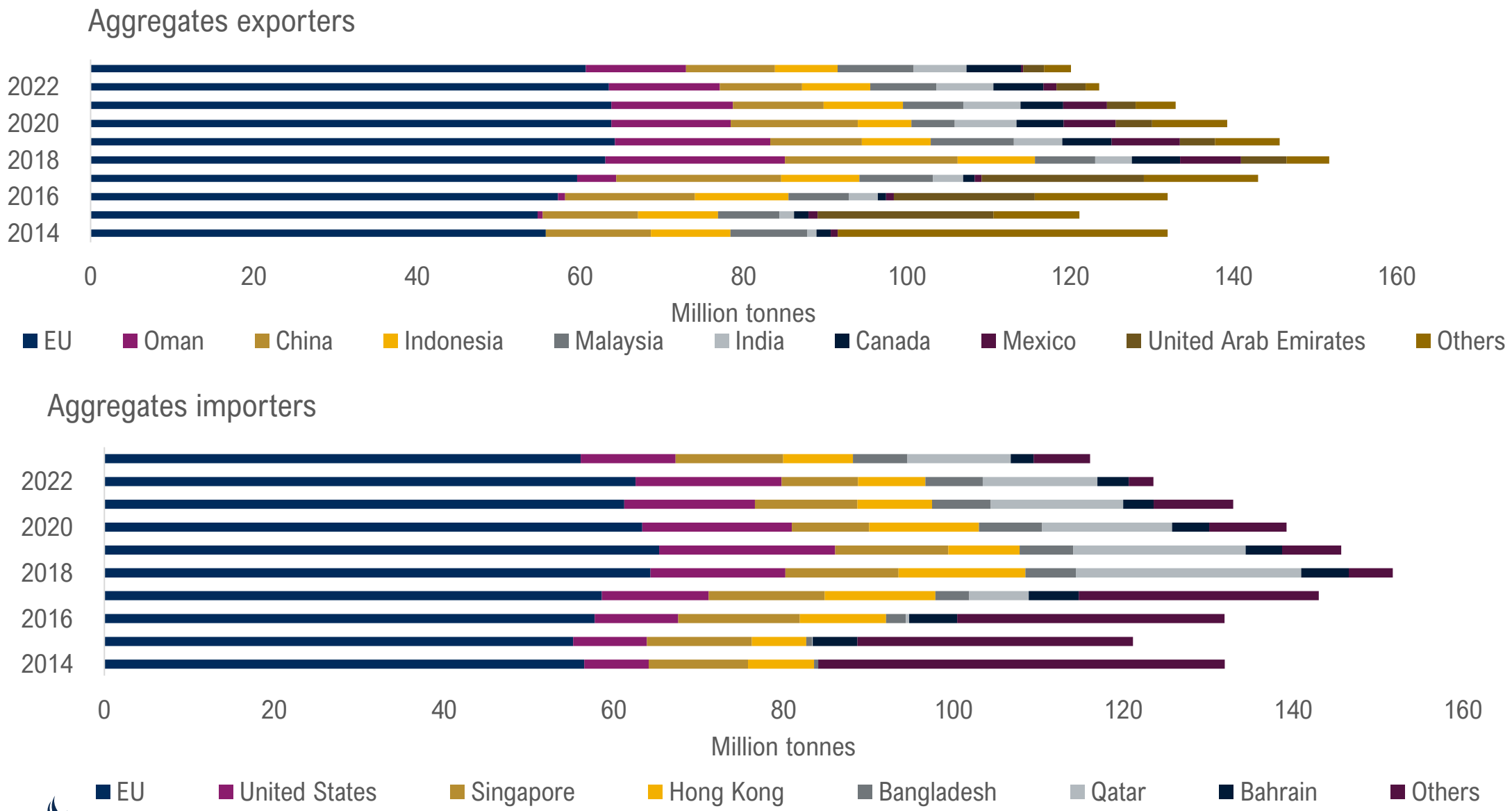
Fly ash trade





Source: Drewry

Aggregates trade



Source: Drewry

Drewry

Supply

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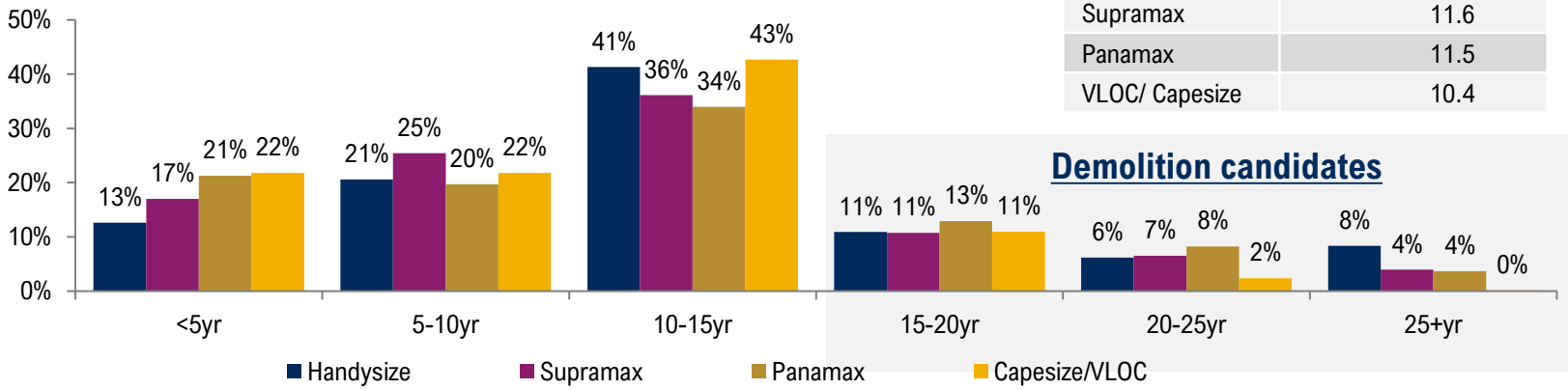
Dry bulk fleet age profile – a critical factor in fleet forecast

Larger vessels such as Capesize and Panamax have lower average