



台灣航業股份有限公司

Taiwan Navigation Co., Ltd

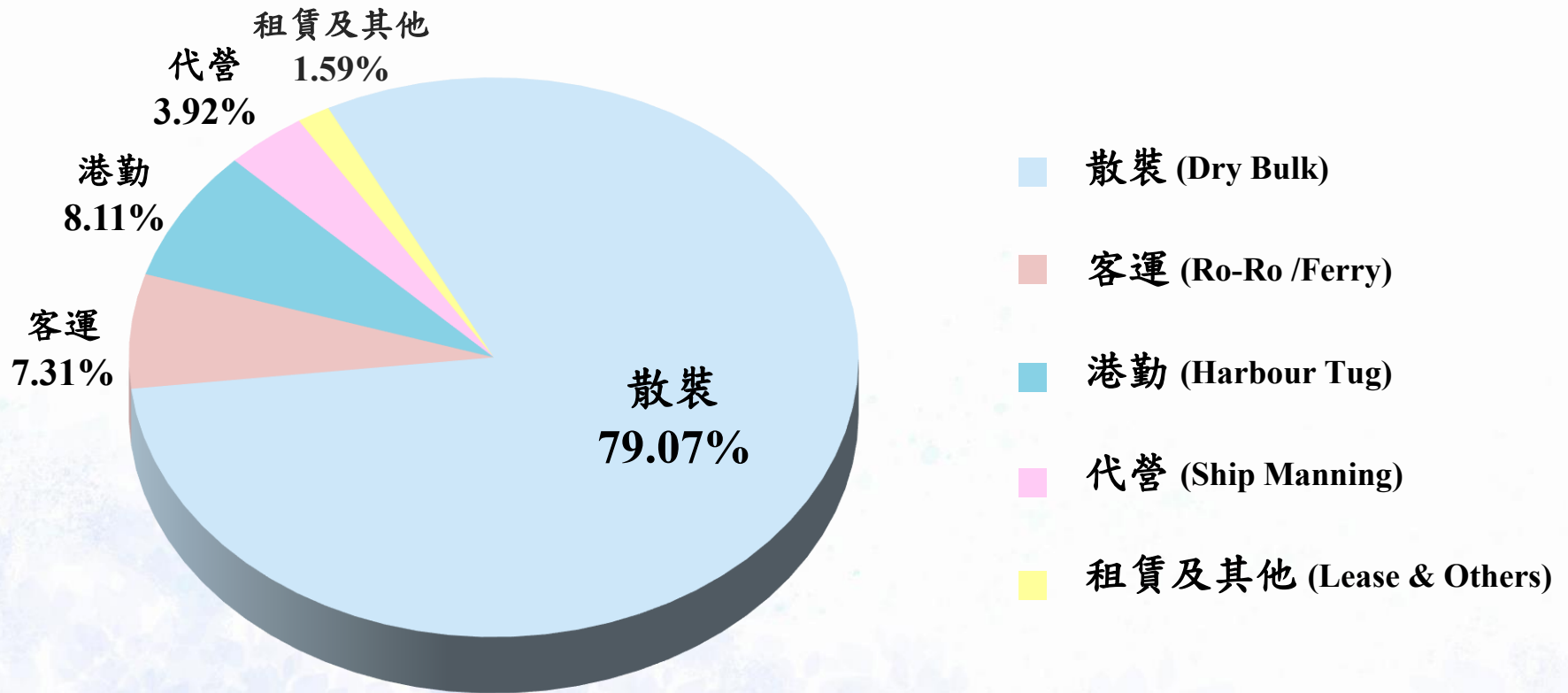
業務說明會

2025.9.19

股票代號 2617

業務範疇 Business Scope

(~ 30 June, 2025)



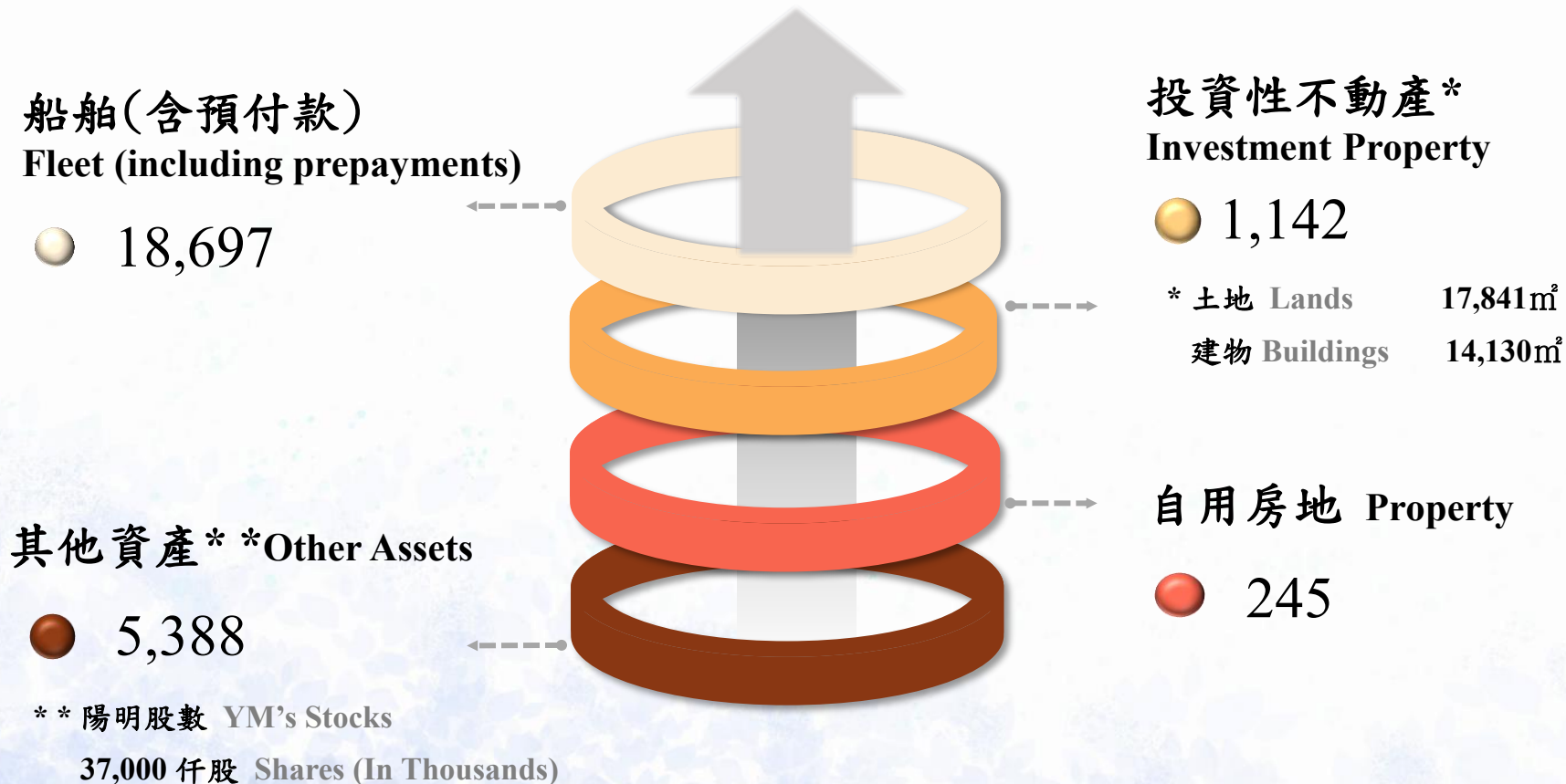
◀ 現有船隊 Fleet ▶

- 乾散貨船 Dry Bulker
 - 82K ~ 84K x 9 (Avg. 5 yrs)
 - 60K~64K x 10 (Avg. 7 yrs)
 - 40K x 2 (Avg. 2 yrs)
 - NB (40K) x 2 (Q2, 2026)
 - NB (64K) x 2 (Q3, Q4 2028)
- 港勤拖輪 Harbour Tugs & Launches
 - 台中LNG Terminal—Harbour Tug x 4 (Avg. 18 yrs)
 - 觀塘LNG Terminal—Harbour Tug & Launch x 7 (Avg. 3 yrs)
- 客貨輪 Ro-Ro/Ferry
 - 澎湖輪 (Penghu) x 1 (Delivered in Aug 2023)
- 油輪 MR Tanker x 3 (Manning management for CPC Taiwan)

資產 Assets (~ 30 June, 2025)

總資產 Total Assets 25,472

新台幣百萬元 mn-NT\$



歷年損益 Financial Performance

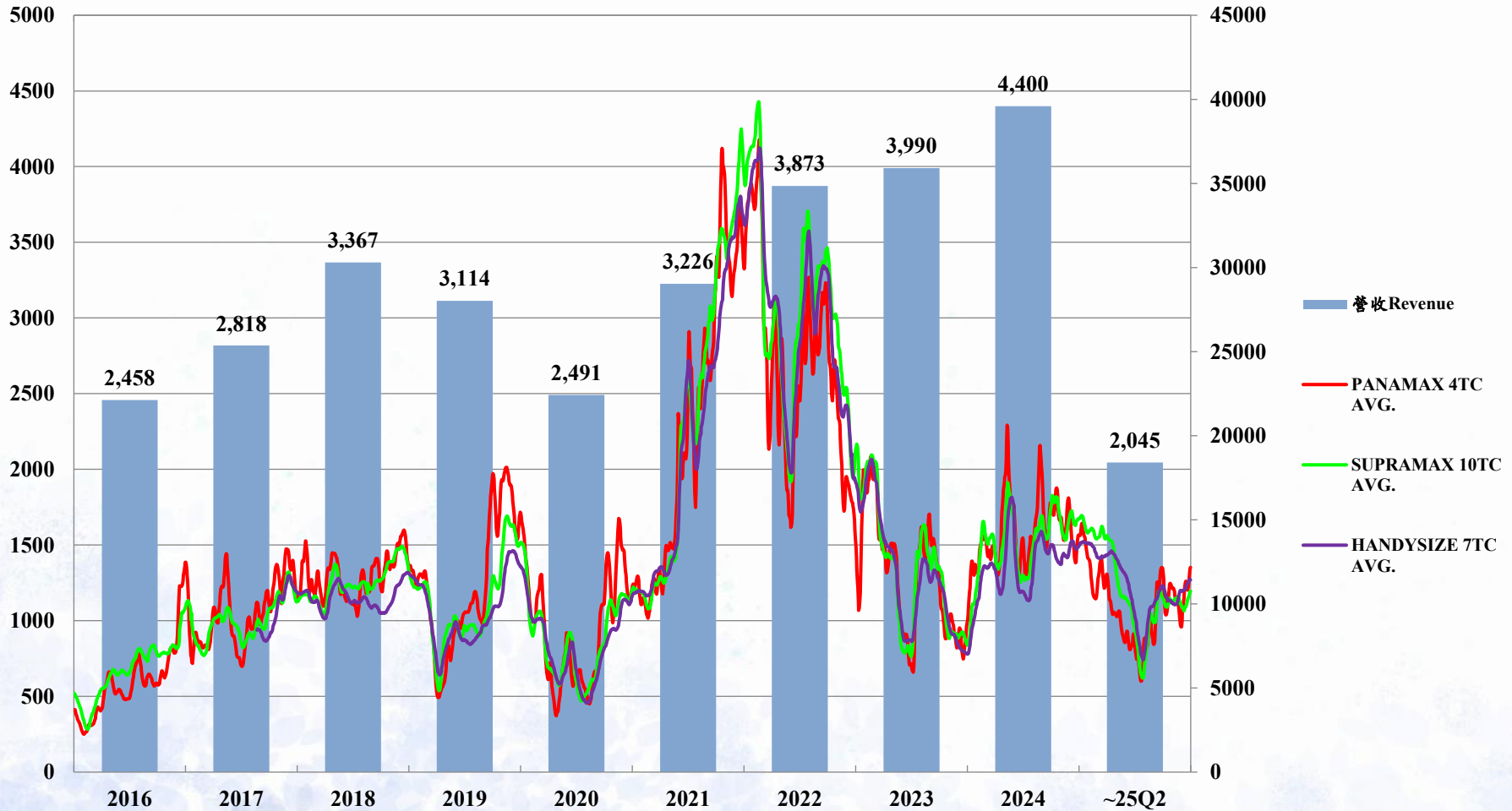
單位：新台幣佰萬元，
惟每股盈餘為元

	2020	2021	2022	2023	2024	~25Q2
營收 Revenue (mn-NT\$)	2,491	3,226	3,873	3,990	4,400	2,045
稅後淨利 Net Profit (mn-NT\$)	518	1,320	2,015	1,663	1,283	421
每股盈餘 EPS (NT\$)	1.24	3.16	4.83	3.98	3.08	1.01
負債比率 Debt Ratio (%)	36	33	36	35	35	35

