Maritime markets: key issues

ESPO conference 2023

Tim Power, Managing Director, Drewry

1st June, 2023

www.drewry.co.uk

Maritime Research | Maritime Advisors | Supply Chain Advisors | Maritime Financial Research

Drewry

1 Introduction

2 Macroeconomics

3 Energy trades

4 Container shipping

5 Energy transition

Agenda

Introduction

Ukraine war

Inflation

China

Energy transition

Future trade and trade patterns

Labour unrest

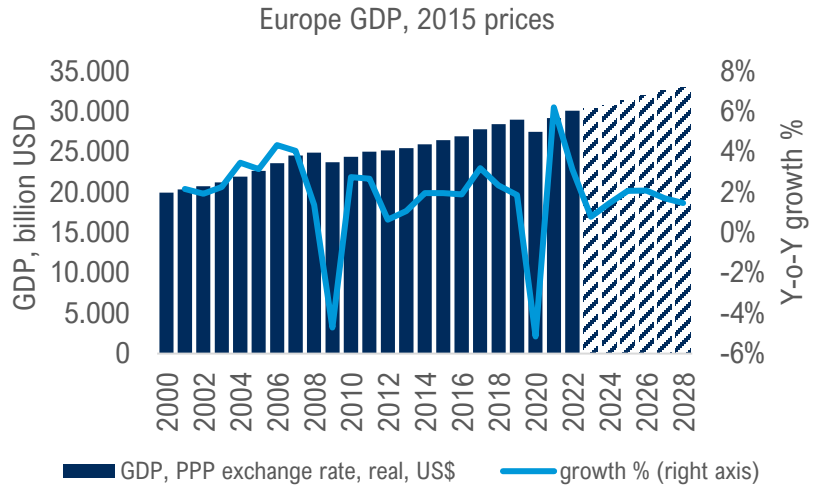
Drewry

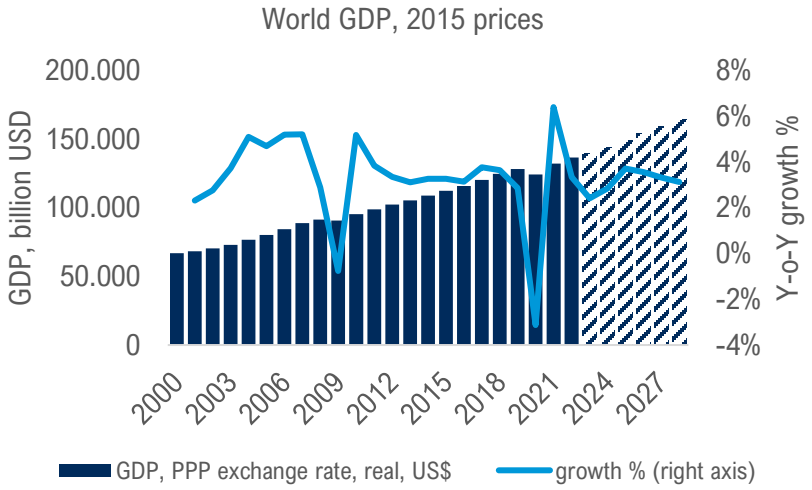
Macroeconomics

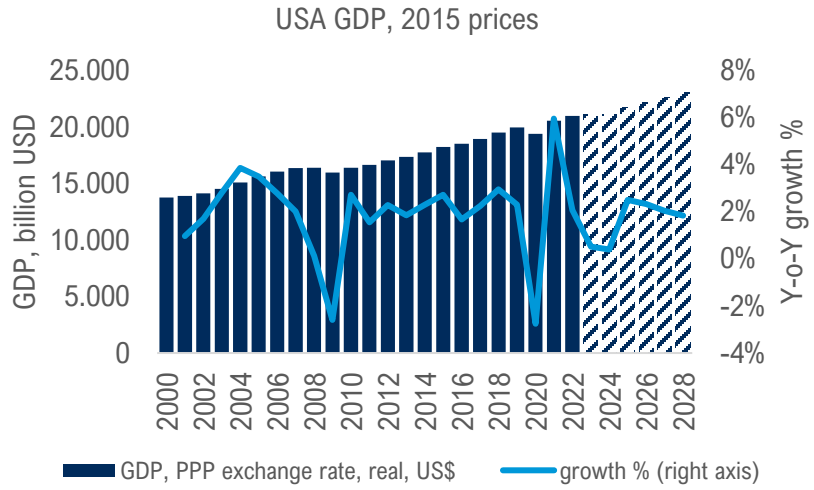
- World GDP growth 3.0% in 2023-2028 and 2.3% thereafter
- China's GDP growth of 4.6% in 2023-2028
- US and Europe will avoid recession but growth will be slow

Economic growth forecast

Recovery in global GDP. New normal of slower growth in China. US and Europe to avoid recession, but growth will be slow.







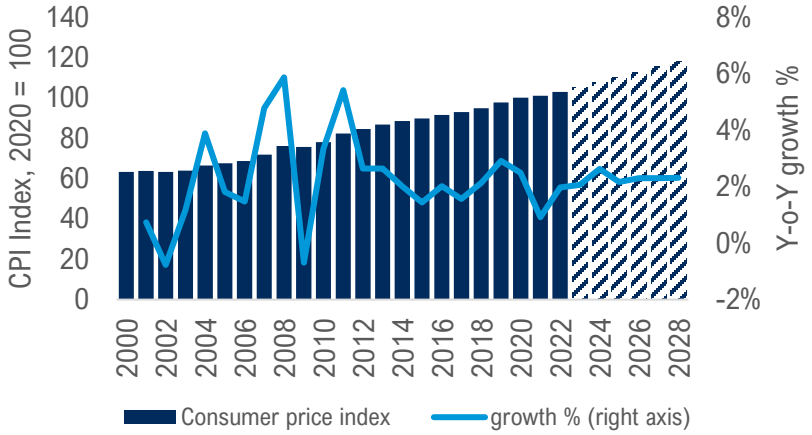
Source: Oxford Economics

- Very sharp spike in inflation in EU and US in 2022
- No spike in China
- High inflation currently forecast to be a short run phenomenon
- Back to 3.5% in 2025 at a global level

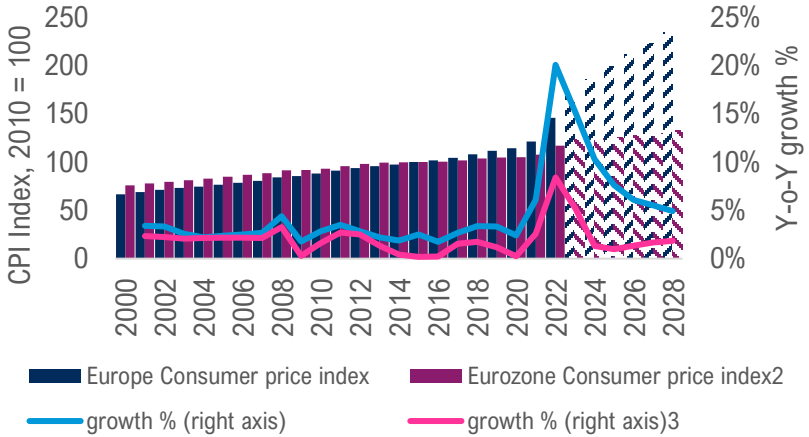
Inflation – Consumer Price Index

Sharp spike in inflation in Western economies in 2022: 20% in Europe (including Turkey) and 8% in the Eurozone. Expected to revert to normal levels in 2024

China CPI index, 2020 = 100



Europe and Eurozone CPI index, 2010 = 100



World CPI index, 2010 = 100

USA CPI index, 1982 = 100

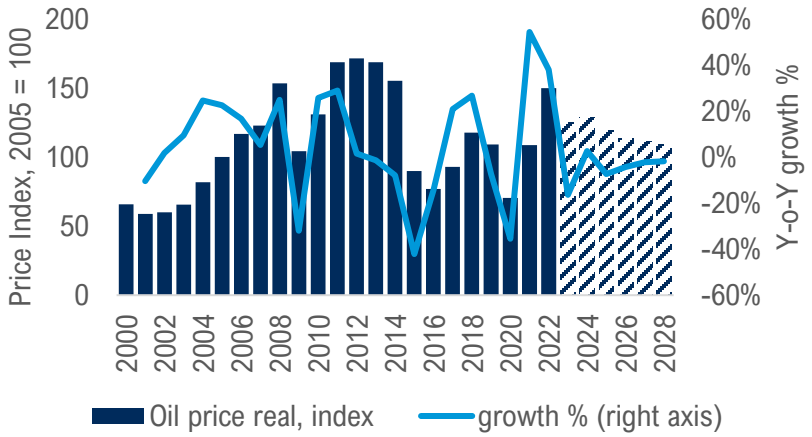
Source: Oxford Economics

- Short term drop in gas price in 2023 (-60%).
- Oil price slows slight decline
- Overall, energy prices significantly higher than pre-pandemic

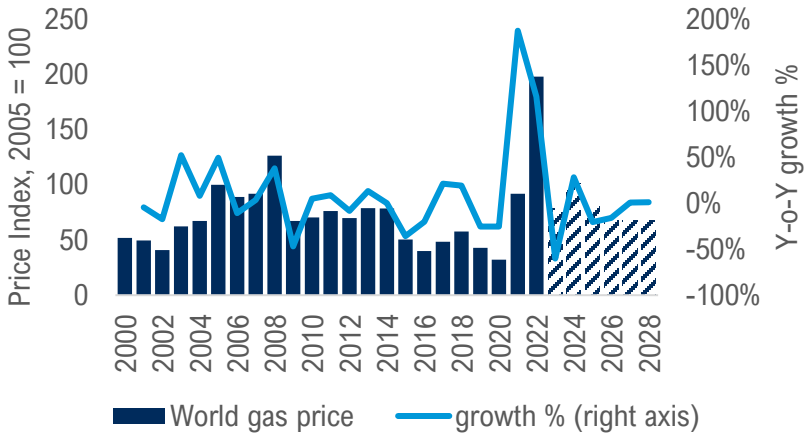
Energy prices

Oil price forecast to be comparatively stable to 2028, Global gas price down 60% in 2023 from its index of 198, but much higher than pre-pandemic. Overall energy prices significantly higher than pre-pandemic.