age as there has been a general increase in the size of the vessels spurred by increasing parcel sizes. The average age of Handysize and Handymax vessels is 13.4 and 16.1 years, respectively.

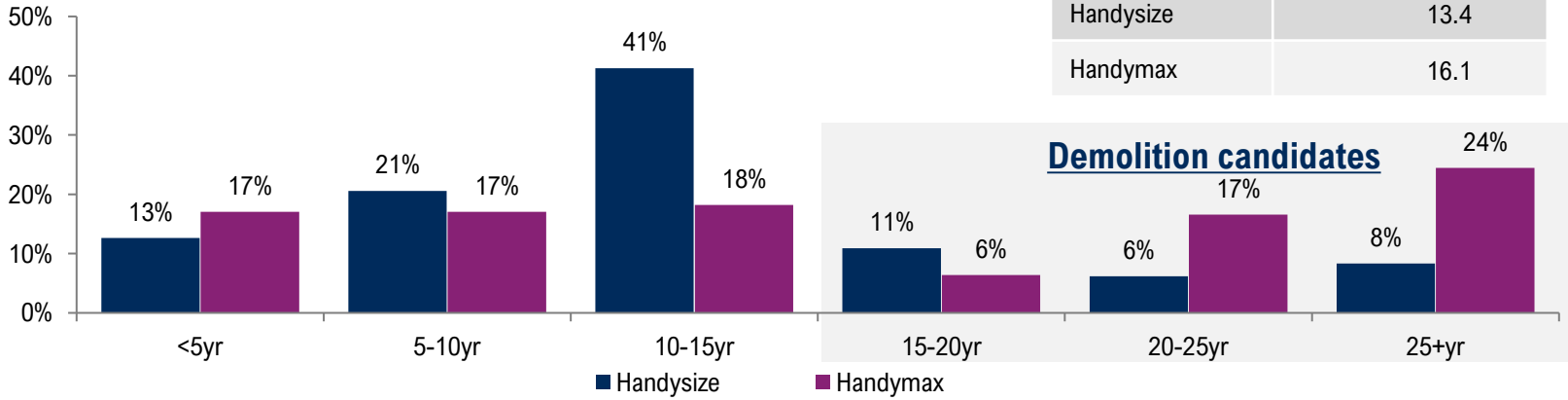
Dry bulk fleet age



Vessel	Average Age (Years)
Handysize	13.4
Supramax	11.6
Panamax	11.5
VLOC/ Capesize	10.4