營業收入 Revenue vs. Dry Market

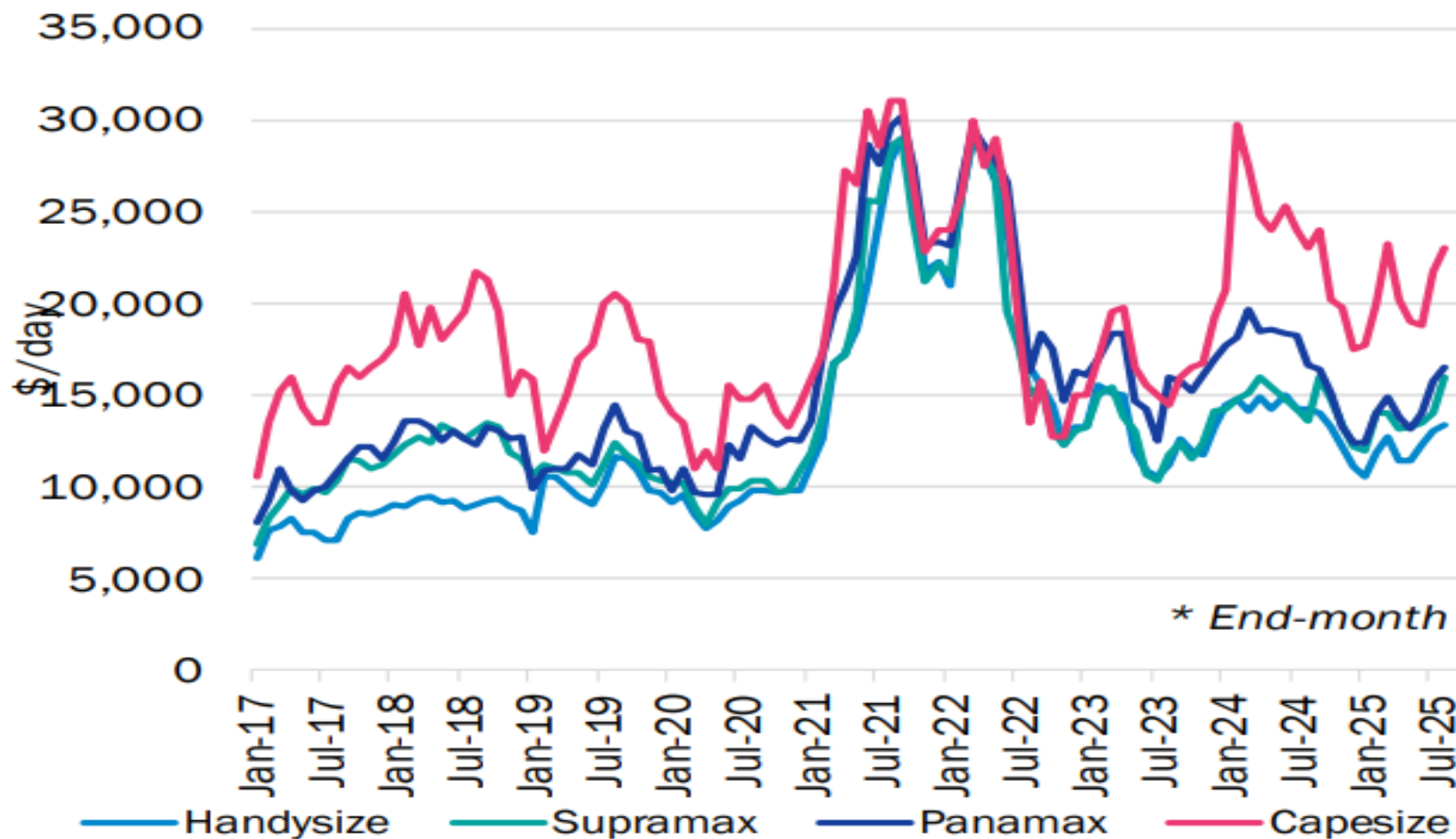
新台幣百萬元
mn-NT\$

日租金
USD / Day

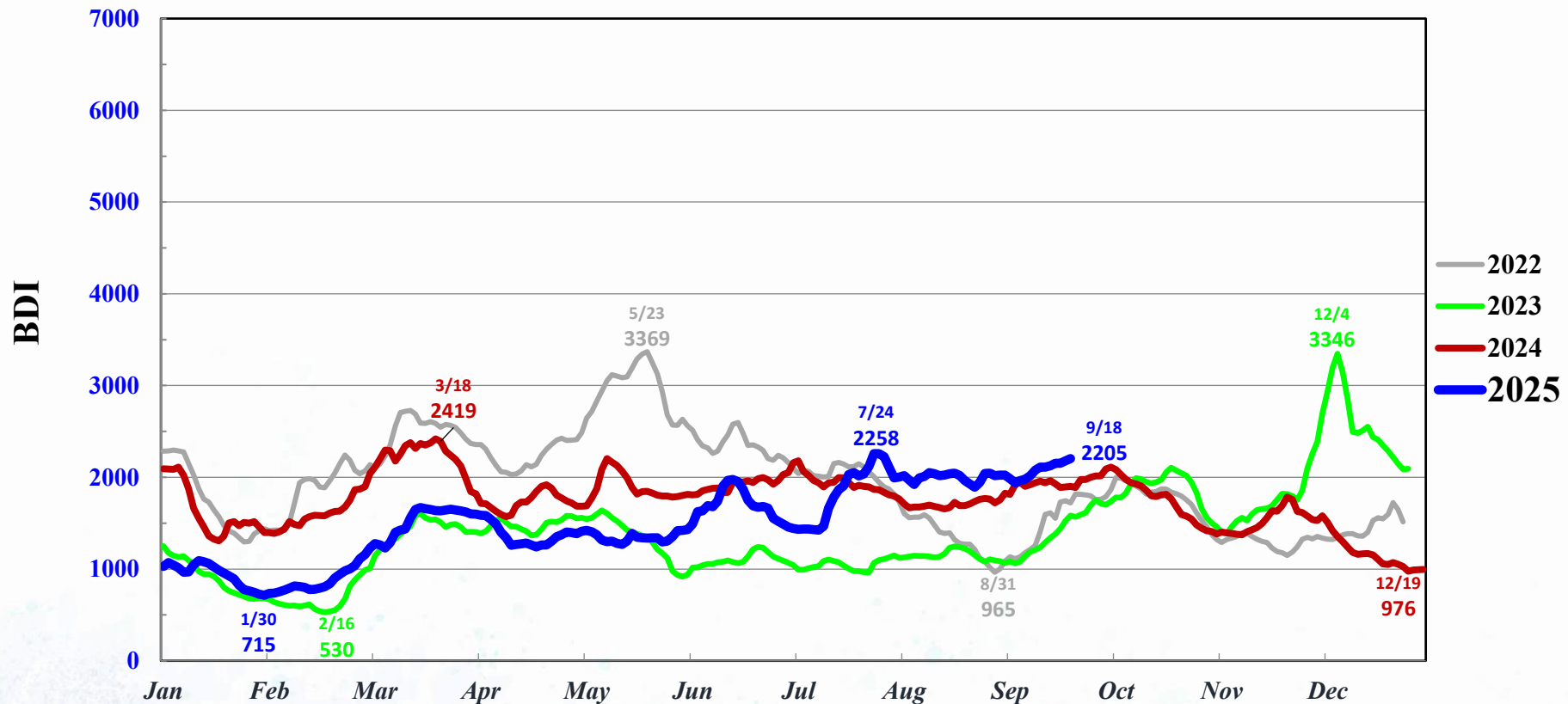


近八年一年期傭船費走勢

12 Month Time-Charter Rates



乾散貨船市場 Dry Bulk Market Review



Average	2022	2023	2024	2025 (~Sep., 18)
BDI	1938	1380	1755	1496
BCI	1959	1980	2724	2213
BPI	2308	1429	1567	1370
BSI	2017	1023	1241	1030

經濟指標 Economic Indicators

Growth Rate (% , y-o-y)	23'	24'	25'(f)	26' (f)
World GDP	3.3	3.3	3.0	3.1
-US	2.9	2.8	1.9	2.0
-China	5.2	5.0	4.8	4.2
Coal seaborne trade	7.1	3.3	-7	NA
Seaborne Trade - Dry	3.6	3.2	-1	NA
Dry Fleet	3.1	3.0	3.2	NA

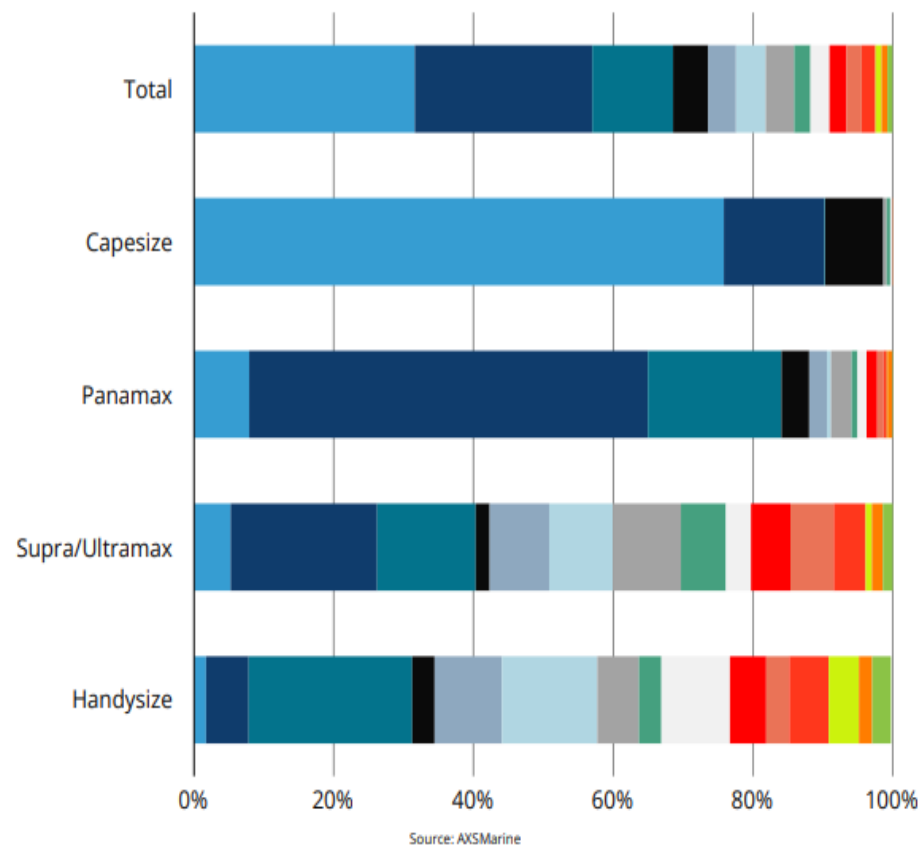
← 乾散貨船主力貨載 → Commodity Dry Bulker Carries