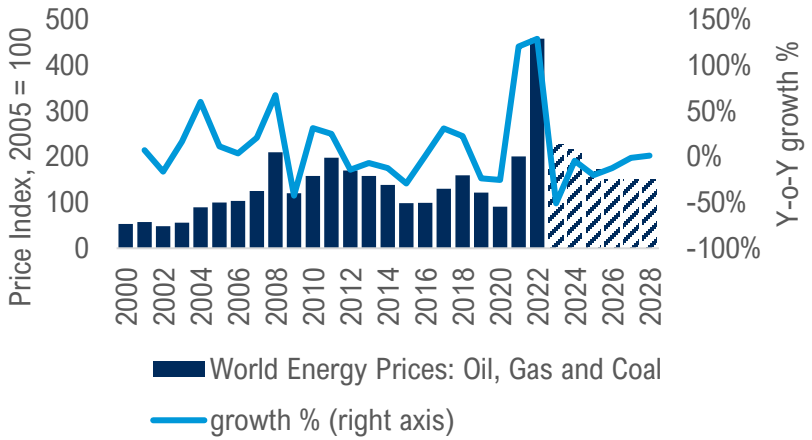
World oil price index, 2005 = 100



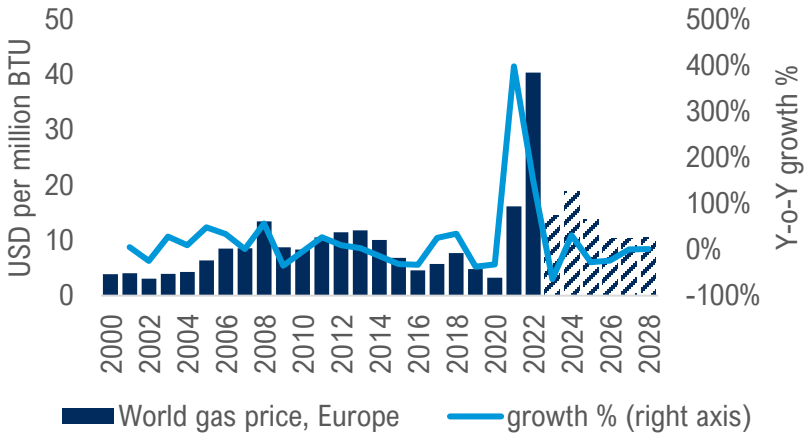
World gas price index, 2005 = 100



World energy price index, 2005 = 100. (Oil, gas and coal)



Europe gas price, US$ per Mil.BTU



Source: Oxford Economics

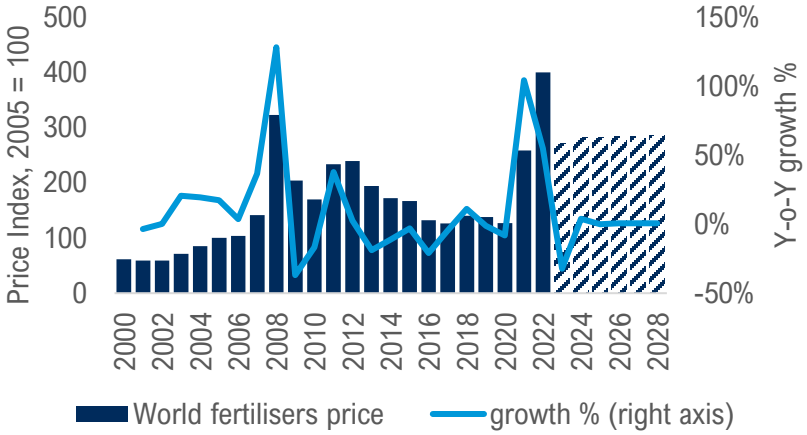
- From an index of 126 in 2020, the Russia/Ukraine war made fertilizers price index jump to 258 in 2021, and further to 400 in 2022. This index is expected to stabilise to around 286 in the next five years.

- A similar pattern can be observed for the food price index which saw a 31% growth in 2021 and an 18% growth in 2022.

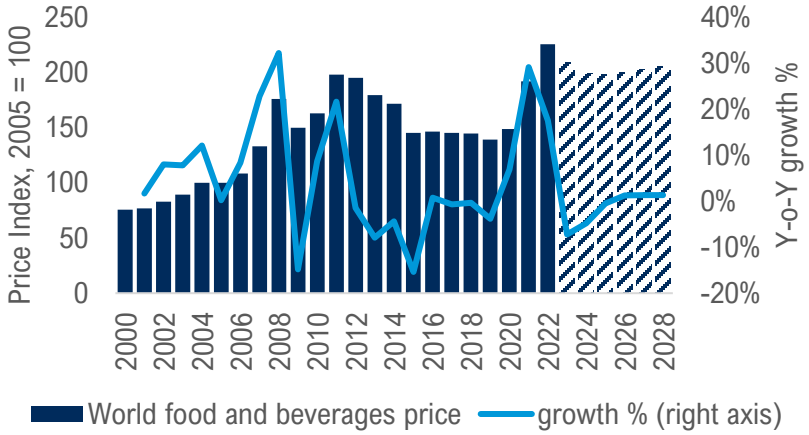
Food price

Global food prices surged by 31% in 2021 and 18% in 2022, driven by fertilizer price growth of 104% and 54% in these years.

World fertilizers price index, 2005 = 100

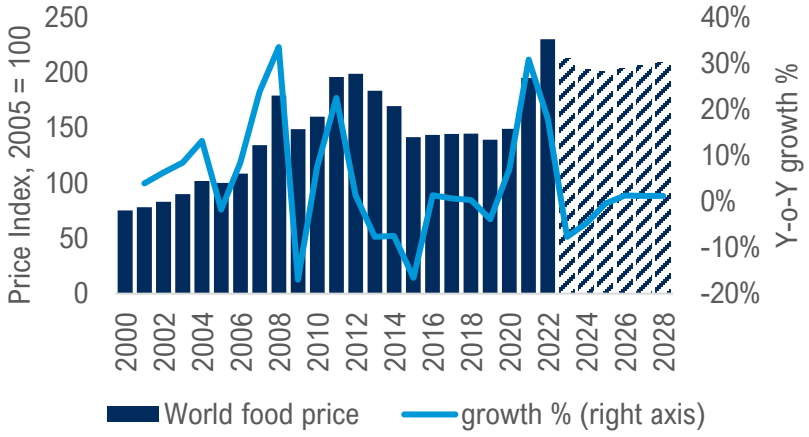


World food and beverages price, 2005 = 100



Price index	2020	2021	2022	…	2028
Fertilizers	126	258	400		286
Growth Y-o-Y %	-8%	104%	54%		
Food	149	195	230		209
Growth Y-o-Y %	7%	31%	18%		

World food price index, 2005 = 100



Source: Oxford Economics

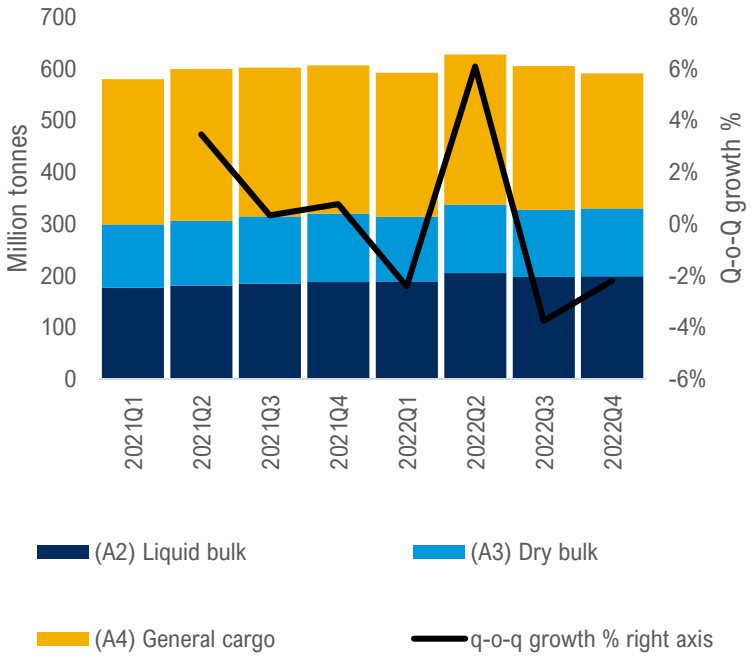
Drewry

European port volume

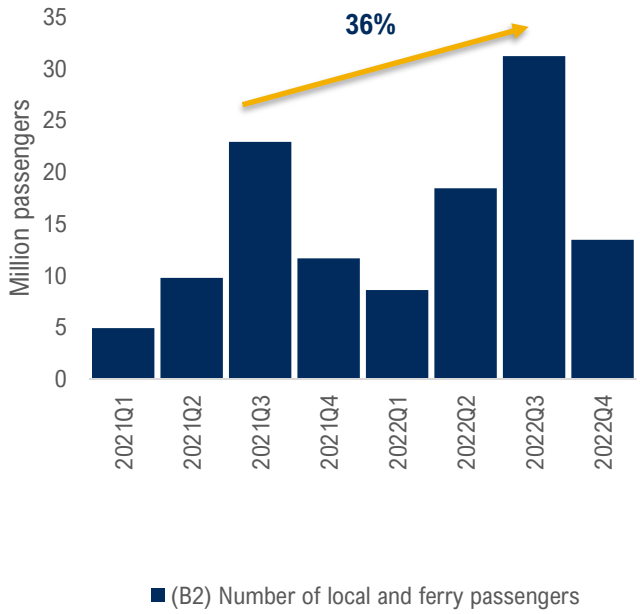
European ports total volume and growth – all regions

Total liquid bulk, dry bulk, and general cargo tonnage grew at a 1.1% y-o-y in 2021-2022. However, 4Q22 saw a contraction of general cargo volume by 6% Q-o-Q growth of 1% only for dry and liquid bulk volumes. For passengers, a seasonal pattern can be observed with the third quarter being the peak. Pax volumes grew at 36% from 3Q21 to 3Q22. Total container volumes dropped dramatically in two consecutive quarters: 3Q22 and 4Q22 at respectively -1% and -7%.