Demolition candidates

Handysize and Handymax fleet age



Vessel	Average Age (Years)
Handysize	13.4
Handymax	16.1

Demolition candidates

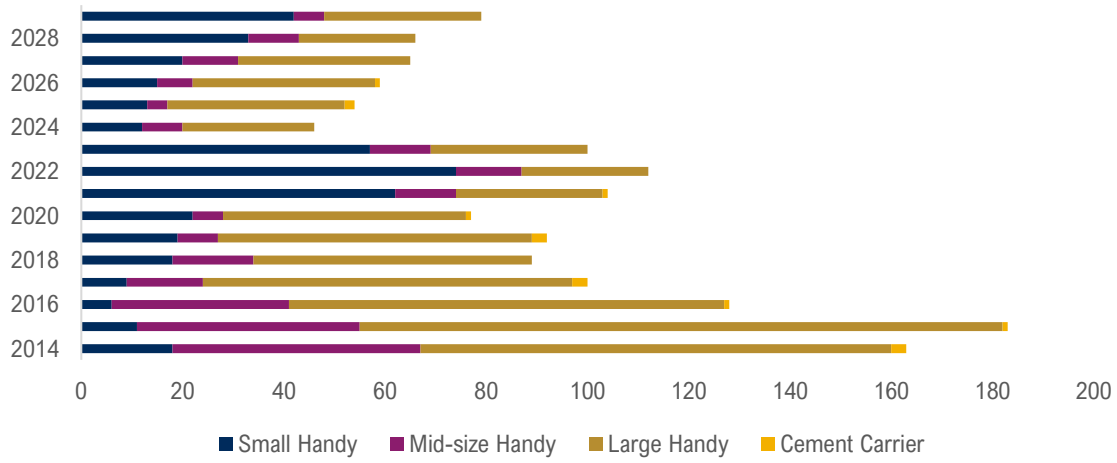
Source: Drewry

Key takeaway

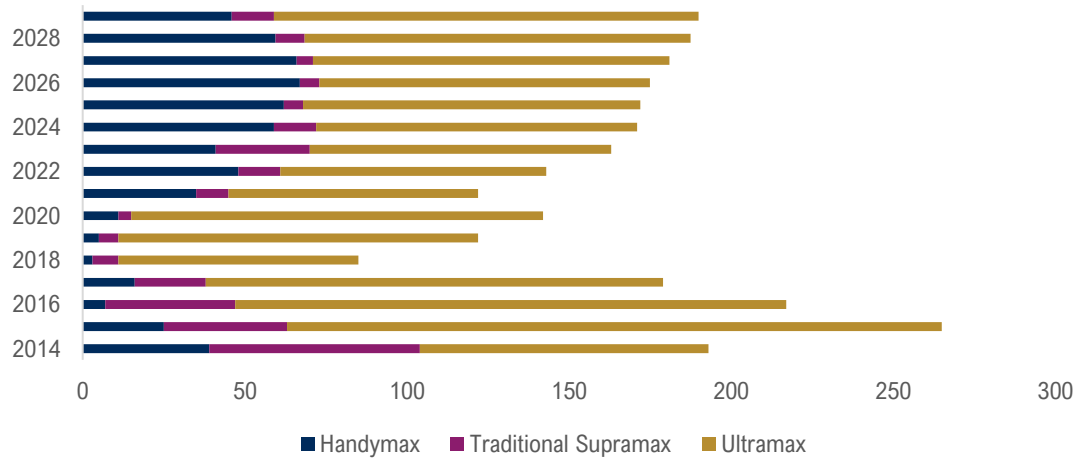
- In terms of age, VLOC/ Capesize fleet has the lowest average age at 10.4 years, followed by Panamax, Supramax and Handysize with 11.5, 11.6 and 13.4 years, respectively.
- There has been gradual upsizing in dry bulk shipping, leading to higher ordering of larger tonnages in each segment. New class of vessels have emerged in each sub-segment. For example Ultramaxes between 60-63,000 dwt are increasingly being preferred by the shipowners.
- The average age of Handysize and Handymax vessels is towards the higher end among all vessel segments.
- As environmental regulation is tightened the vessels older than 15 years are likely to be demolition candidates.

Supply

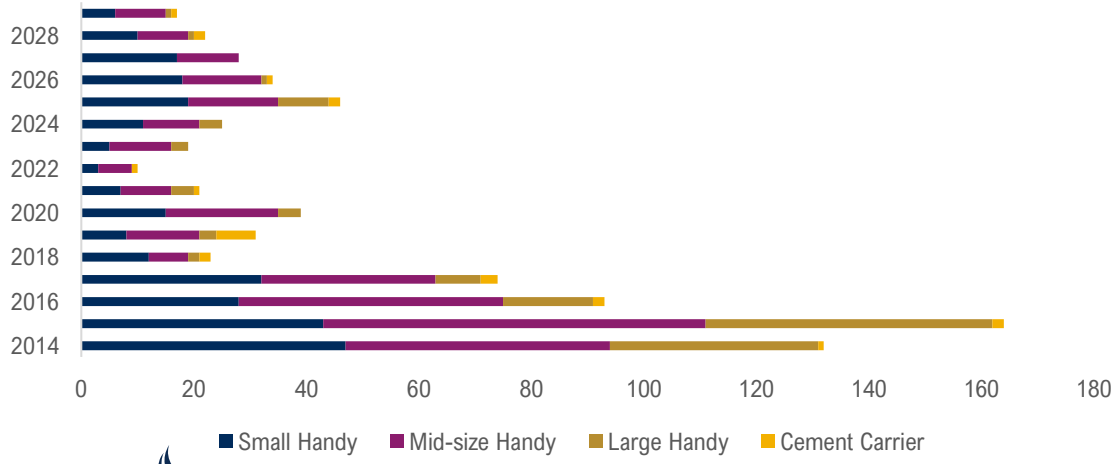
Handysize deliveries (No. of vessels)