Vessel Share of Commodities

Commodity dependence across vessel sizes

Commodity mix Q1 2025

Deadweight share of completed voyages



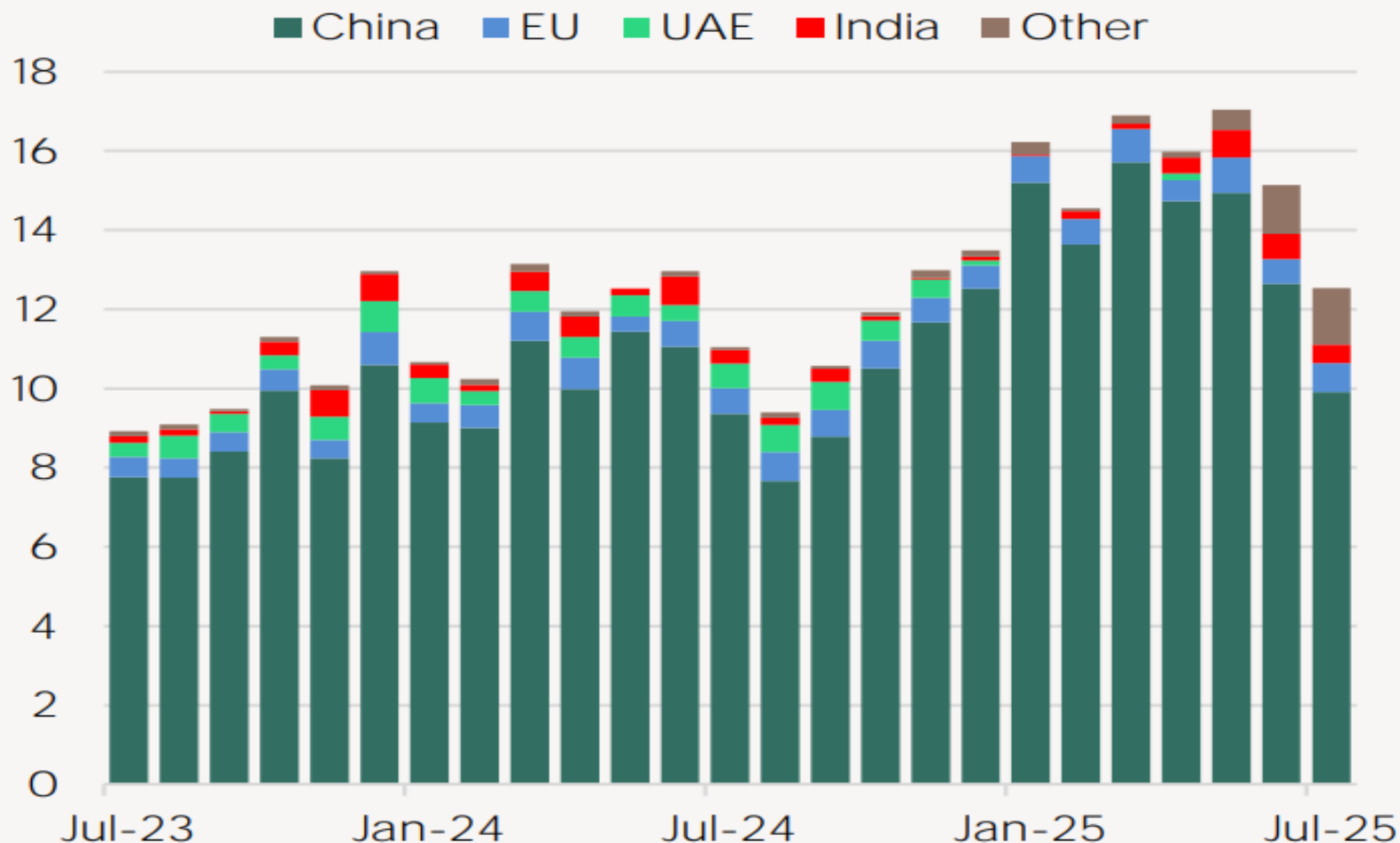
	Hs	Sx/Ux	Px	Cs	Total
Iron Ore	2%	5%	8%	75%	32%
Coal	7%	22%	56%	16%	26%
Agricultural goods	24%	15%	22%	0%	13%
Alumina/Bauxite	3%	2%	4%	7%	4%
Fertilizers	10%	8%	2%	0%	4%
Steel Products	13%	8%	0%	0%	4%
Minerals	6%	8%	3%	1%	4%
Minor Ores	5%	9%	1%	1%	3%
Unknown & Parcels	9%	3%	1%	0%	2%
Construction	3%	5%	1%	0%	2%
Biomass	3%	6%	1%	0%	2%
Semi-Processed	6%	5%	0%	0%	2%
Wood Products	4%	1%	0%	0%	1%
Other Ferrous	2%	2%	0%	0%	1%
Other	2%	1%	0%	0%	1%