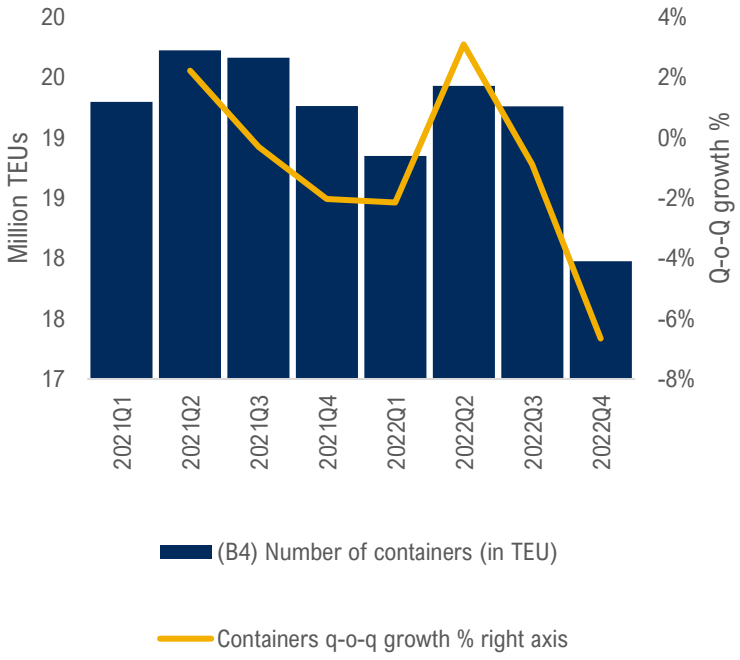
Total volume and growth by cargo type



Total passenger volume and growth



Total container volume and growth



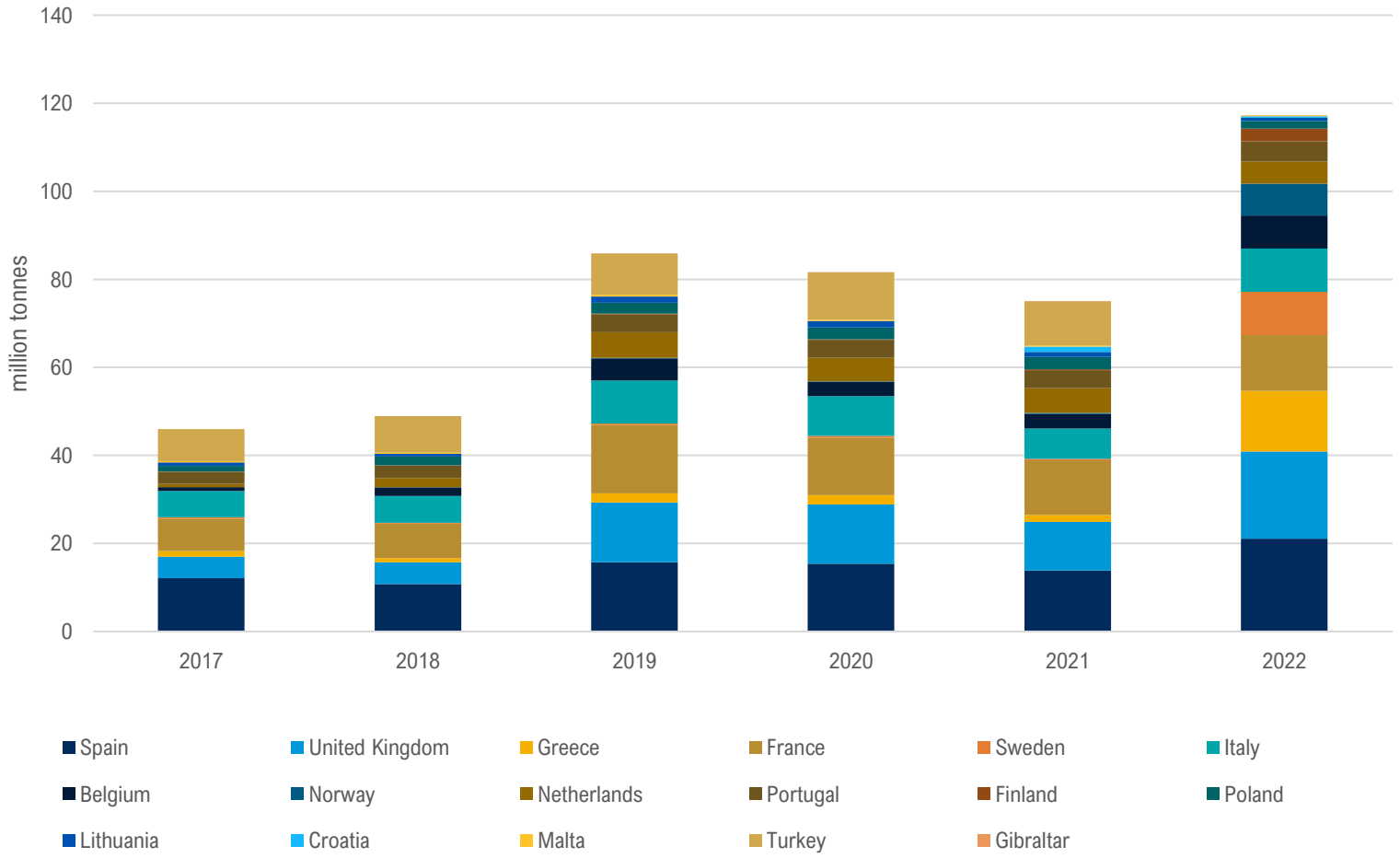
Source: Portinsight

Drewry

Energy trades

European LNG imports

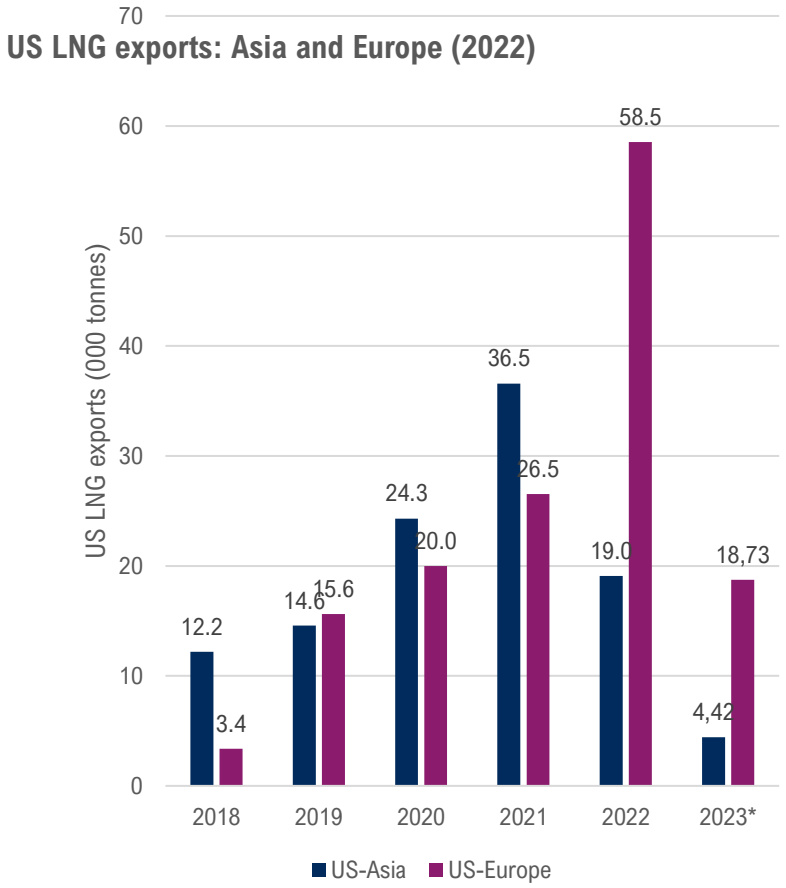
56% increase in LNG imports in 2022. Major buyers importing more and new buyers joining

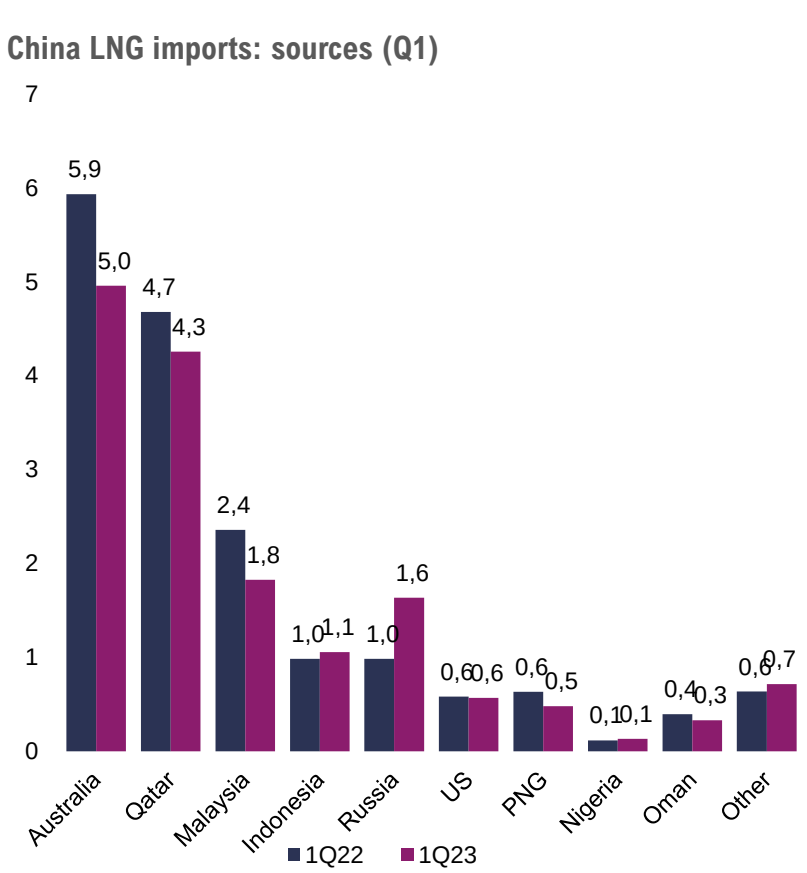


- Spain, UK, Italy and France remained major importers in 2022
- Large additional volume from Greece, Sweden, Belgium
- Other countries also participating

Changing trade patterns

The Ukraine war has led to major shifts in LNG trading patterns. Europe sourcing from US; China importing more from Russia