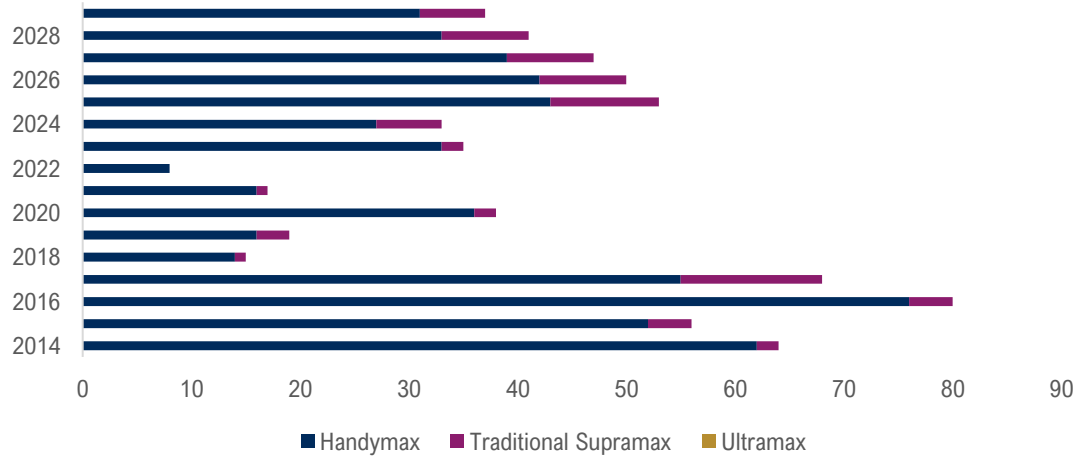
Supramax deliveries (No. of vessels)



Handysize demolitions (No. of vessels)



Supramax demolitions (No. of vessels)