Source: AXSMarine

西非幾內亞鋁礬土出口



Guinea bauxite exports by destinations
m tonnes



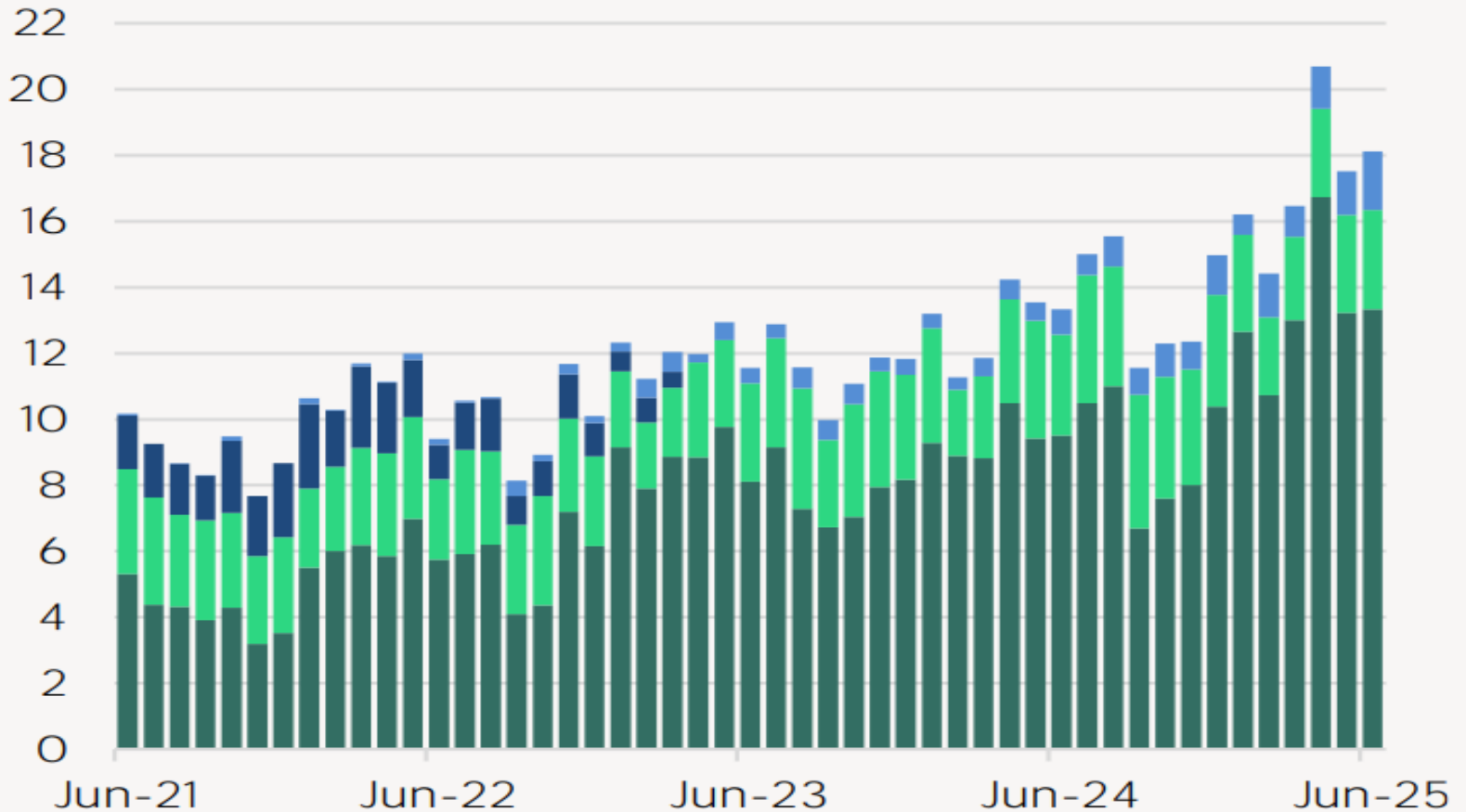
Source: AXSMarine

中國的鋁礬土的進口狀況



China's bauxite imports by source
m tonnes

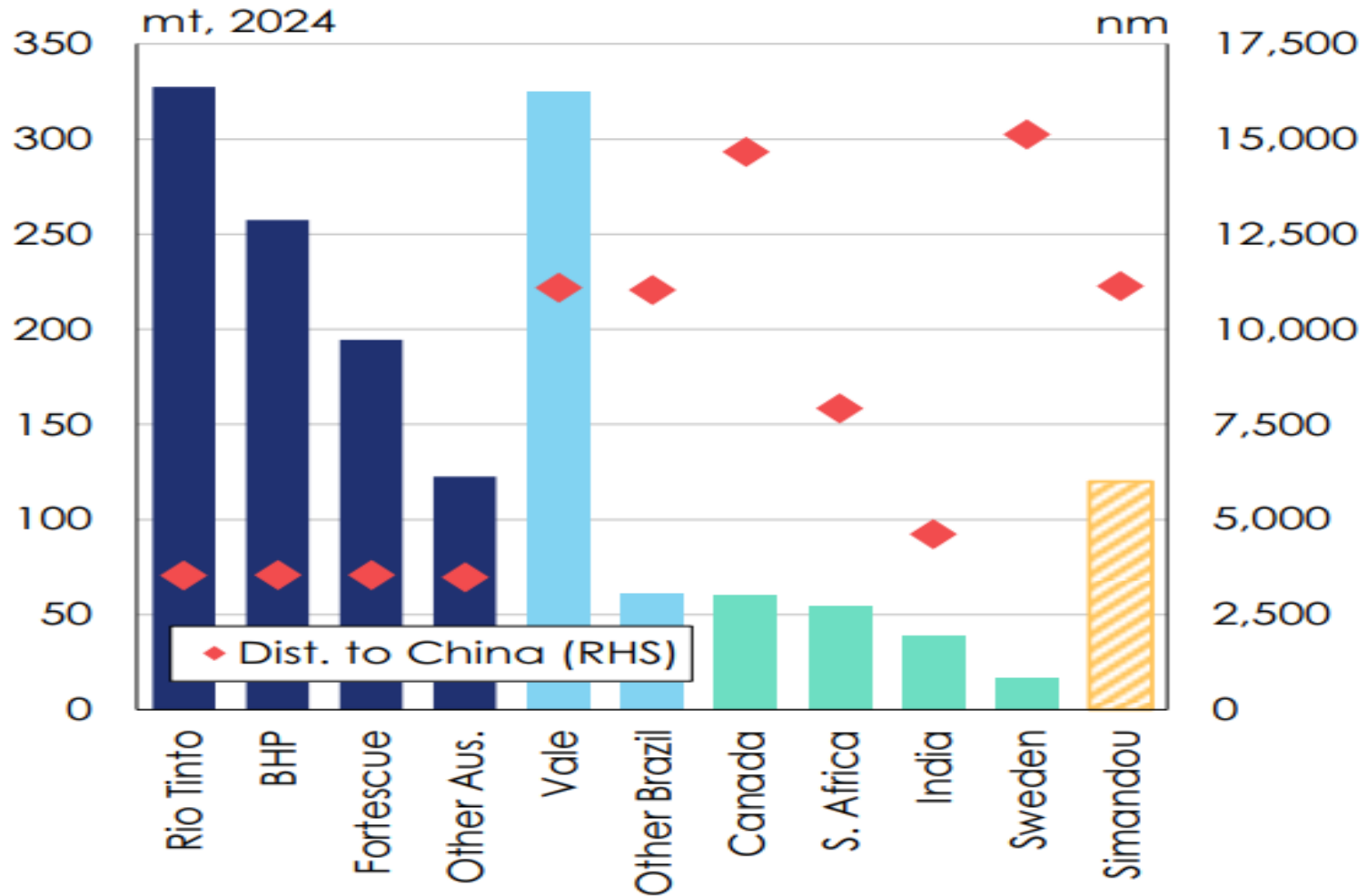
Guinea Australia Indonesia Other



Source: GTT

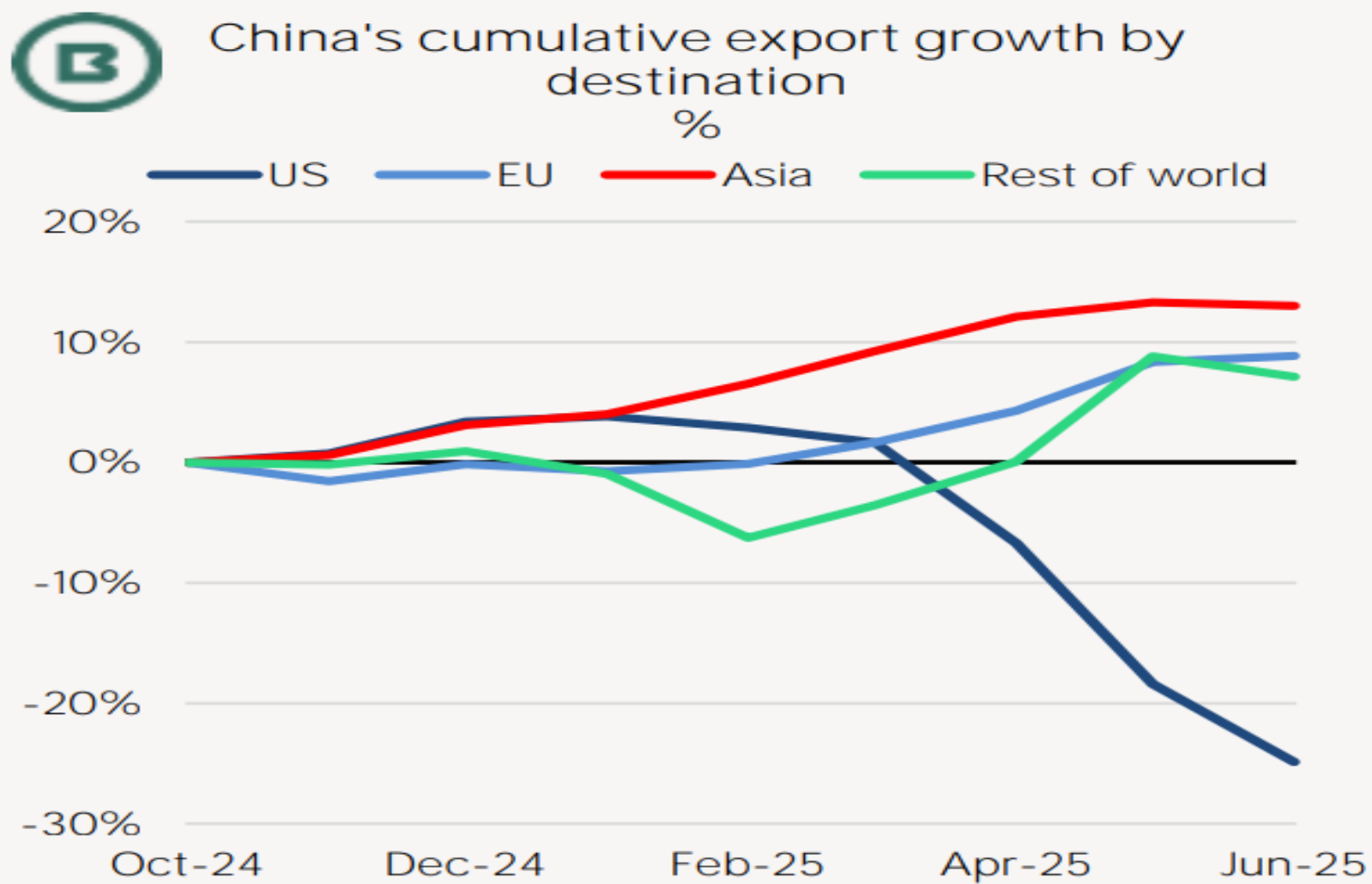
西非幾內亞鐵礦砂出口預測

Seaborne Iron Ore Exports: Simandou of Guinea In Context
(expected to commence from late 2025)