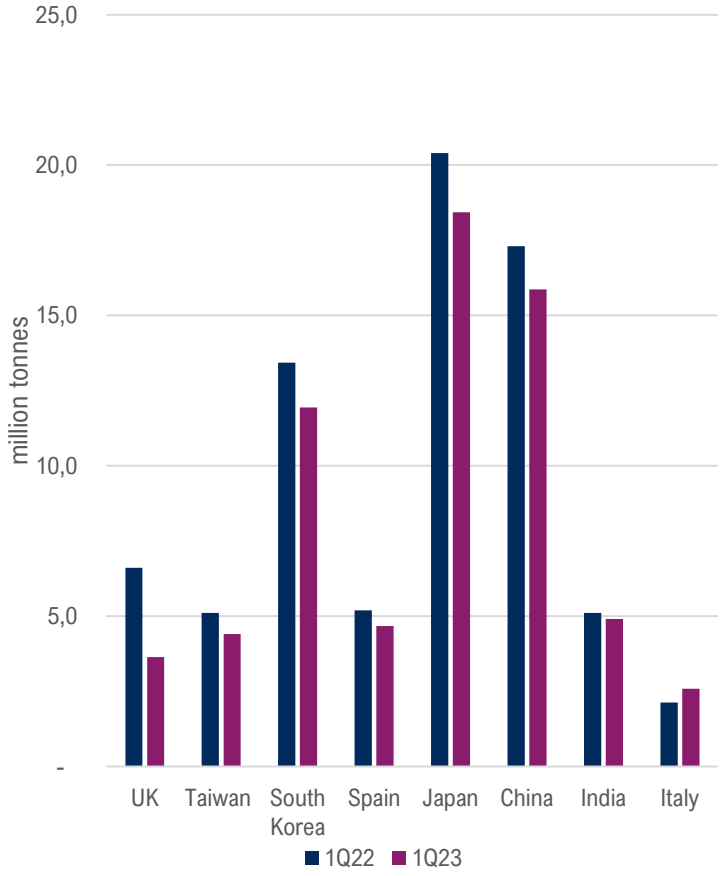
- US LNG exports to Europe increased by 121% in 2022 from 2021, while US LNG exports to Asia declined by 40% in the same period
- Russian LNG exports to China increased by 66% YoY

Drewry

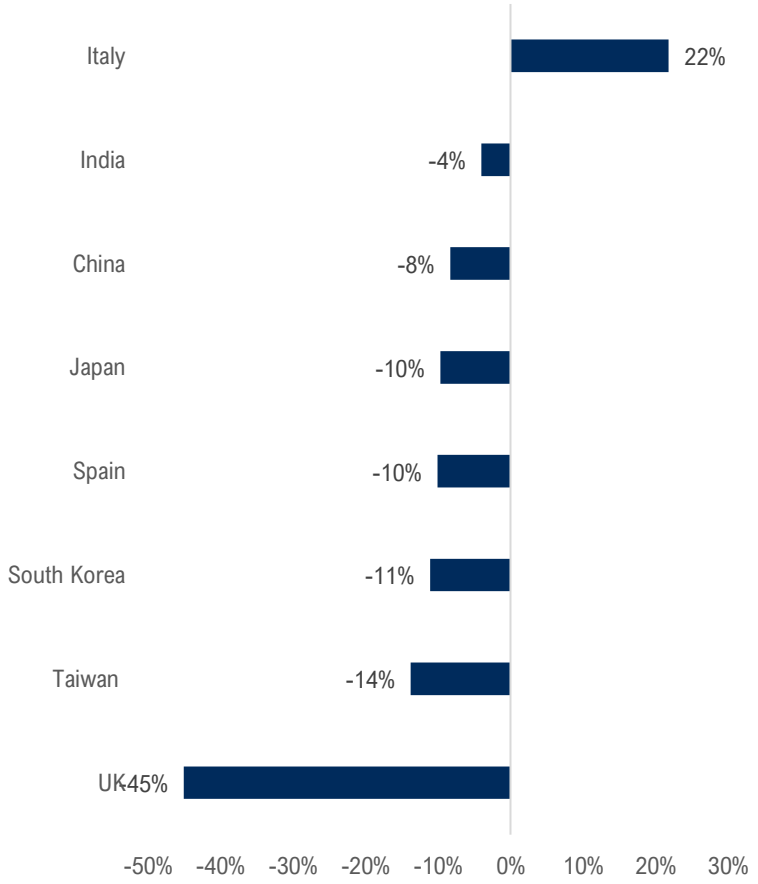
LNG imports Q1

Major importers, with the exception of Italy, saw lower import volumes in Q1 2023 than in the previous year. High inventories restricted demand for LNG in European countries

Top LNG importers – 1Q23 vs 1Q22



LNG demand falling among major importers

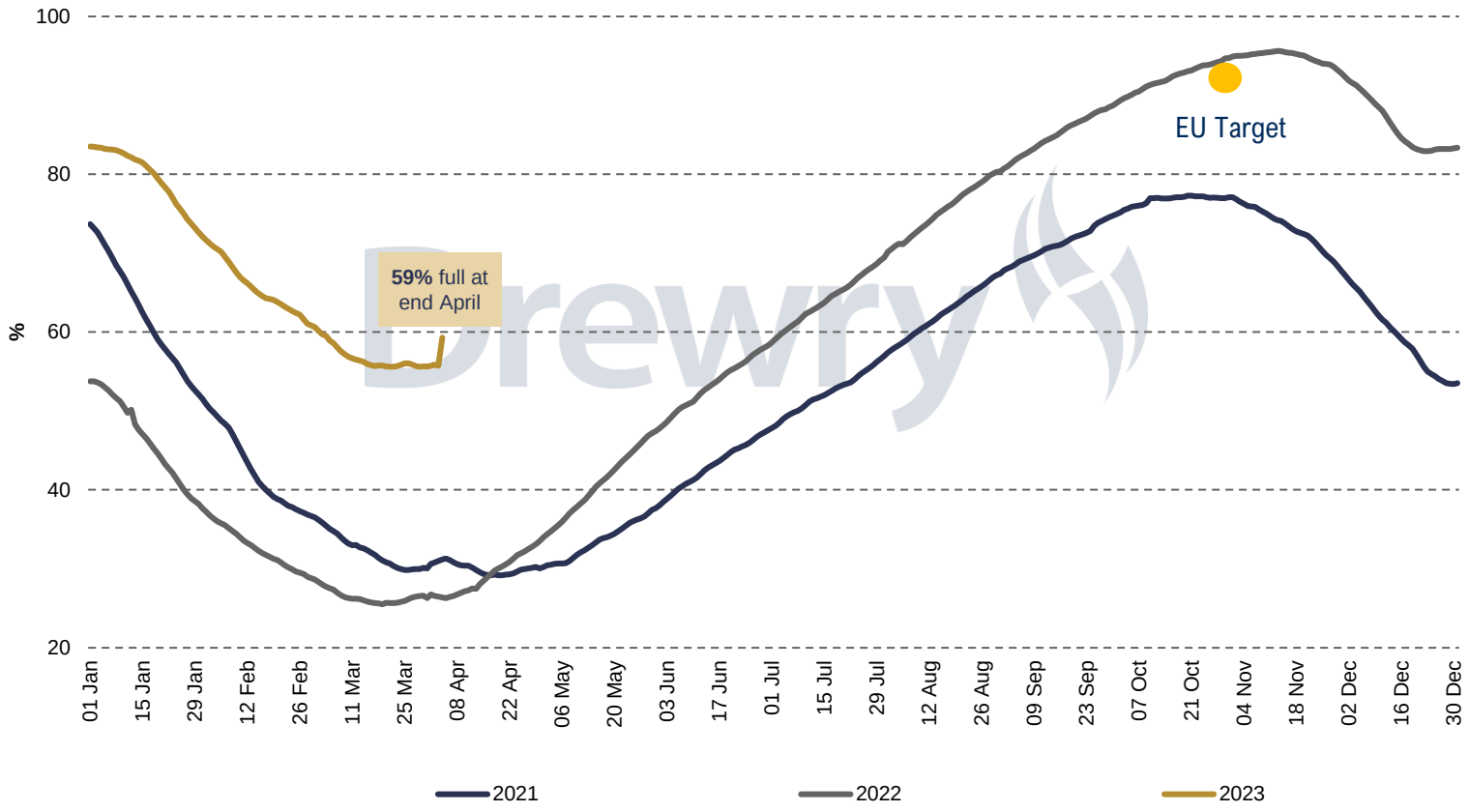


- Europe's top LNG importers (Spain, the UK and Italy) – imported an estimated 10.8 million tonnes of LNG in 1Q23 compared to 13.9 million in 1Q22.
- Asia's top LNG importers (Japan, China, India, South Korea and Taiwan) imported 55.5 million tonnes in 1Q23 compared to 61.3 million in 1Q22.
- Lower LNG prices prompted some buying in the price-sensitive countries – India, Bangladesh and Thailand.
- High inventories restricted demand for LNG in European countries, Japan and South Korea
- Gas consumption recovering at a slow pace

Drewry

European storage capacity utilisation

Capacity utilisation at 59% at end April, far higher than in April 2022, but increased competition with Asia for LNG supply is likely



- European gas storage has benefited from mild winter conditions and low industrial demand
- Industrial demand for LNG is down 25% YoY due to European conservation measures and policies.
- Conservation Policies likely to be extended in 2023; will hurt industrial sector
- Limited Russian gas supply this year
- Competition with Asia will compel Europe into aggressive purchasing of LNG
- Expected El Nino effect of bringing in hotter summers and colder winters