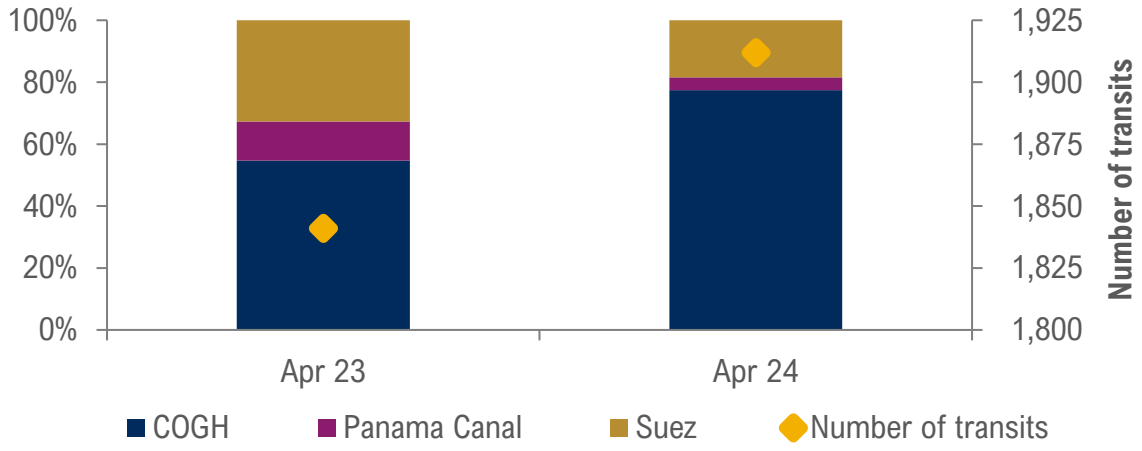
Source: Drewry

Drewry

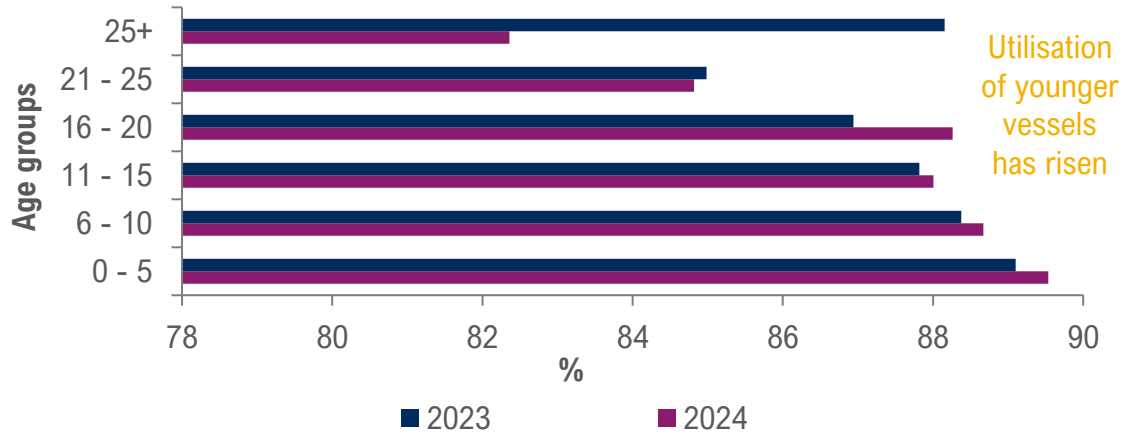
Other factors such as efficiency

Other factors

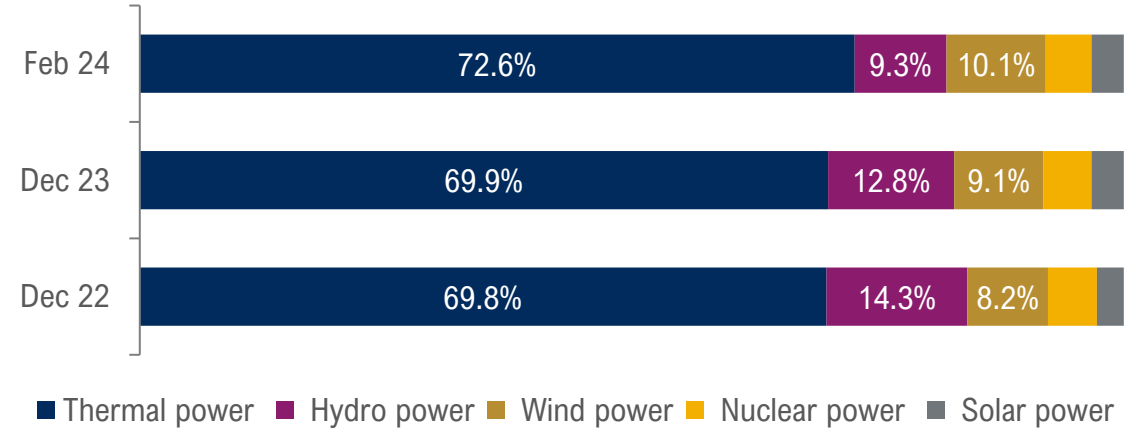
Share and number of transits via COGH, Panama Canal and Suez Canal