Source : Clarksons Research

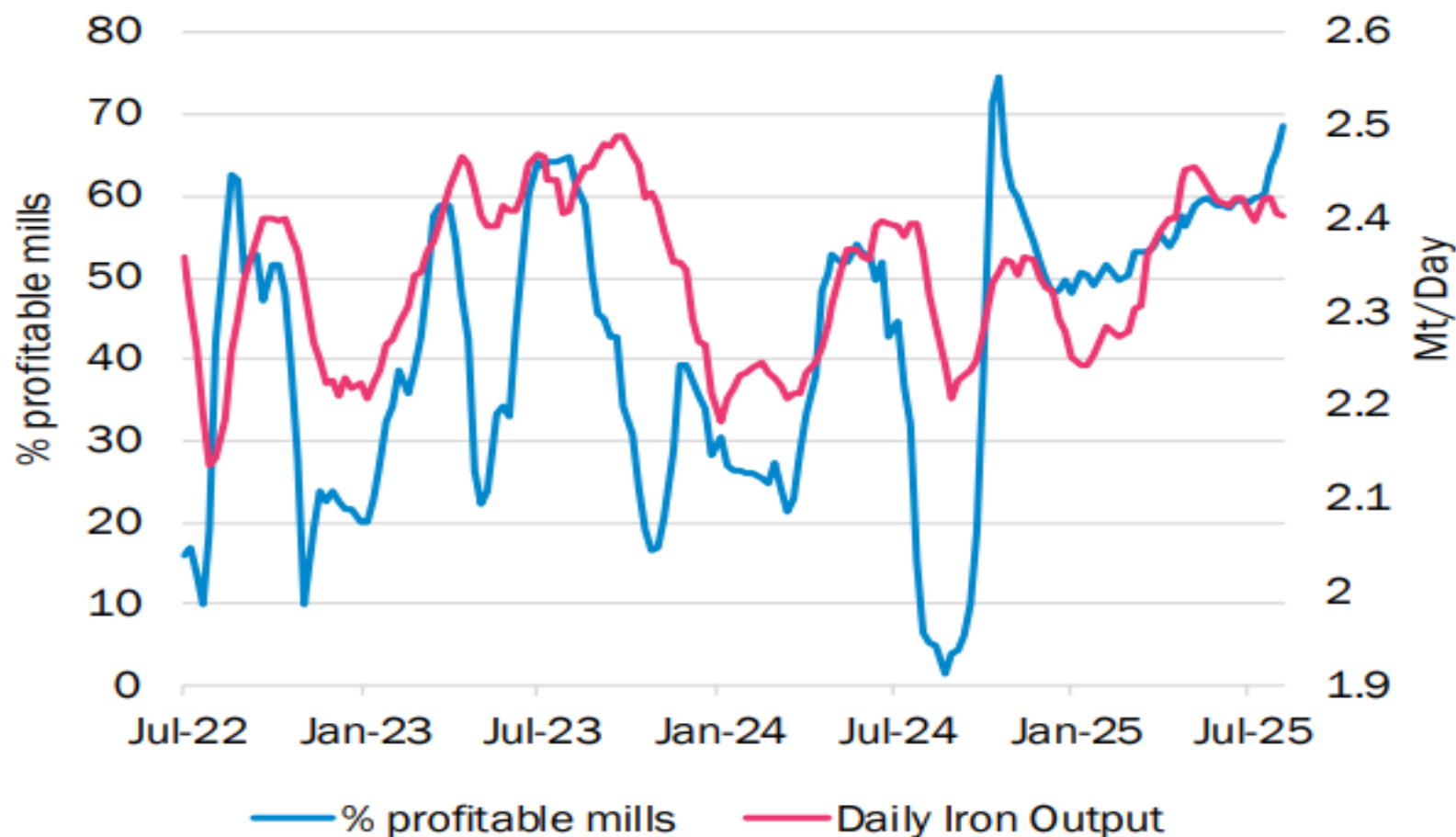
◀ 中國出口地狀況 ▶



Source: IMF

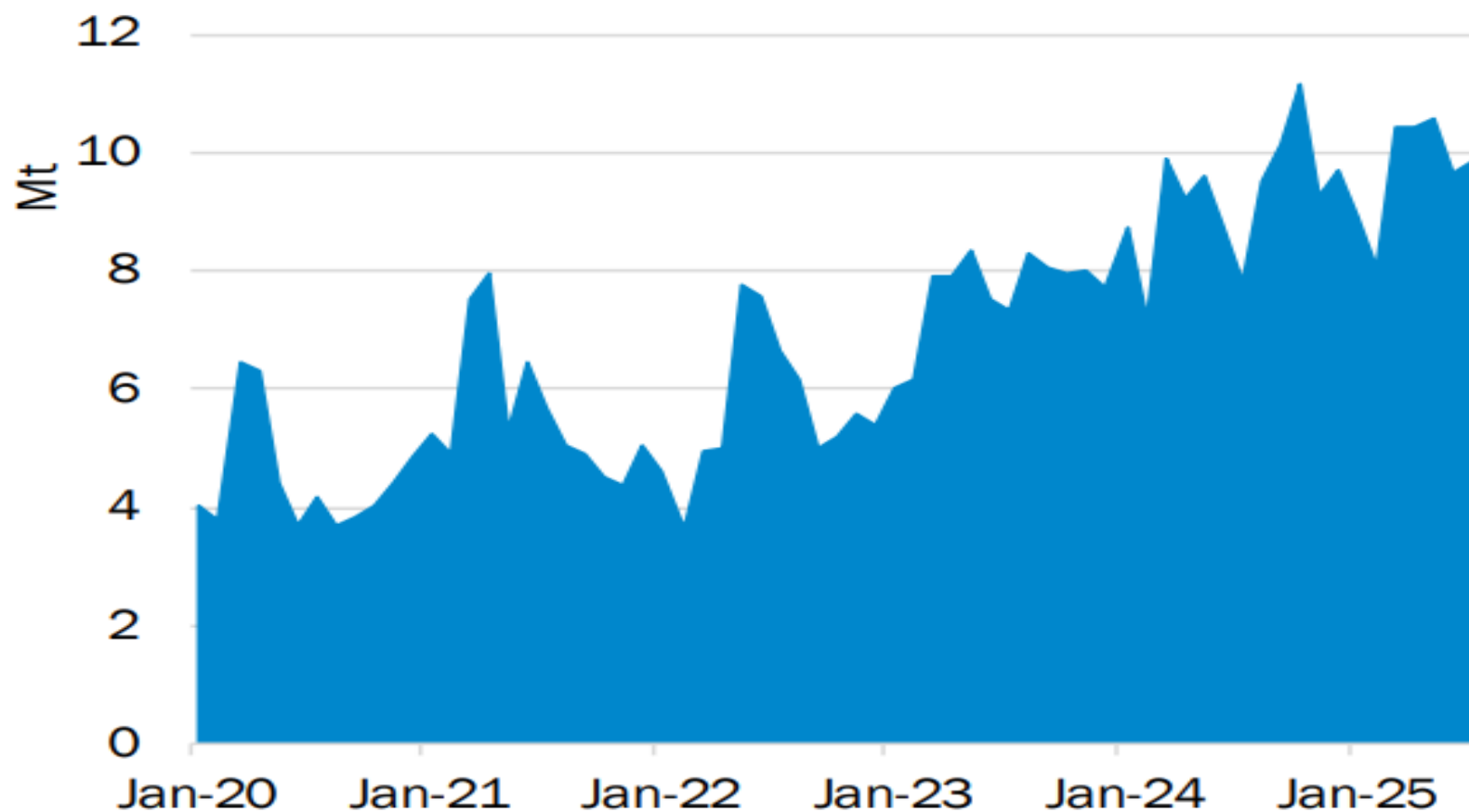
中國鋼鐵廠生產獲利狀況

China Daily Iron Production and % Profitable Mills



◀ 中國鋼材出口狀況 ▶

Monthly Chinese Steel Exports



Source: Chinese Customs, SSY

—美國對中國相關船舶收費措施-散裝船方面—

U.S. Fees on China-Related Vessels on Bulk Carriers

類別(Category)	適用對象(Applicable Vessels)	收費標準 (每淨噸) (Fee Schedule, per net ton)	豁免條件(Exemptions)
中國船舶經營人或船東 Chinese Operators/Owners	船舶由中國經營人或中國船東持有/經營 Vessels operated or owned by Chinese companies	2025/10/14 : \$50 2026/04/17 : \$80 2027/04/17 : \$110 2028/04/17 : \$140	無 (Nil)
中國建造船舶 (但非中國公司擁有/經營) PRC-built Vessels (not owned/operated by Chinese firms)	所有在中國建造的乾散貨船 All dry bulk carriers built in China	2025/10/14 : \$18 2026/04/17 : \$23 2027/04/17 : \$28 2028/04/17 : \$33	- 空船或壓艙入港 - 載重噸 ≤ 80,000 dwt - 航程 < 2,000 海浬 (如加拿大/加勒比/墨西哥短程航運) - 特定美國公司所擁有的船舶 - Arriving empty or in ballast - Capacity ≤ 80,000 dwt - Voyages < 2,000 nm (e.g., Canada, Caribbean, Mexico) - Certain U.S.-owned vessels

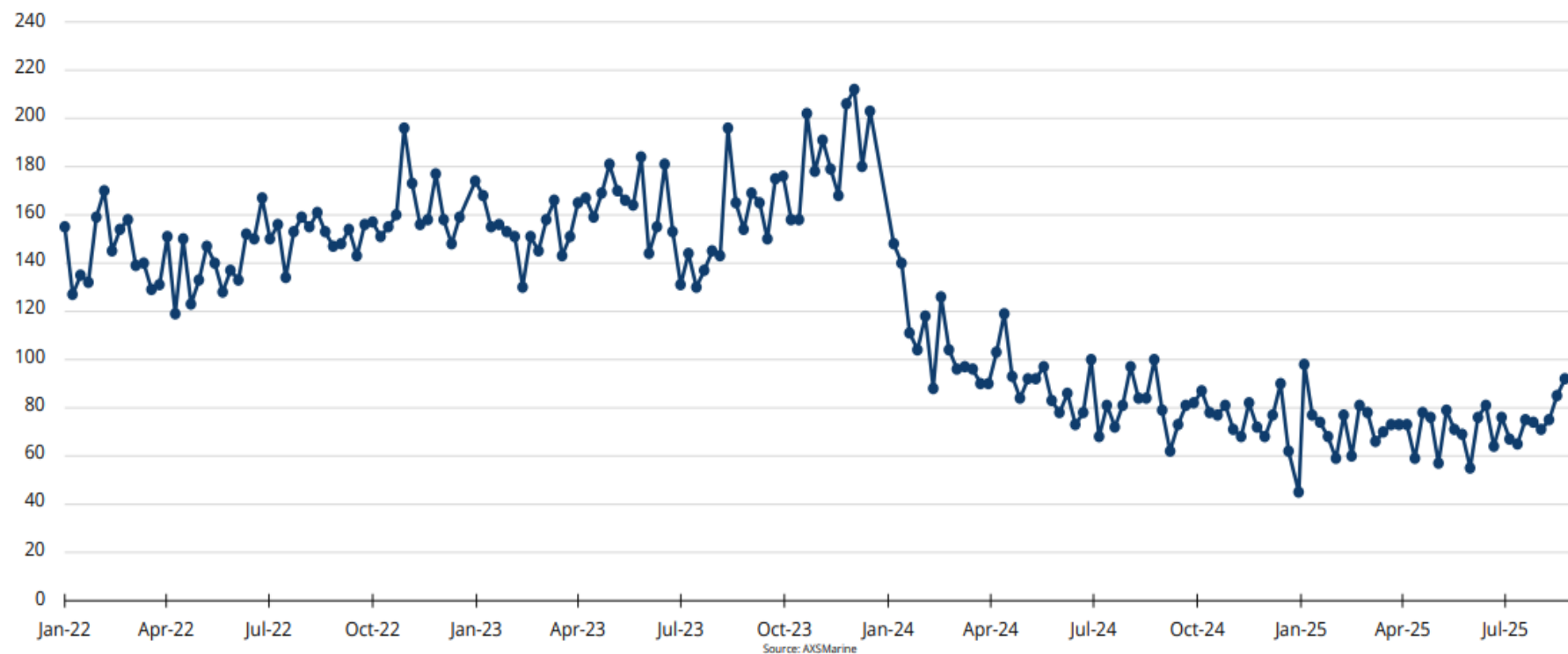
散裝貨輪蘇伊士運河通行狀況

The disruption to Suez canal on Bulk Carrier

Suez Canal Transits

Dry Bulk Suez Canal transits remain very low

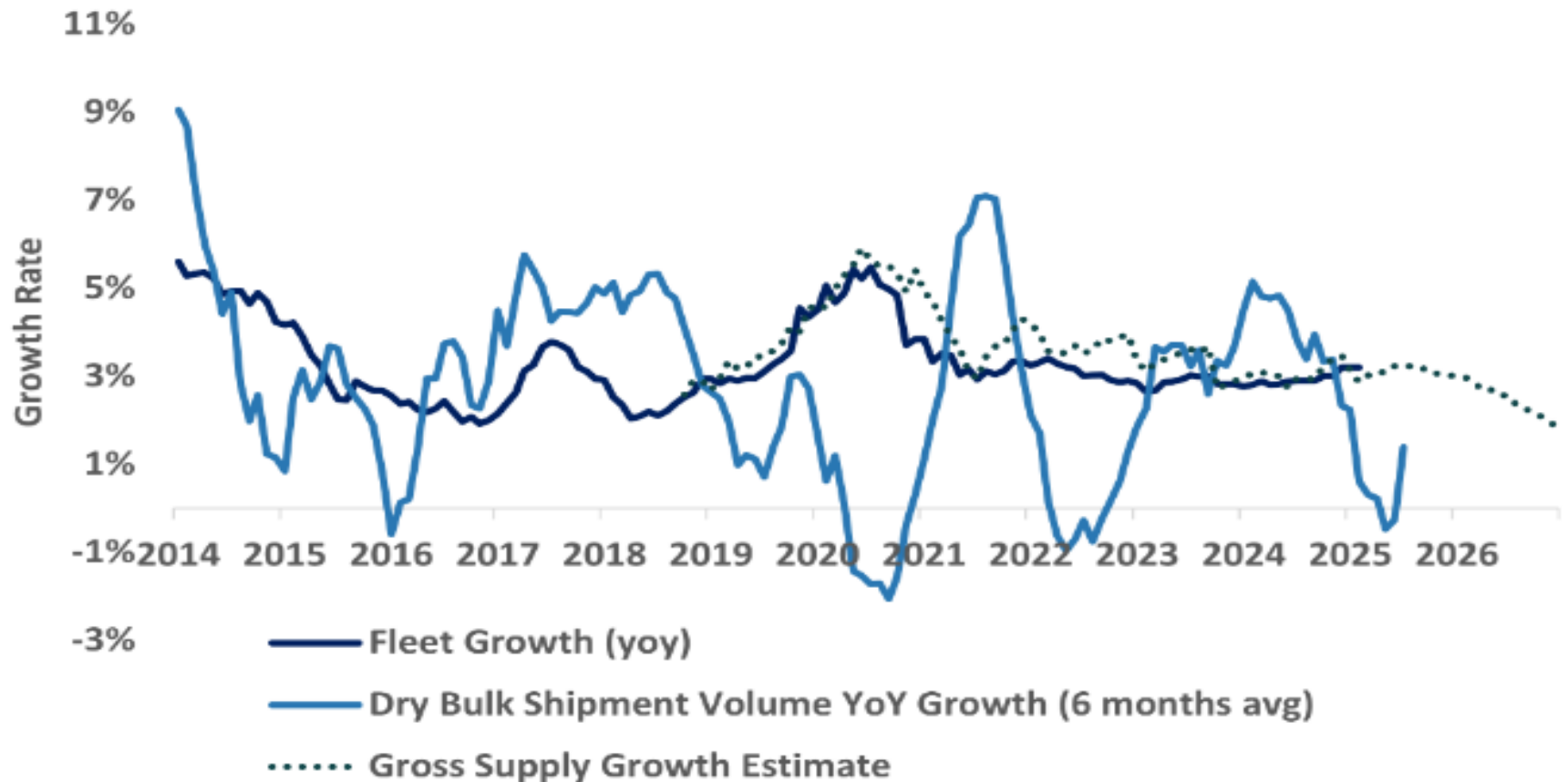
Suez Canal Transits
No. of vessels per week



全球乾散貨需求及船噸預測

The forecast for global dry bulk demand and tonnage supply

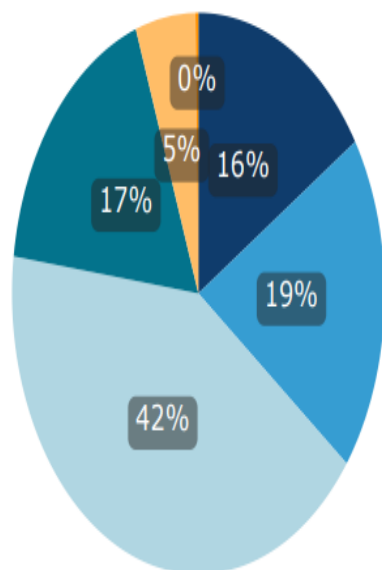
Dry Bulk Shipment Volume Growth vs Supply Growth (All Segments)