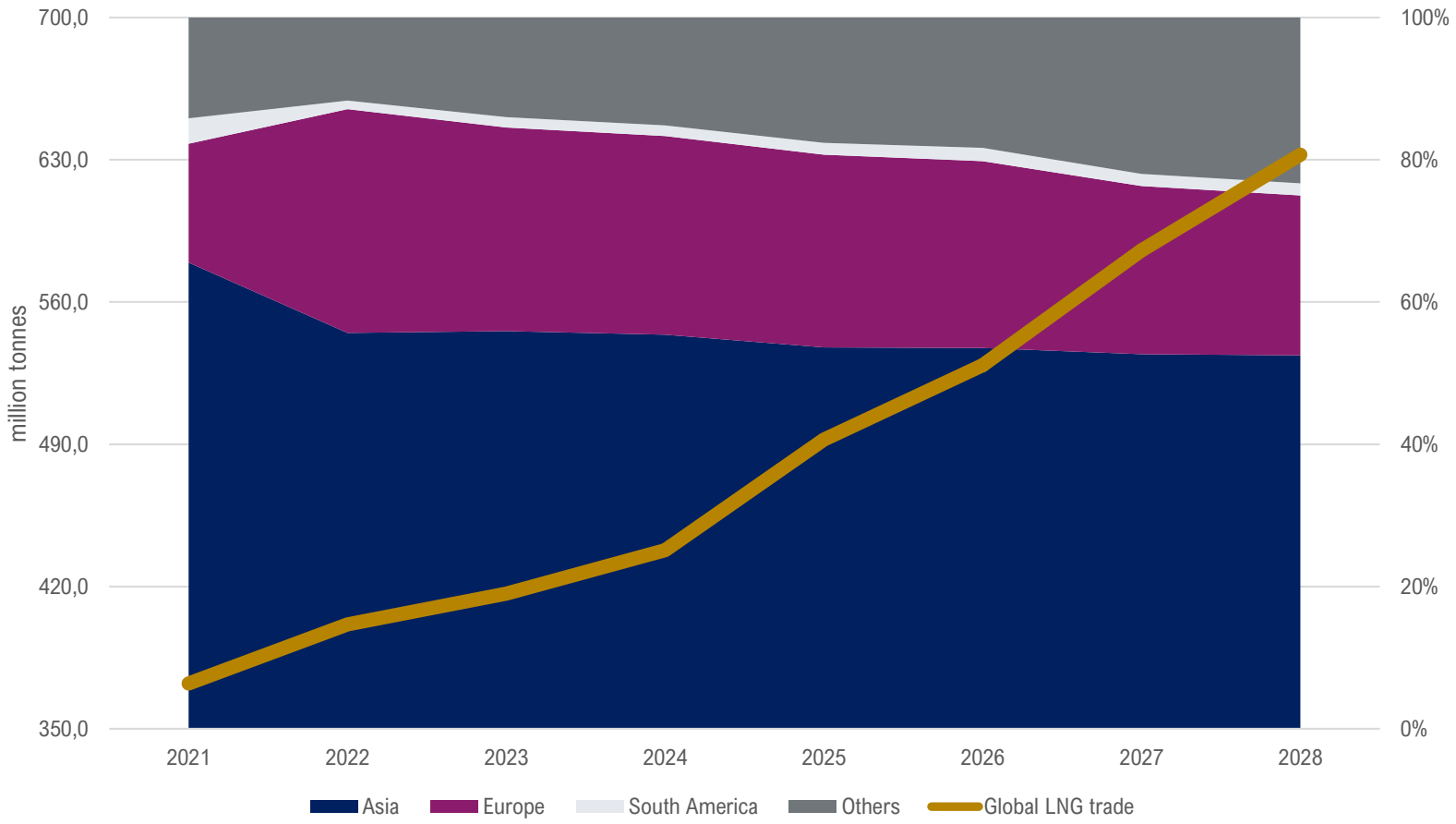
FSRU deployment

Substantial growth in FSRU capacity

Mtpa capacity	Operational	Under construction	Planned	Speculative
Albania	0	0	0	3.8
Croatia	1.9	0	2.5	0
Cyprus	0	0.6	0	0
Finland	3.7	0	0	0
France	0	3.7	0	0
Germany	11.6	7.4	3.7	3.5
Greece	0	4	5.4	4.4
Ireland	0	0	0	13.3
Italy	2.8	7.4	3.7	0
Netherlands	6	0	0	0
Poland	0	0	0	4.5
Turkey	9.8	5.4	0	0

LNG trade growth

Global LNG trade will grow 8.7% for 2023-28, but Europe's imports will decline in the long term.

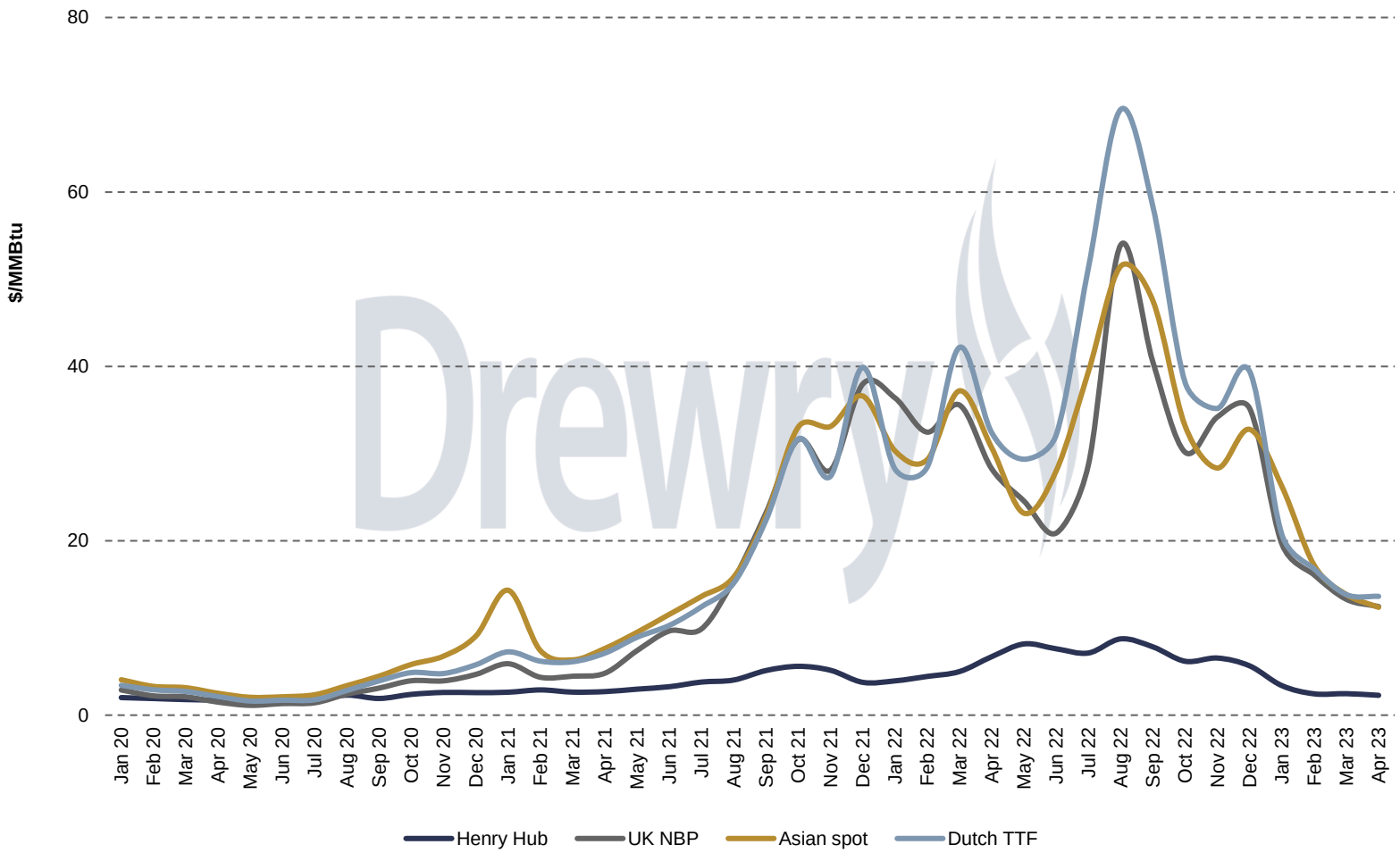


- Global LNG trade is projected to reach 632 million tonnes in 2028; trade projection for 2023 at 416.5 million tonnes, up 4%
- Asia to remain as the LNG growth driver in the forecast period
- Asia's share in global LNG trade reduces to 56% in 2022, down 10% YoY
- Europe's share rises to 31% in 2022, up from 17% in 2021
- Asia to continue to import over half of global LNG supply throughout forecast period
- Europe's share to decline gradually with saturating demand and adoption of alternative fuels

Drewry

LNG Spot prices

Spot prices have declined since 2022 peak but expect volatility in 2H23



- Both TTF and Asian spot converged after a year in 1Q23
- LNG spot prices averaged $13 MMBtu in 1Q23
- Henry Hub is below $3 per MMBtu, owing to increased domestic production and reduced natural gas consumption
- Spot prices to fall further, giving room to price-sensitive countries to import
- Fierce competition between European players (entailed by re-stocking of gas before next winter) and China (expected recovery) to boost prices in 2H23