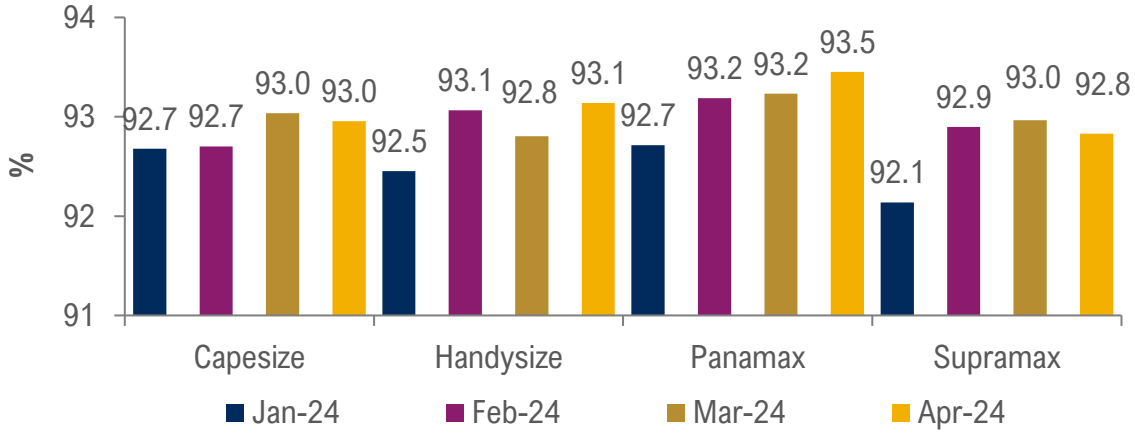
Age-wise utilisation-Dry bulk



Share in China's power generation mix



Utilisation



Source: Drewry AIS, Drewry

Environmental regulations – taking CII as example

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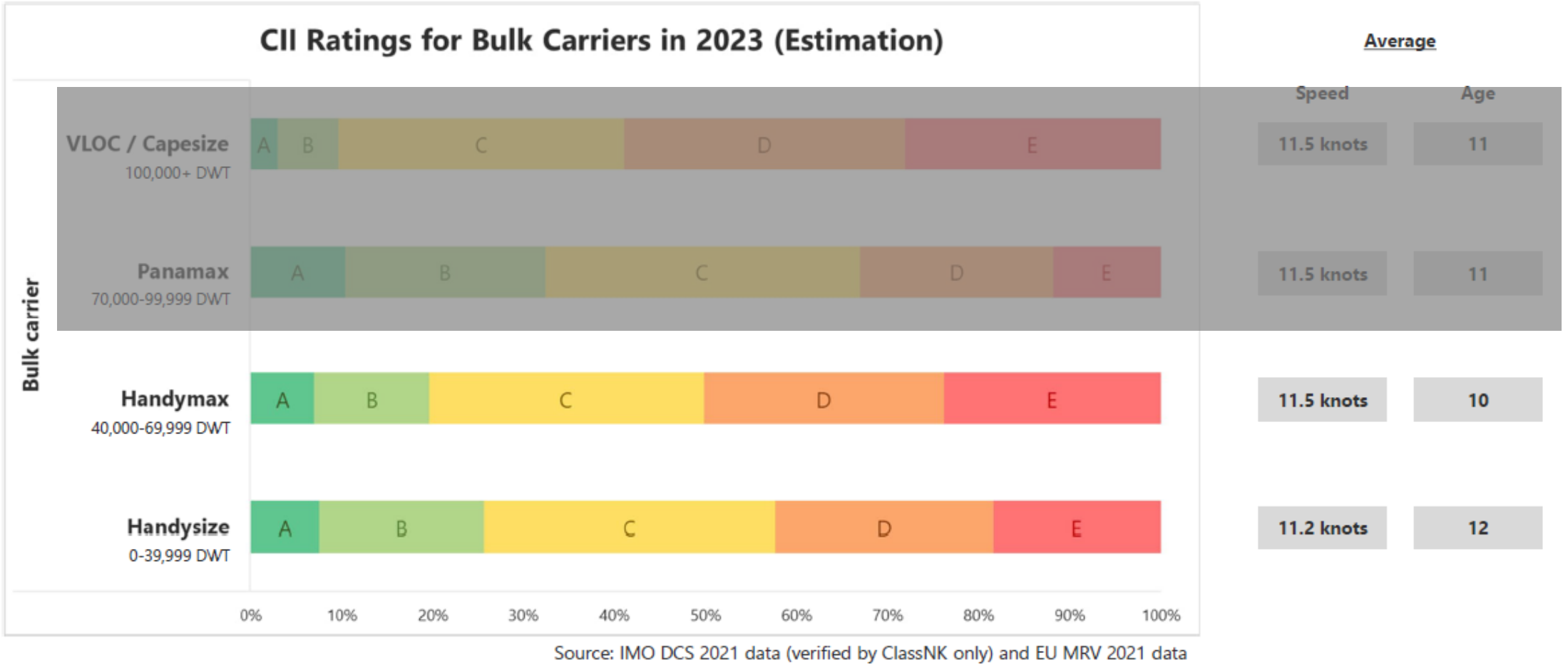
Implications of CII in 2023

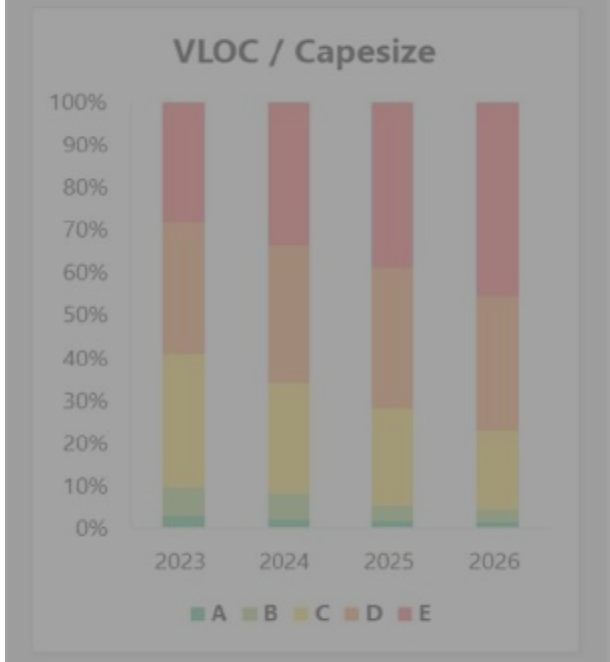
Nearly 20% of dry bulk Handysize and Handymax vessels are estimated to have E rating in 2023. These vessels will be required to undergo retrofitting of energy-saving devices and/or propulsion improvement devices and/or voyage optimisation or switch to low-zero carbon alternative fuel. The solution can potentially be a combination of different options. Some of the vessels may have to be scrapped as the retrofits may be uneconomic depending on the charter market conditions.