乾散貨輪船齡相關分布

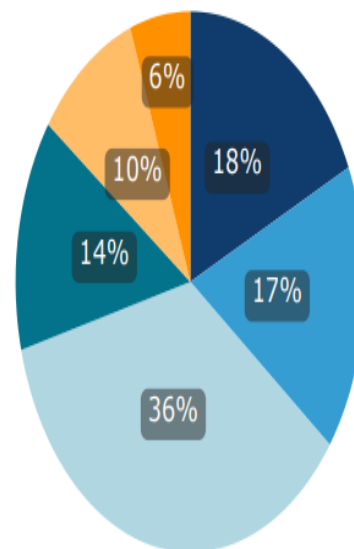
The Age Portfolio of Dry Bulk Carriers

Age Profile: Capesize - 100,000+ DWT



Trading vessels: 2,036

Age Profile: Panamax - 67,000-99,999 DWT

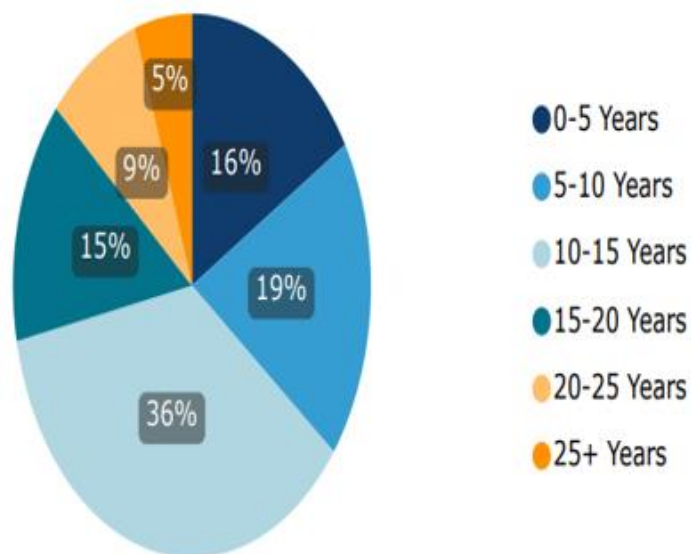


Trading vessels: 3,208

乾散貨輪船齡相關分布

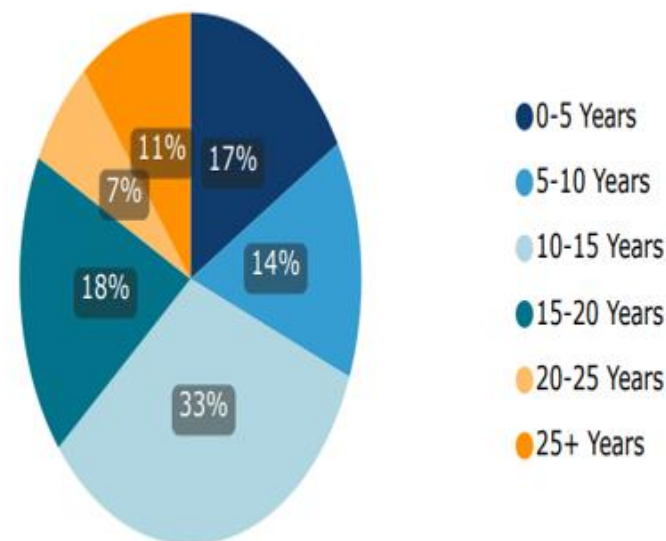
The Age Portfolio of Dry Bulk Carriers

Age Profile: Supramax - 40,000-66,999 DWT



Trading vessels: 4,174

Age Profile: Handysize - 10,000-39,999 DWT

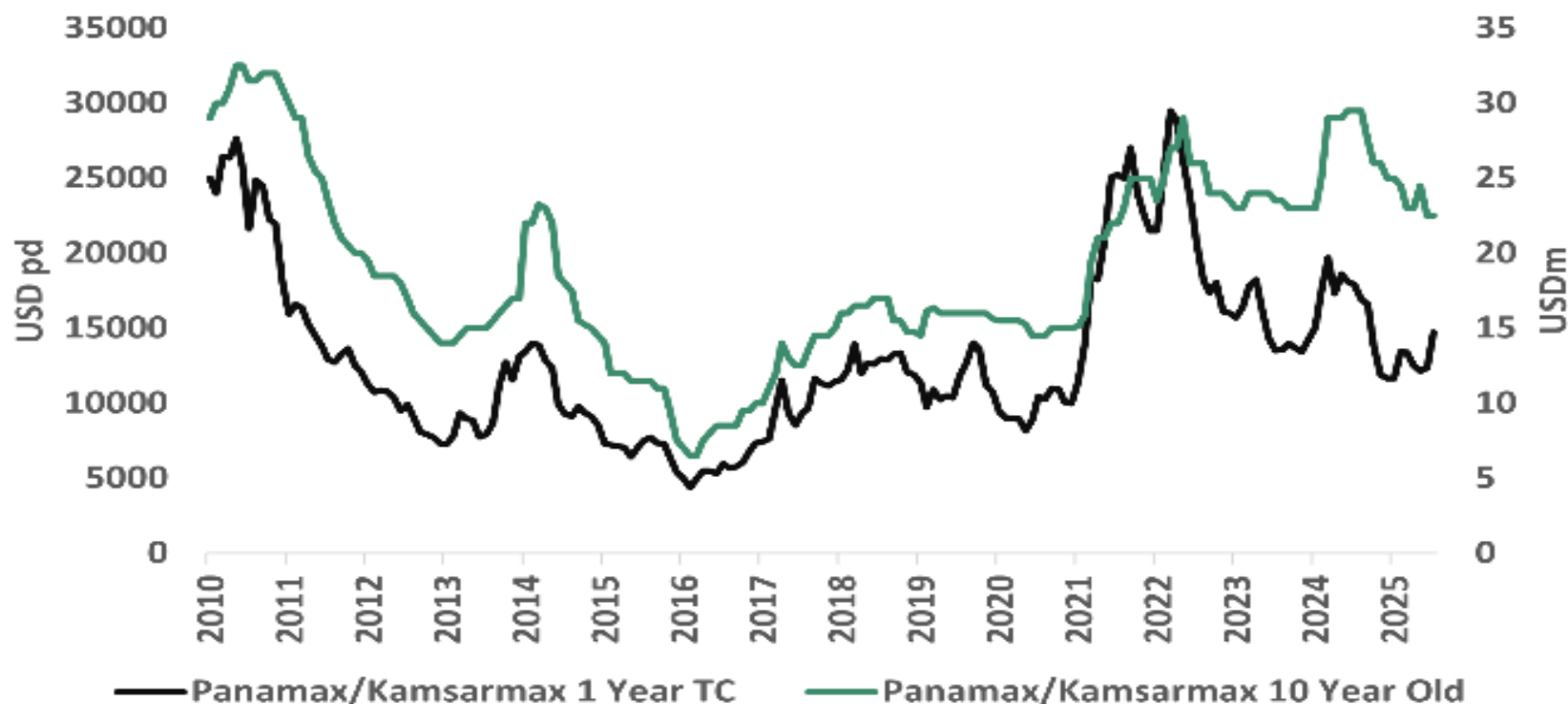


Trading vessels: 4,349

◀ 二手船價及一年期租金(a) ▶

The Price of Second Hand Ship and The One Year Hire Rate (a)

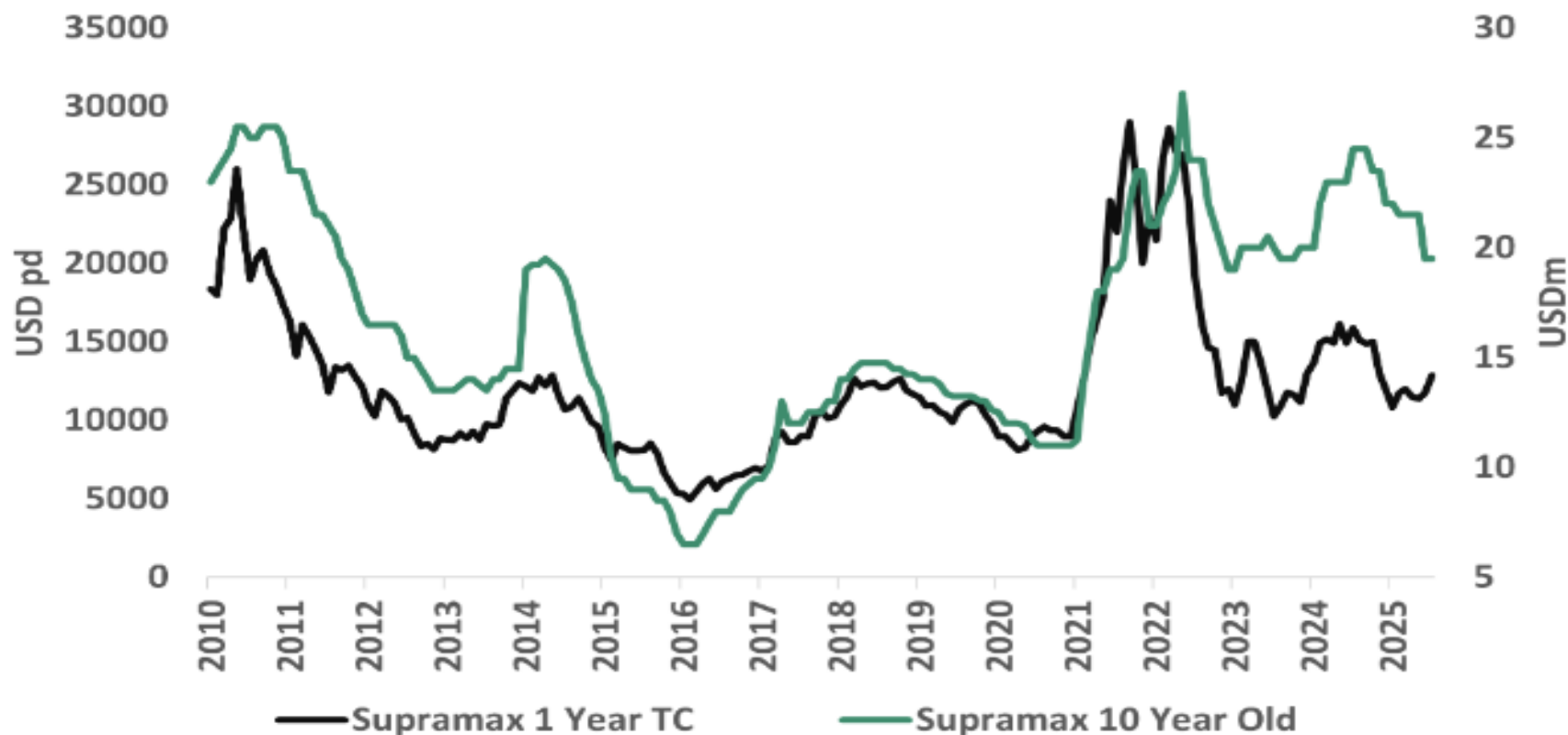
**Panamax/Kamsarmax 1 Year TC vs Panamax/Kamsarmax 10 Year Old
(Japanese)**



◀ 二手船價及一年期租金(b) ▶

The Price of Second Hand Ship and The One Year Hire Rate (b)

Supramax 1 Year TC vs Supramax 10 Year Old (Japanese)



◀ 二手船價及一年期租金(c) ▶

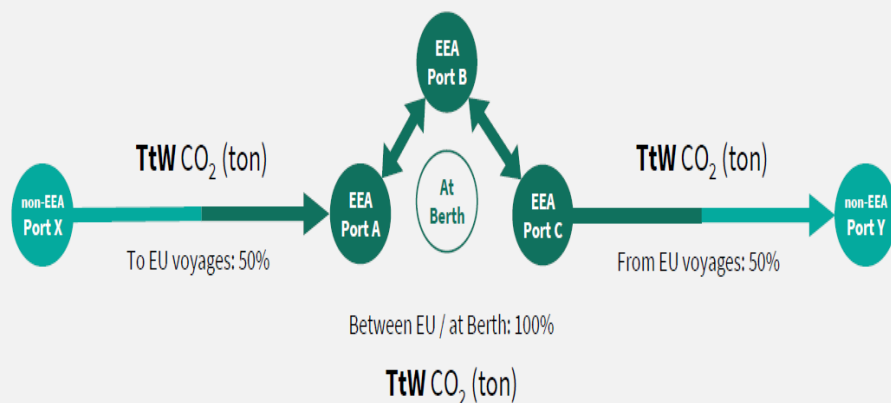
The Price of Second Hand Ship and The One Year Hire Rate (c)