Oil and refined products: key issues

Russia crude trade

Shift in trade of refined products

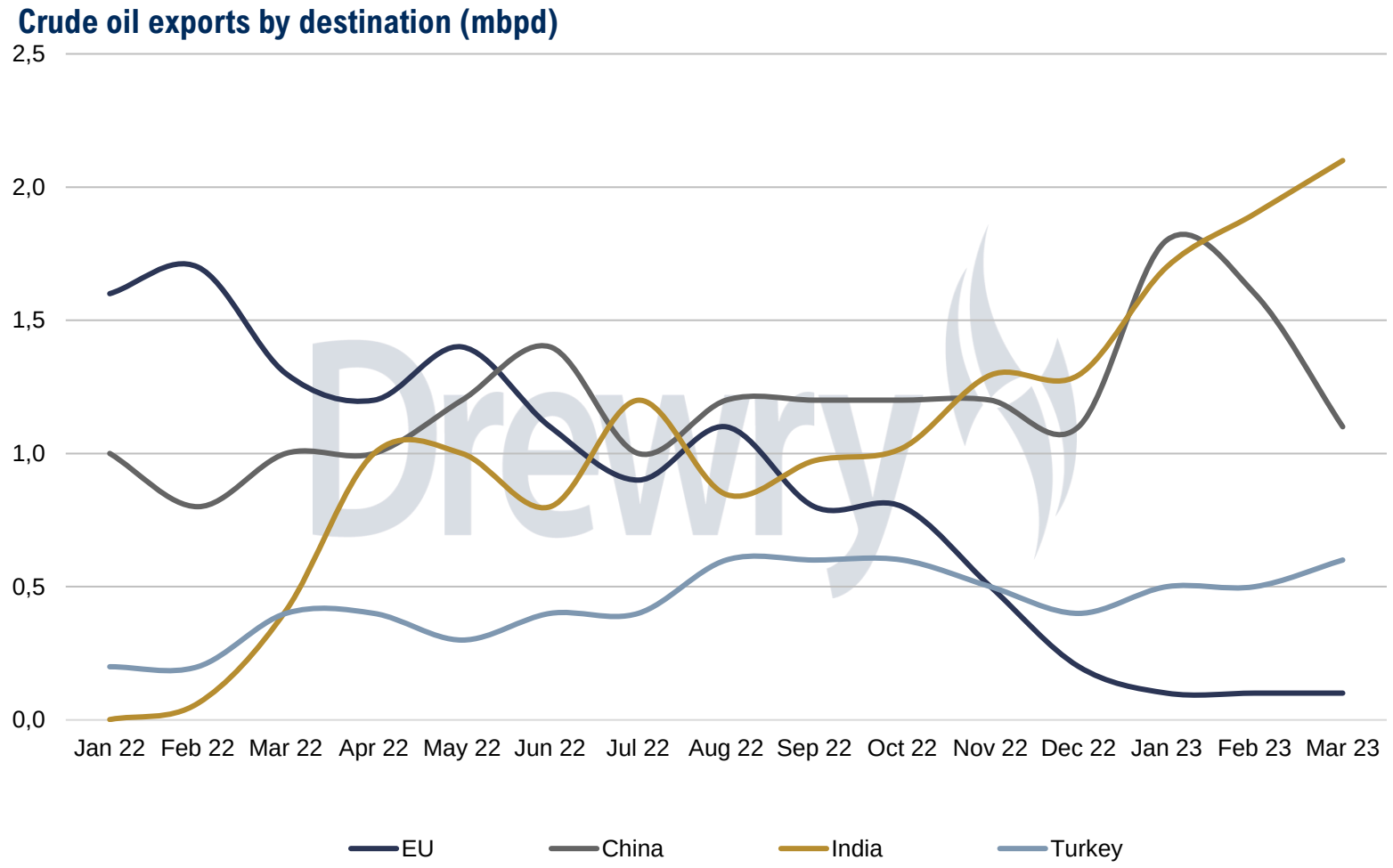
OPEC production

Low vessel orderbook

Sources: Drewry Maritime Research

Russia crude exports in 2022

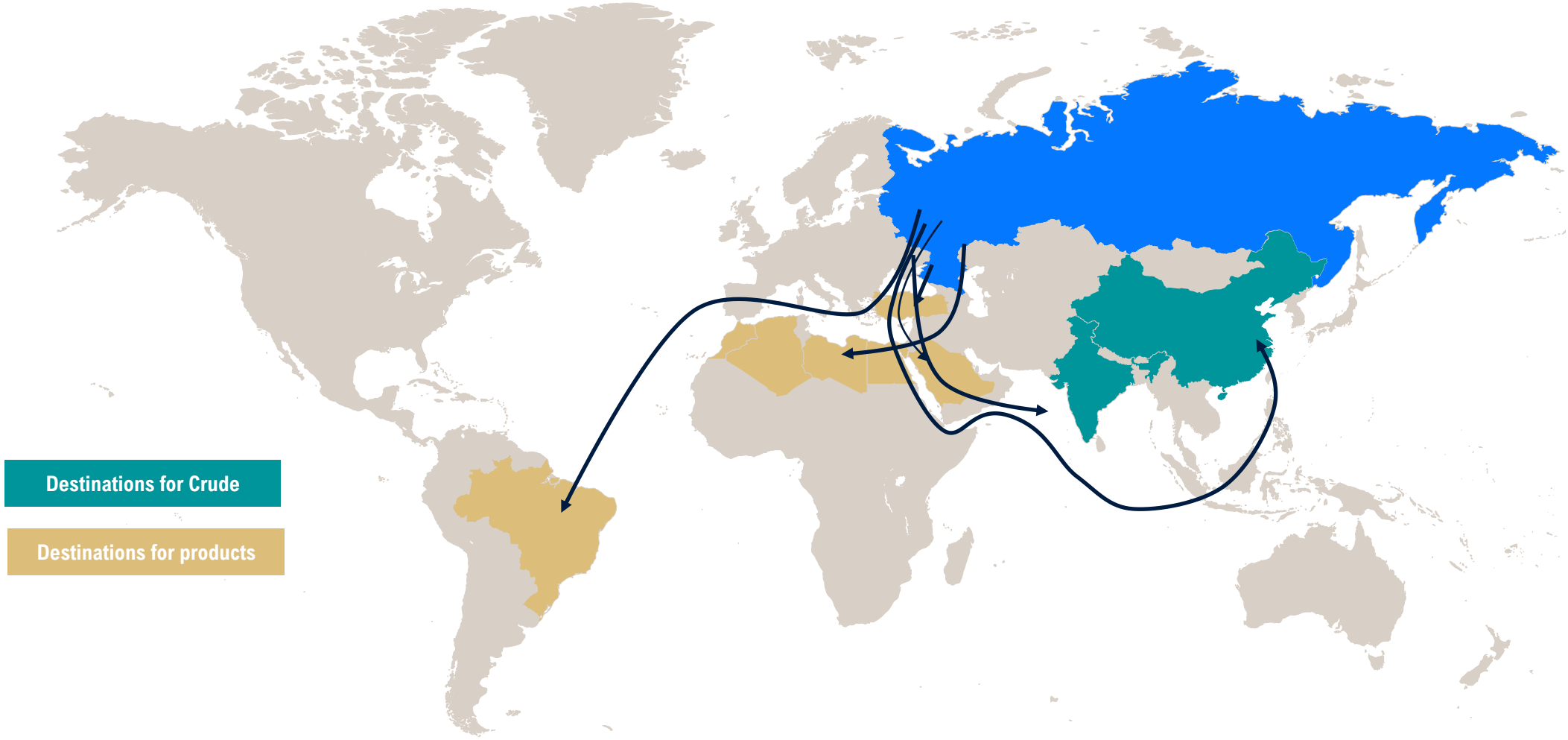
Russia's crude exports have grown; destination mix is very different



- Russian exports to EU have fallen from 1.7 mbpd to almost zero during 2022
- Exports to India have risen from zero in Jan 2022 to 21. mbpd in Mar 2023
- China's imports have also risen, but less consistently
- Overall increase in crude exports

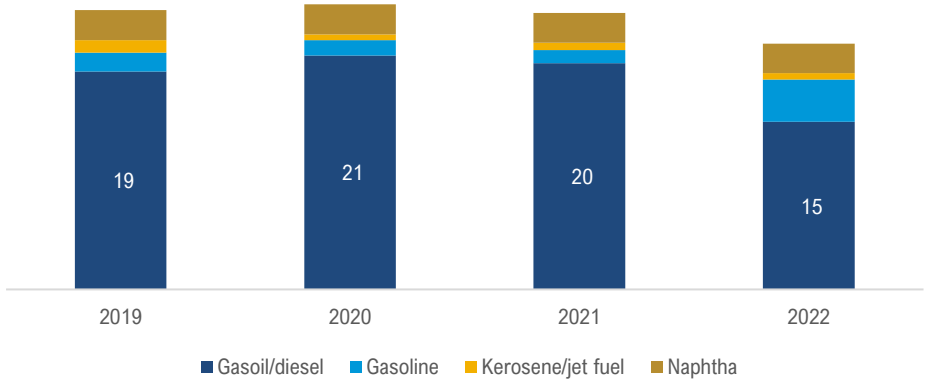
Russia’s crude oil and product export markets

Growing long-haul trade for Russian crude. Uncertain outlook for products

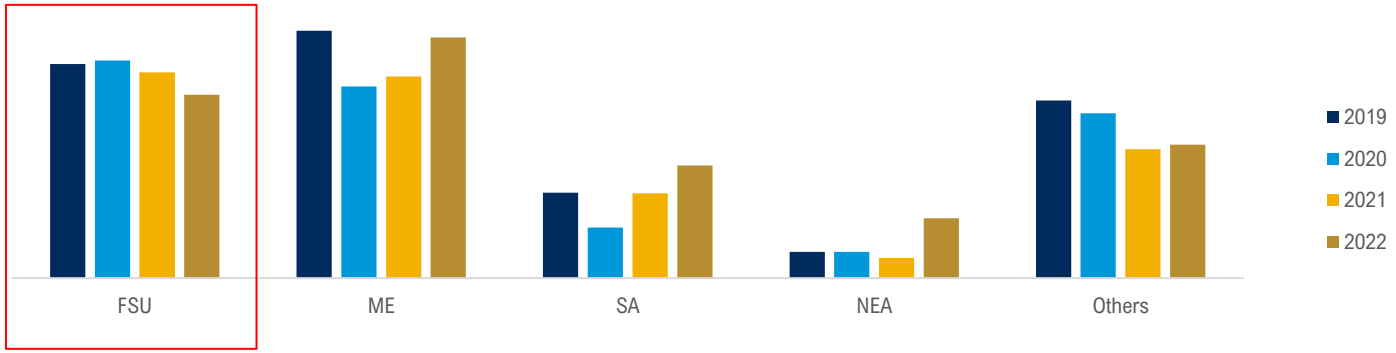


Refined products trade shift

Russia's exports of refined products to EU (million tonnes)



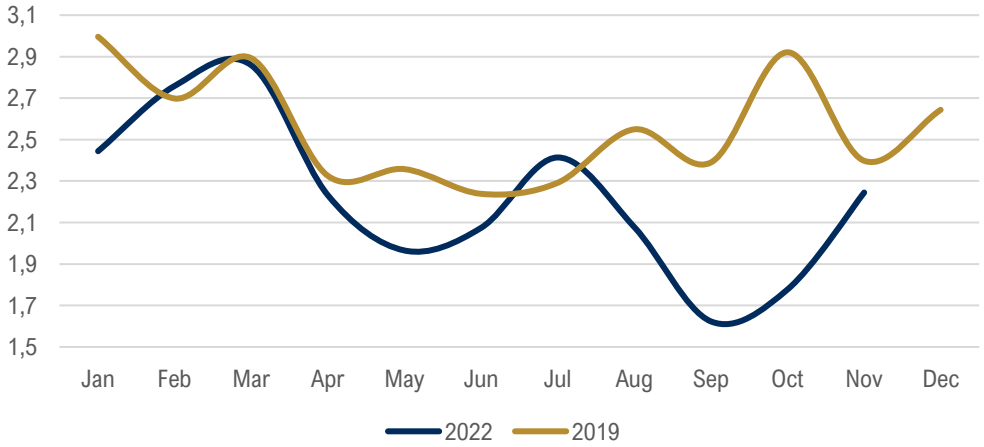
Sources of European product imports (million tonnes)



** Contains gasoline, gasoil/diesel, naphtha, kerosene/jet fuel*

EU product imports from FSU replaced by volume from Middle East and S. Asia.