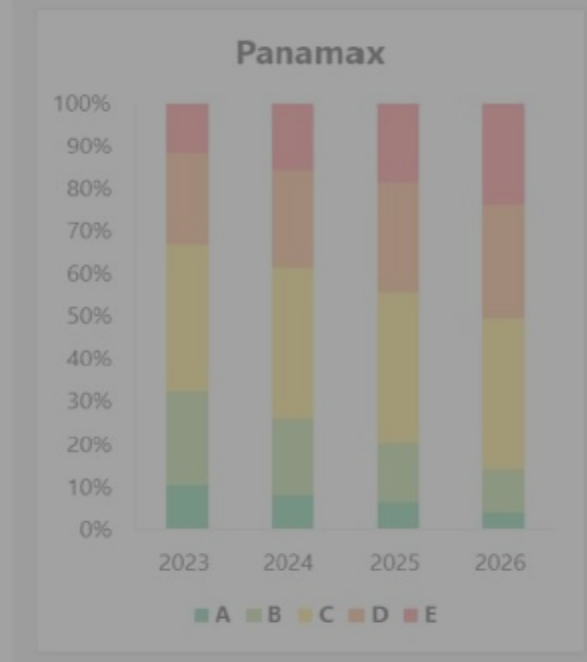
Source: ClassNK

Implications of CII in 2026

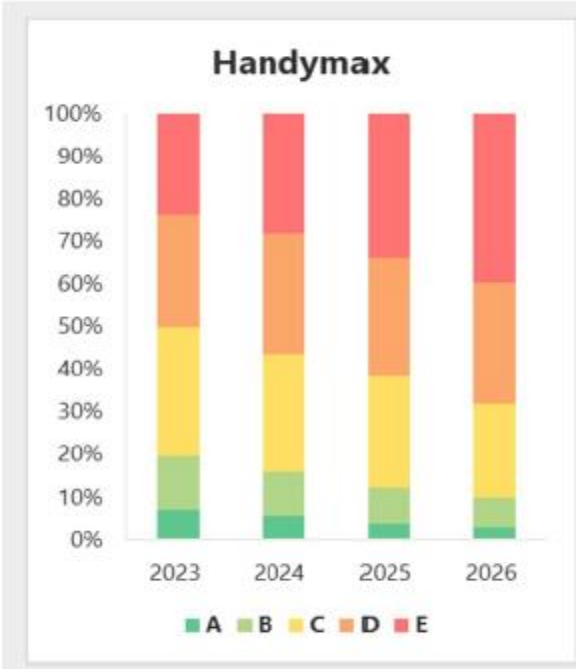
About 60% of dry bulk vessels are likely to be rated "D" or "E" in 2026. In 2023, about 20% of Handysize vessels are likely to be rated "D" or "E" whereas over 30% of vessels in this segment are likely to fall in 'D" or "E" in 2026.



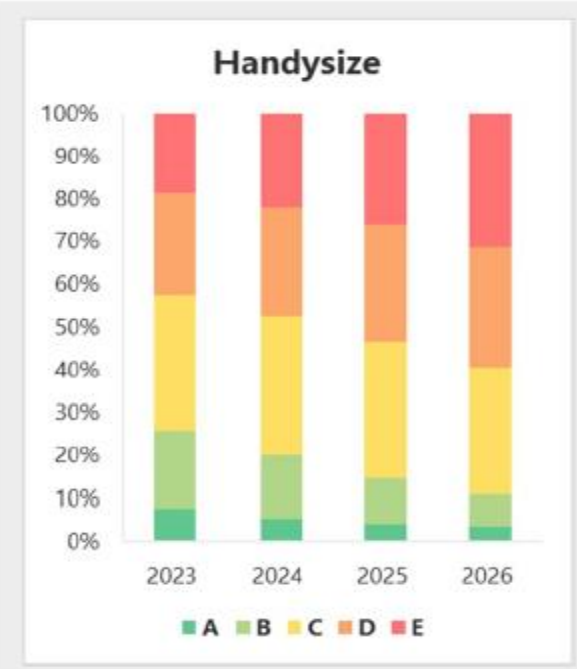
"D" or "E" ratio
59% (2023)
77% (2026)



"D" or "E" ratio
33% (2023)
50% (2026)



"D" or "E" ratio
50% (2023)
68% (2026)



"D" or "E" ratio
42% (2023)
60% (2026)

Source: IMO DCS 2021 data (verified by ClassNK only) and EU MRV 2021 data
Note: Estimation based on current fleet, trade, and operation

Source: ClassNK

Freight cost

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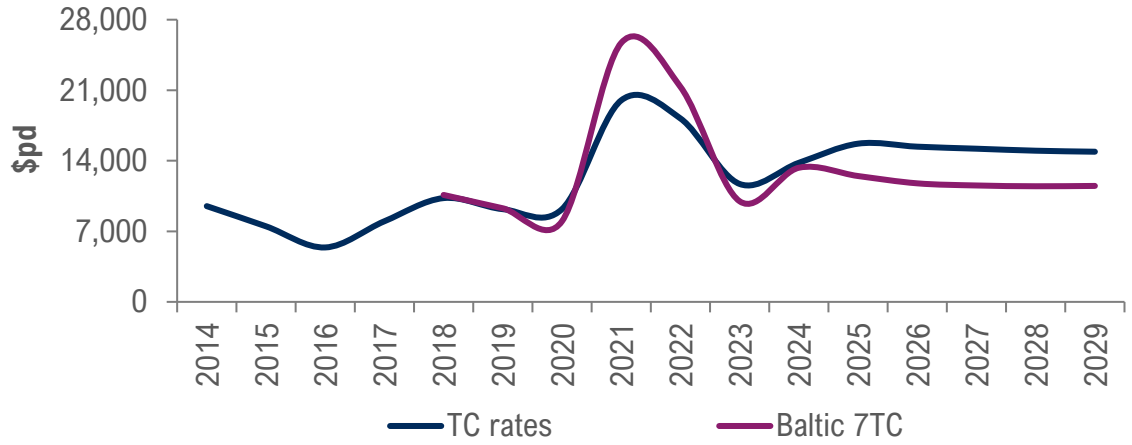
Benchmark rates