Handysize 1 Year TC vs Handysize 10 Year Old (Japanese)



溫室氣體減排—EU法規要求

1. EU ETS (Emissions Trading System), 已於2024.01.01生效實施



Phased-in

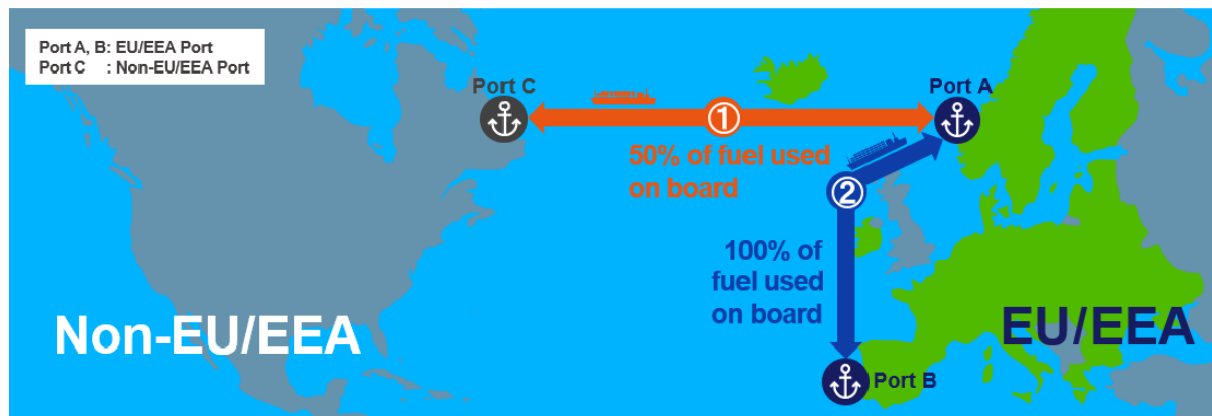
Phase-in period of:

2024 40%
2025 70%
2026 100%

Ex. 40% of emissions reported for year 2024, payable in 2025.

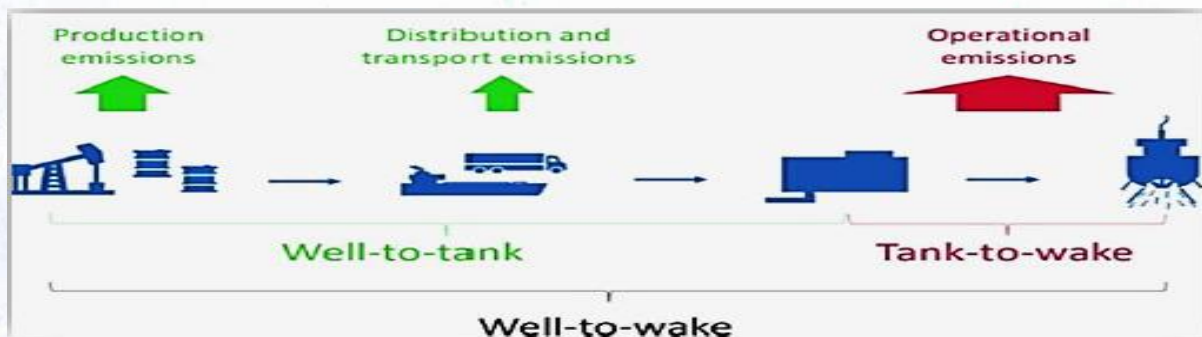
溫室氣體減排—EU法規要求

2. Fuel EU Maritime, 已於2025.01.01 生效實施



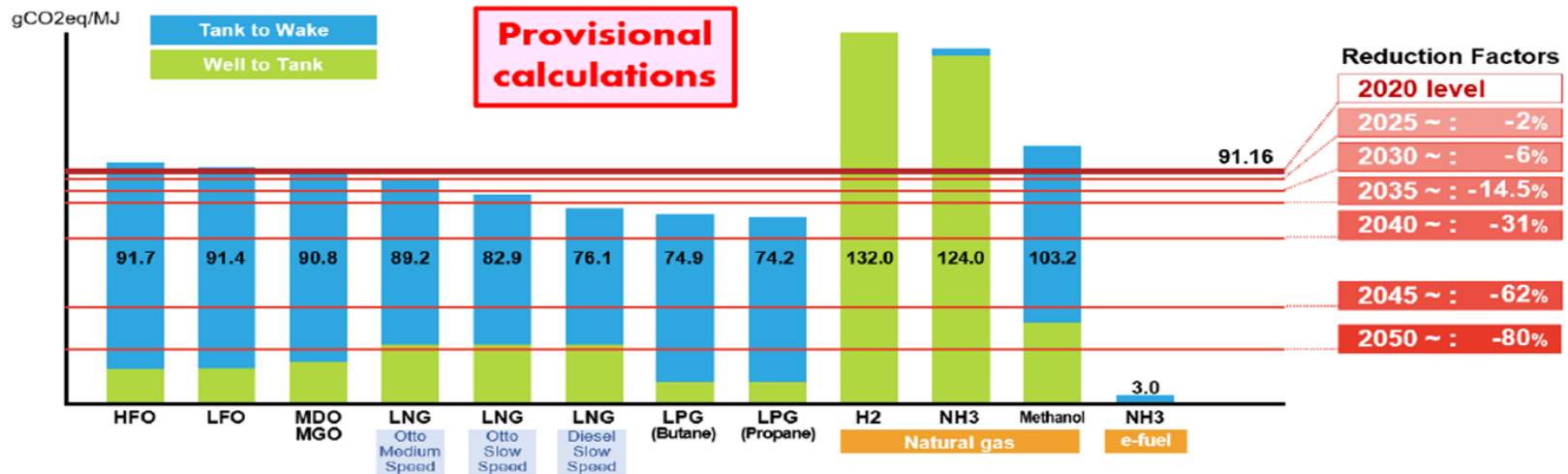
Energy used

WtT + TtW
GHG intensity
(gCO_{2eq}/MJ)



溫室氣體減排—EU法規要求

Overview of GHG intensity of each fuel and limits



Outline of the calculation of the penalty

$$\frac{\text{GHG intensity limit of the year} - \text{GHG intensity of the ship}}{\text{GHG intensity of the ship}} \times \text{Energy used on board [MJ]} \times \text{Penalty per energy used [€0.06EUR/MJ]}$$

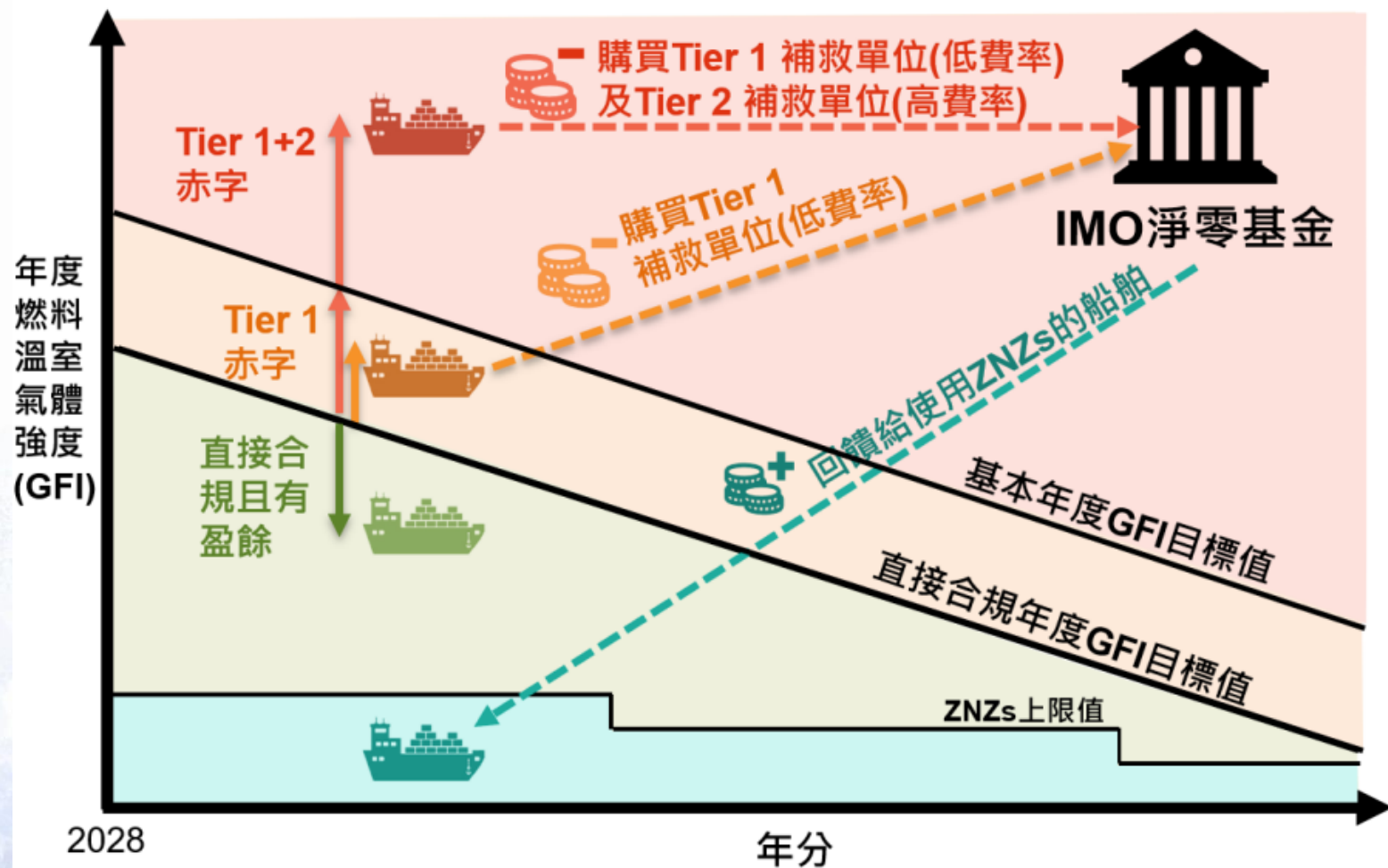
——溫室氣體減排—IMO法規要求——

IMO MEPC(83)提出溫室氣體減排中期措施案，預計2028.01.01生效實施。

- (一) 溫室氣體減排中期措施定案，2028年1月1日起，國際航線總噸位 5,000 以上船舶，需符合年度燃料溫室氣體強度(GFI)目標值。若船舶 GFI 達成值超過「直接合規年度目標」，則超額的排放量，需按 100 美金/tCO₂eq 費率繳納費用至 IMO 淨零基金。若再超出「基本年度目標」，超出的排放量費率將達 380 美金/tCO₂eq
- (二) 為計算 GFI 達成值，將建立永續性燃料驗證機制和燃料生命週期標籤，以搭配海運燃料全生命週期溫室氣體強度準則，計算燃料全生命週期的溫室氣體排放量
- (三) 確定碳強度指標(CII) 2027~2030 年折減係數，每年加嚴 2.625%