EU imports of gasoil/diesel from Russia
- *Unusual peak before the price cap*



Outlook:
- The trade shift is the “new normal”
- The real impact of the trade shift to be felt in 2023
- Massive surge in tonne-mile demand to boost freight rates

OPEC Production cuts

- Voluntary cut of 1.6 mbpd from May to December on **4 April**
- Total production cuts 3.66 mbpd (2 mbpd cut in October 2022)

Aim

Strengthen oil prices

Impact

Possible Outcomes

Global oil demand softens

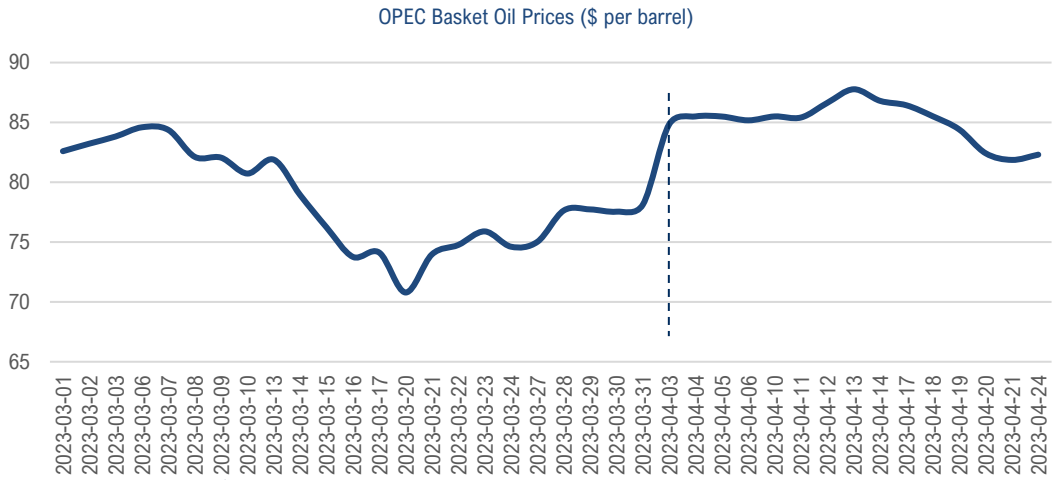
- Balanced oil market
- Low refinery runs and crude oil trade
- Low tanker rates

Our prediction

- OPEC to bring back the output once demand improves
- Surge in oil demand and trade in 2H23 on the back of the resurgent Chinese demand
- Softening in earnings in the short term, firmness in crude oil trade in tandem with the new trade patterns in long run

Oil demand remains strong

- Massive drawdown in strategic and commercial inventories
- Extreme oil deficit
- May crush tanker demand



Drewry

Drewry

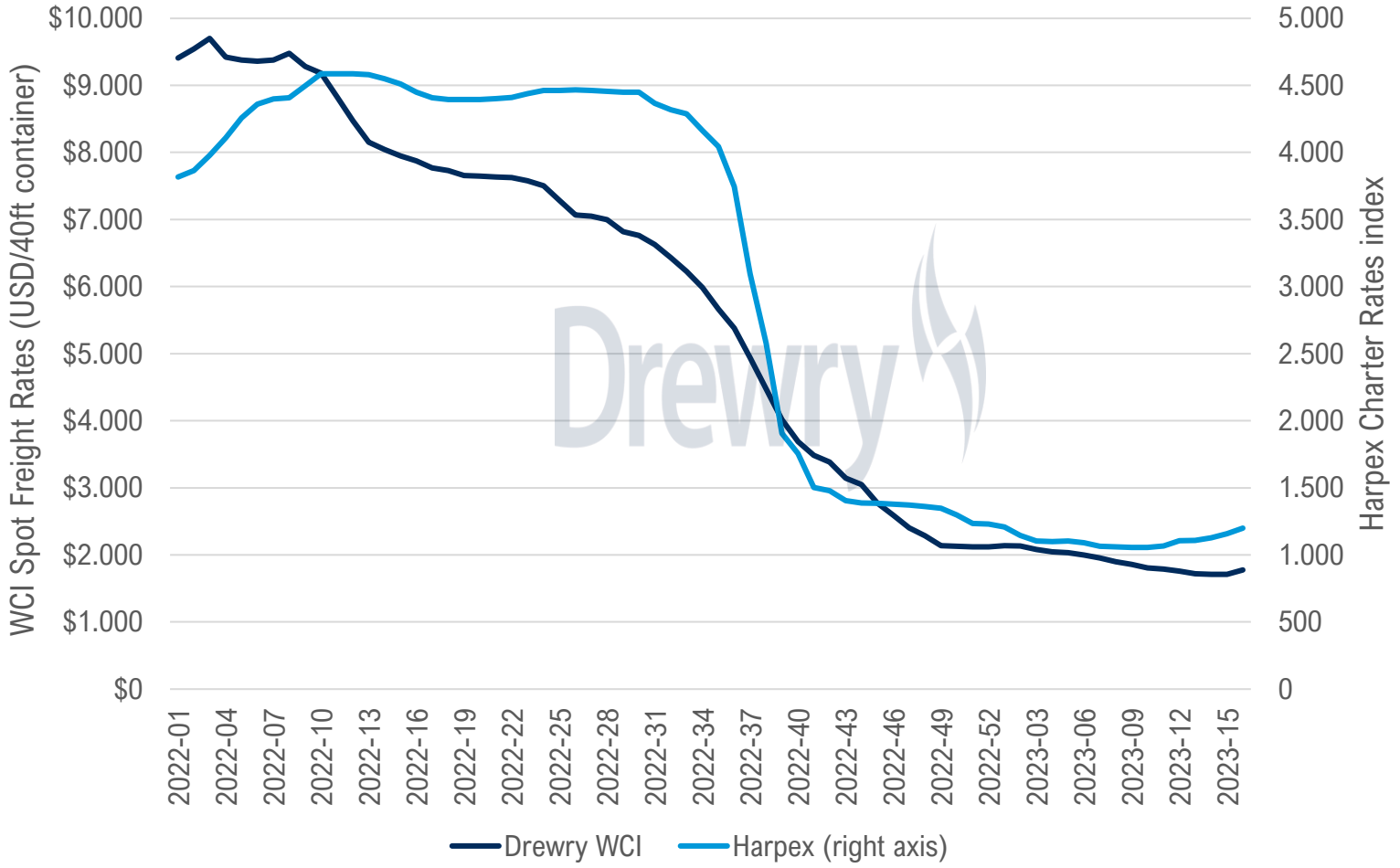
Container shipping

- Drewry's World Container Index saw its first weekly rise in 60 weeks on 20 April 2023, rising $65/40ft container.

- Harper Petersen Charter Rates Index (Harpex) – covering 6-12 months fixture periods – started rising at end of March 2023.

Container market rates

Drewry World Container Index and Harpex Charter Rates Index

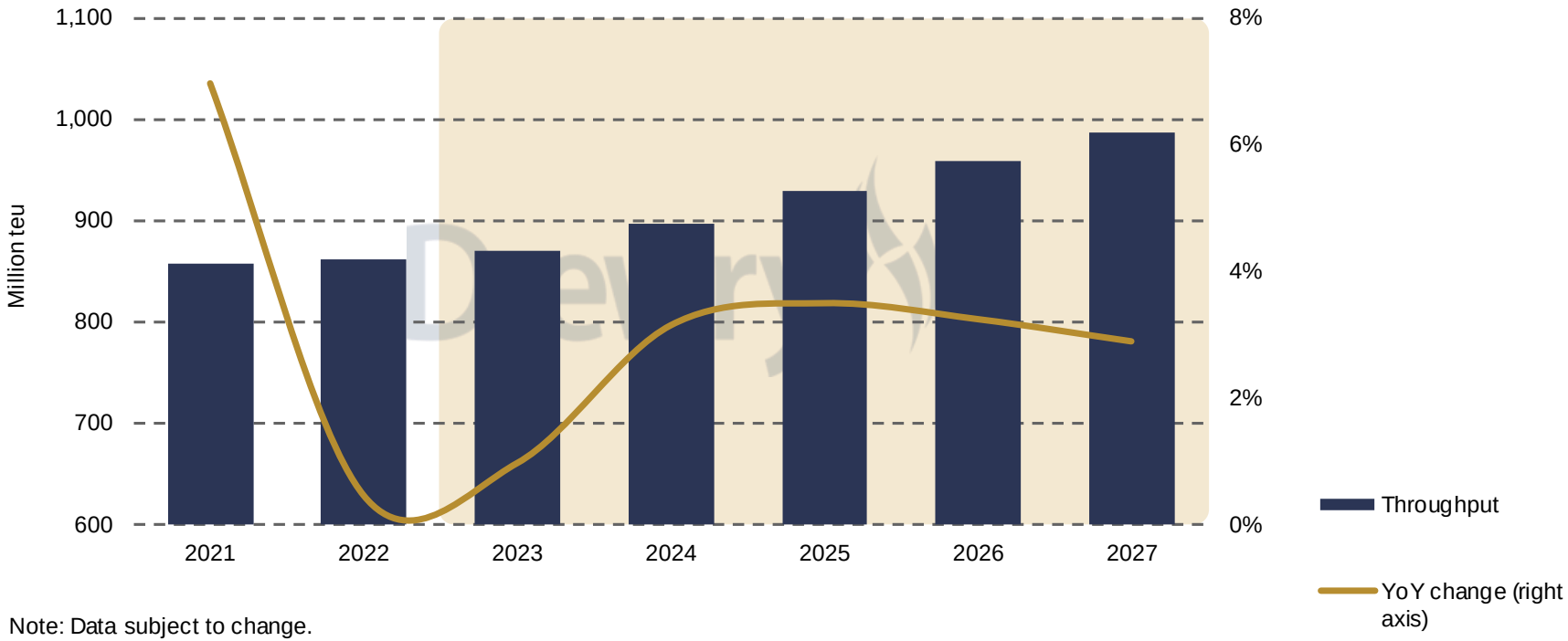


Source: Drewry Supply Chain Advisors, Harper Petersen

- Most of the factors that contributed to the colossal surge in ocean freight in the last three years have vanished

- World container port throughput ended 2022 slightly better than anticipated, growing 0.5%; 2023 expected to remain at a similarly low level of 1.0%