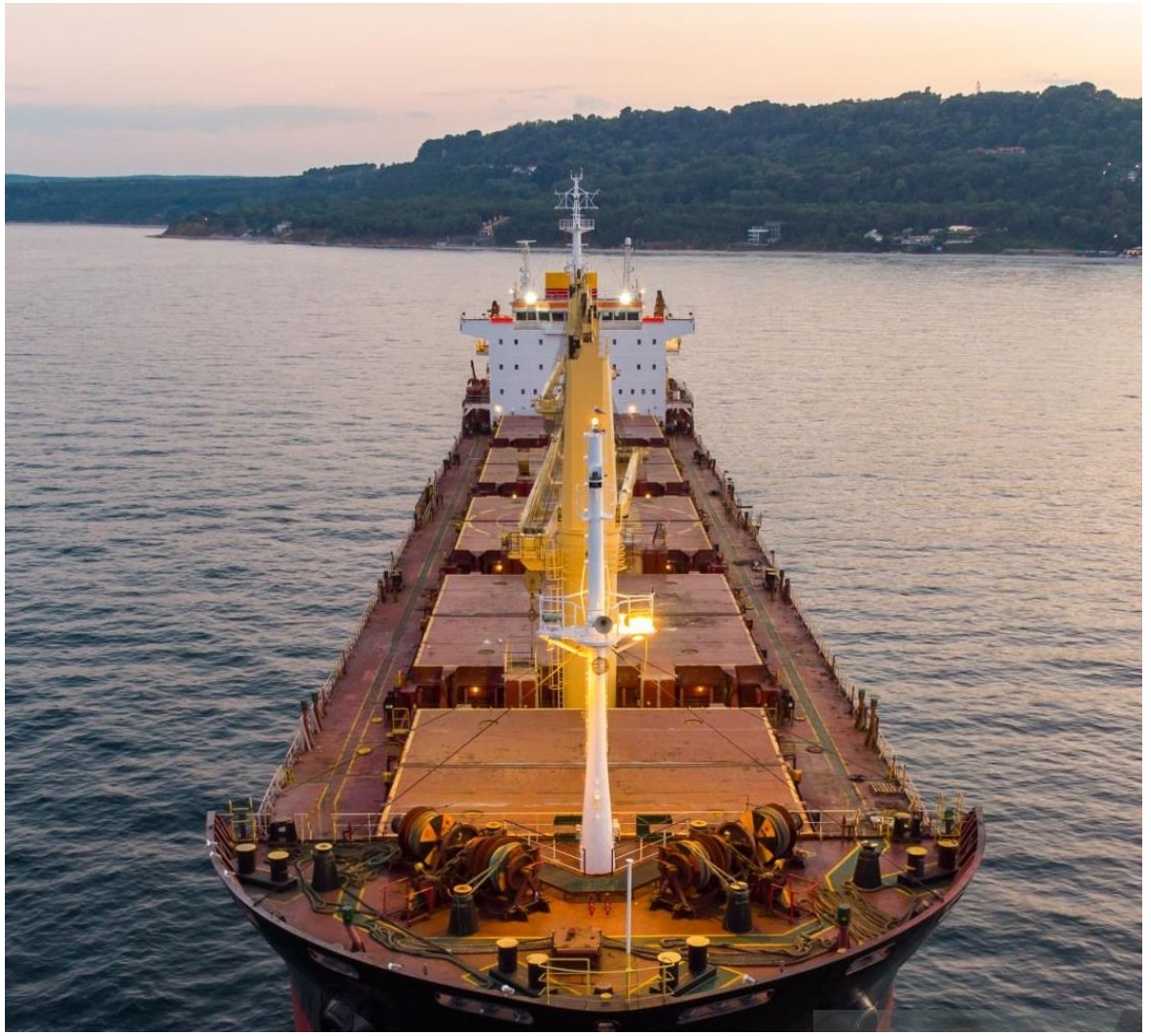
Supramax	Handysize
Baltic routes such as: S1C, S2	Baltic routes such as: HS7_38, HS1_38
Drewry's 1-year TC rates & TCE on major routes	Drewry's 1-year TC rates & TCE on major routes

A firm market in the medium term

Handysize



Supramax



Source: Drewry, Baltic Exchange

rahul@drewry.co.uk
+91-9868461589

LONDON DELHI SINGAPORE SHANGHAI