溫室氣體減排—IMO法規要求

* Tier 1 赤字只能用購買補救單位抵銷、Tier 2 赤字才可用盈餘抵銷。



溫室氣體減排—IMO法規要求

$$\text{年度GFI達成值}(GFI_{attained}) = \frac{\sum_{j=1}^J EI_j \times Energy_j}{Energy_{total}}$$

j = 燃料類型

J = 依據IMO船舶燃料消耗資料庫報告，報告期間內使用的燃料總數(*total number*)

EI_j (gCO₂eq/MJ) = 燃料類型 j 的溫室氣體強度(油井到艙流WtW)，計算時需考量IMO LCA準則

$Energy_j$ (MJ) = 船舶於報告期間內，燃料類型 j 的能量消耗

$Energy_{total}$ (MJ) = 船舶於報告期間使用的總能量消耗，包括但不限於燃料、岸電和零排放能源，如風力推進和太陽能

$$\text{年度GFI目標值}(GFI_T) = (1 - Z_T/100) \cdot GFI_{2008}$$

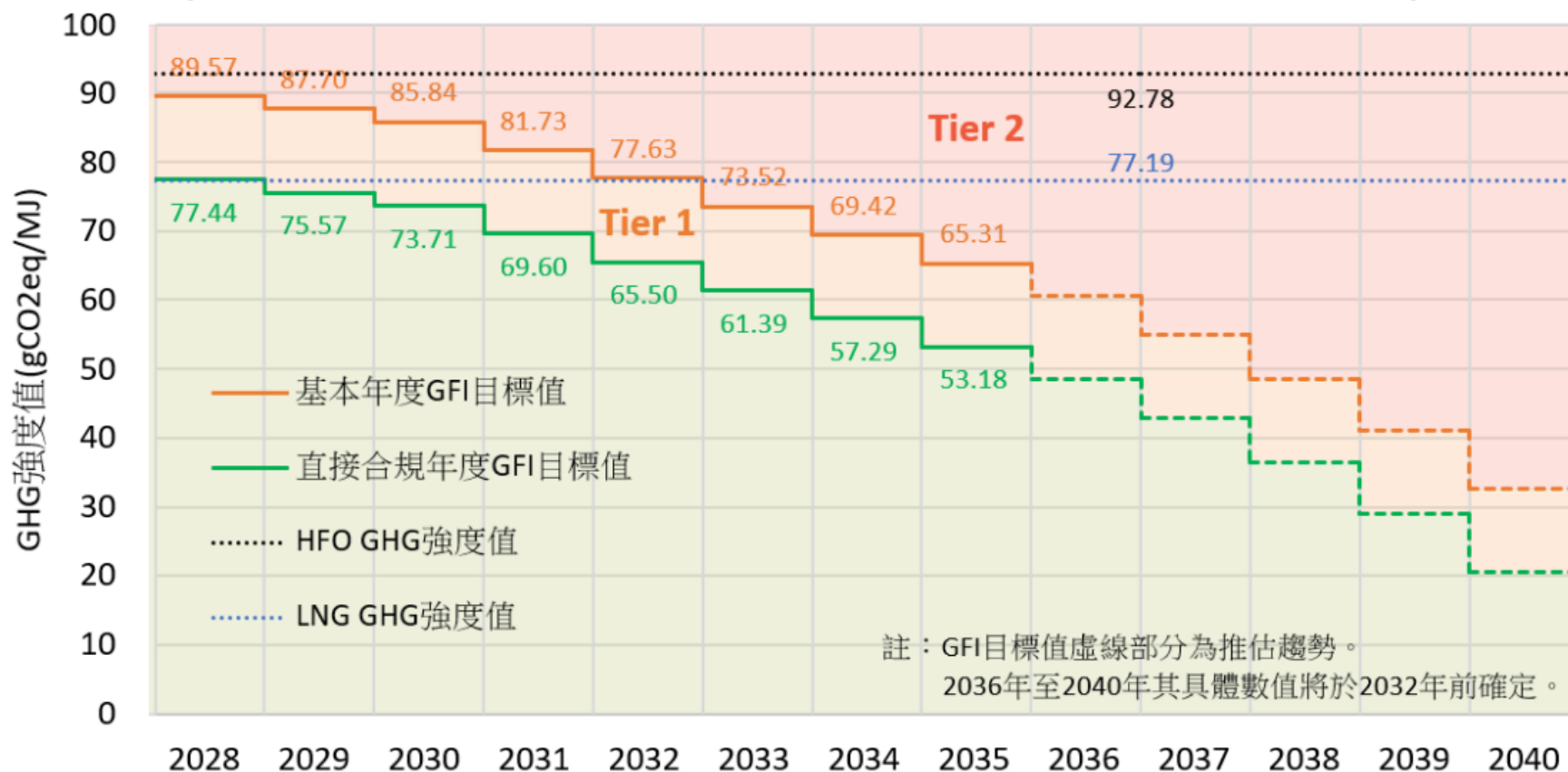
T = 日曆年

GFI_{2008} = GFI基線值，即93.3 gCO₂eq/MJ (WtW)，代表2008年國際航運GFI平均值

Z_T = 年度GFI折減係數(與GFI基線值相比)，由基本目標值和直接合規目標值的年度折減係數組成，如右表

日曆年 (T)	基本目標值 (Z_T %)	直接合規目標 (Z_T %)
2028	4.0 %	17.0 %
2029	6.0 %	19.0 %
2030	8.0 %	21.0 %
2031	12.4 %	25.4 %
2032	16.8 %	29.8 %
2033	21.2 %	34.2 %
2034	25.6 %	38.6 %
2035	30.0 %	43.0 %

溫室氣體減排—IMO法規要求



各年度「直接合規」與「基本」年度目標值示意圖。

溫室氣體減排—IMO法規要求

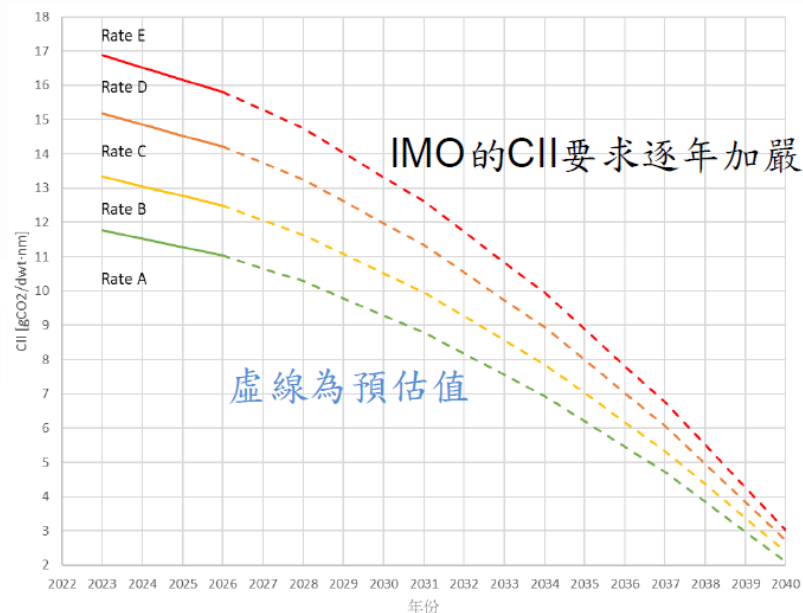
CII (Carbon Intensity Indicator): 短期措施

$$CII = \frac{\sum \left(\text{燃料消耗}_{\text{年度}} \times \text{燃料的CO}_2\text{排放係數}(Cf) \right)}{\text{航行距離}_{\text{年度}} \times \text{船舶載運能力}(DWT)}$$

CII評級加嚴趨勢示意圖



年分	與2019年數據相比之折減係數
2027	-13.625%
2028	-16.25%
2029	-18.875%
2030	-21.5%



CII 碳強度指標2027~2030年折減係數(Z)以每年2.625%幅度加嚴。MEPC(83)

溫室氣體減排一對全球海運影響

GHG Emissions Mitigation-Impact on global shipping

- 一、加速船舶汰換 Speeding up ship replacement
- 二、船速下降 Slowing down ship speed
- 三、供給船噸減少 Reducing ship supply
- 四、使用傳統燃料之新型節能船舶，從Tank to Wake
溫室氣體排放量的角度，在船舶造價、運維費用、
燃料添加等方面仍具有相當的市場競爭優勢

From the point of view of Tank to Wake GHG emissions, the new energy-saving ships using traditional fuel still have considerable market competitive advantages in ship building cost, operation and maintenance costs, bunkering and so on.

溫室氣體減排—公司將如何因應

GHG Emissions Mitigation-How to Cope With

一、持續船舶汰換、建造節能船舶

Continuous ship replacement by building Eco ships

二、加強船舶操作、維護管理

Strengthen ship operation and maintenance management

三、偕同租家積極面對

Cooperative positively with the Charterers

◀ 展望與策略 Prospect & Actions ▶

一、乾散裝船運價市場 The Freight Market of Dry Bulk Carrier 有利因素 The advantage factors :

A. 新船訂單占船隊(10.9%)仍處於健康合理水準。

The share of newbuilding orders in the fleet (10.9%) remains at a healthy and reasonable level.

B. CII及歐盟ETS、FuelEU Maritime 促使船速下降等因素將導致船噸供給成長減少。

The CII, along with EU ETS and FuelEU Maritime, are reducing ship speed's reduction, resulting in the decrease of tonnage supply.

C. 紅海航道危機尚未解除，船舶遠繞。

The shipping crisis in Red Sea has not yet been resolved, and vessels are taking long detours.

D. 烏俄戰爭如結束帶來重建需求。

The possible end of the Russia-Ukraine war will bring reconstruction demand.

— 展望與策略 Prospect & Actions —

不利因素 The disadvantage factors :

A. 中國國內煤炭生產增加、內蒙陸運煤炭增加及再生能源比例提高等因素造成煤炭海運進口量減少。

Factors such as increased domestic coal production in China, higher rail transport of coal from Inner Mongolia, and a greater share of renewable energy have led to a decline in seaborne coal imports in China.

B. 美國的高關稅政策打擊發展中國家經濟成長及出口，對大宗物資海運需求可能減少。

The U.S. high-tariff policy is hurting economic growth and exports in developing countries, which may reduce demand for bulk commodity shipping.

C. 美、中關稅談判未定，未來仍有貿易戰之可能。

The tariff negotiation between US and China is not yet finished; thus, it could still have trade war in the future.

綜合有利及不利因素，未來中、小型乾散貨船型運價看好。

In view of the abovementioned, the freight market of small and mid-size bulker still looks rosy in the near future.

◀ 展望與策略 Prospect & Actions ▶

二、港勤及代營業務持續

The Continuation of Harbour Service And Management Business

中油觀塘港LNG拖船25年合約（建造5艘拖船，2艘交通船），已於2023年4月完成交船營運。將持續拓展相關代營業務。

The 25-year contract of harbor service for CPC Taiwan at Kuan Tung Industrial port (5 tugboats and 2 launch boats) has commenced operation after all new ships were delivered in April in 2023. We would keep expanding the management business.

◆ 展望與策略 Prospect & Actions ◆

三、船舶持續汰舊、年輕化、效能至上

Ship Replacement And Efficiency Improvement

四條散裝船在建，其中二艘四萬噸級於明年第二季交船。

There are 4 newbuilding of bulkers in Japan, two of which would be delivered in Q2 2026.

四、新客輪澎湖輪 New Ferry, Penghu

澎湖輪於2023年9月開始營運，加強行銷擴展客源，增加營收。

The new ferry, Penghu, commenced operation in September 2023. We would strengthen marketing and expand the revenue.



Thank you for your attention



台灣航業股份有限公司

Taiwan Navigation Co., Ltd