Drewry's Global Container Port Throughput Outlook

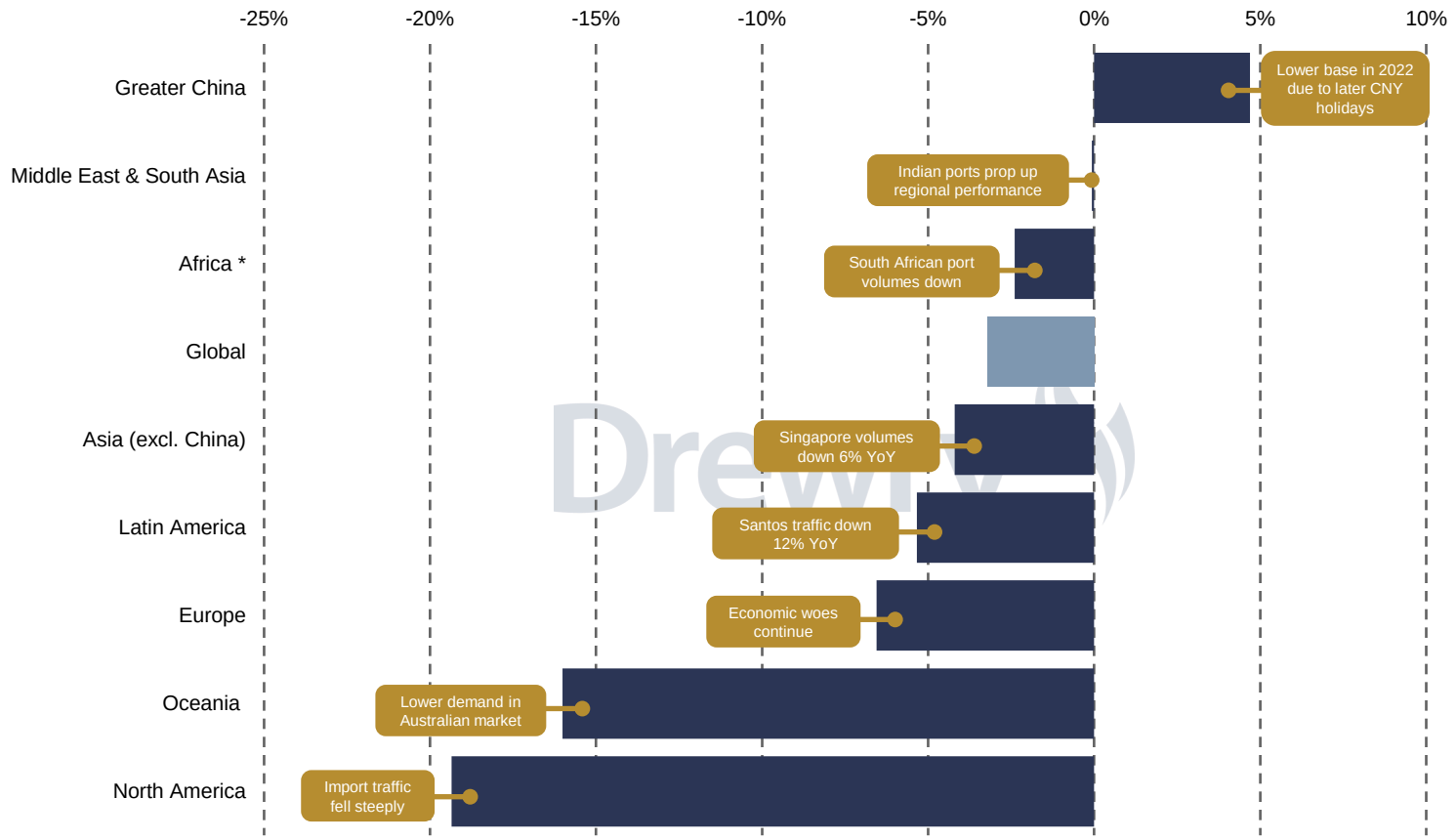


Note: Data subject to change.

Source: Drewry Maritime Research

Regional volumes in 2023

Significant y-o-y declines in many regions



* The index figures for Africa are based on a relatively small sample and therefore should be viewed with caution.

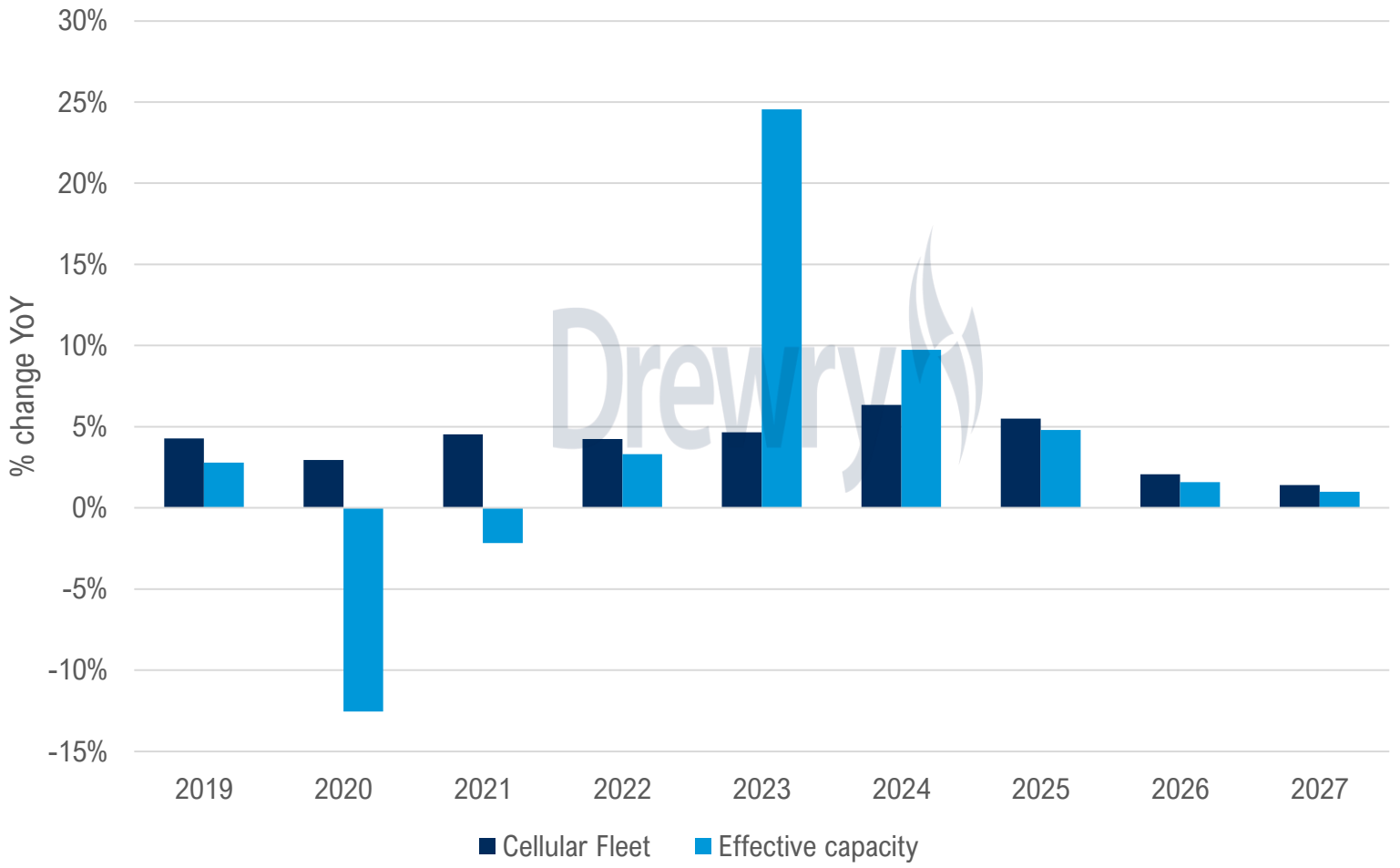
- February 2023 global port volume was down 3.2% vs,. February 2022
- Very large decline in US volume
- Europe volume down 6.6%
- S. Asia and China re the main sources of volume growth

- After some delivery delays and (lower than expected) scrapping the cellular fleet is projected to grow by 4.7% in 2023.

- Easing of port congestion will see effective capacity jump by 25%, even after slow steaming offset

Global Container Shipping Supply Outlook

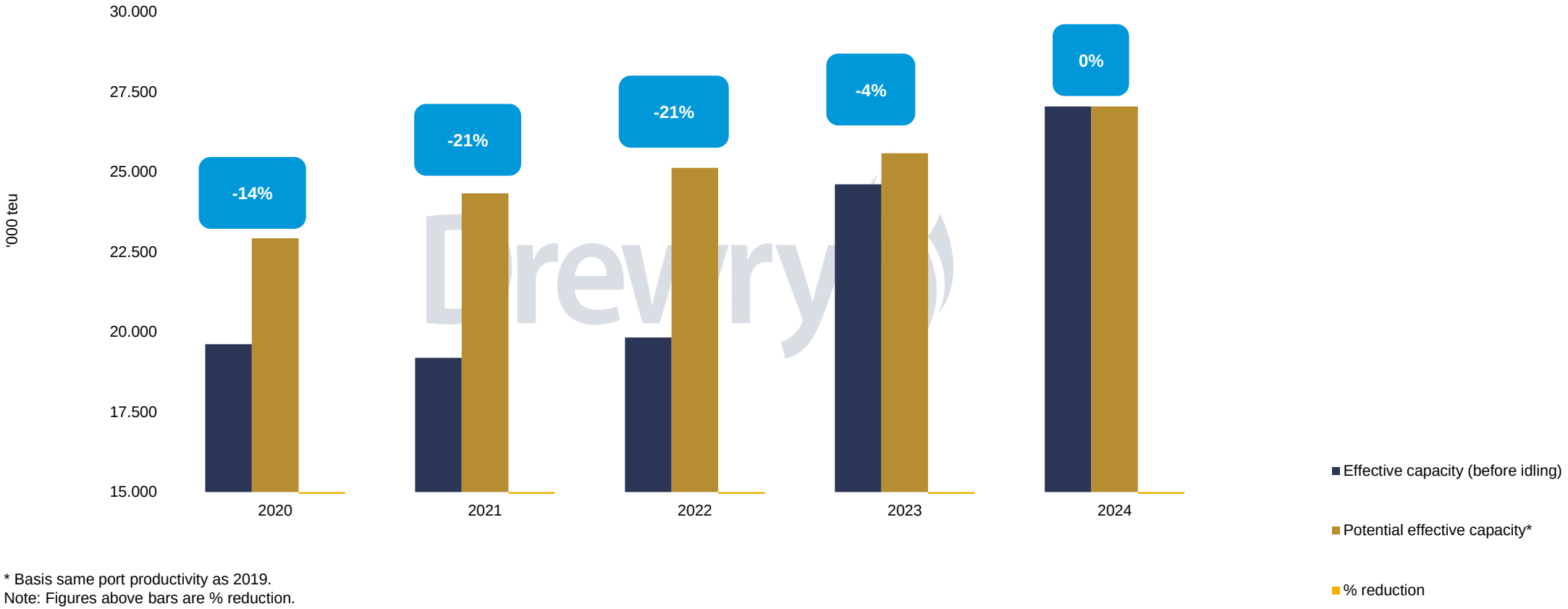
Biggest source of growth in capacity is the end of port congestion



Source: Drewry Maritime Research

Port congestion and capacity

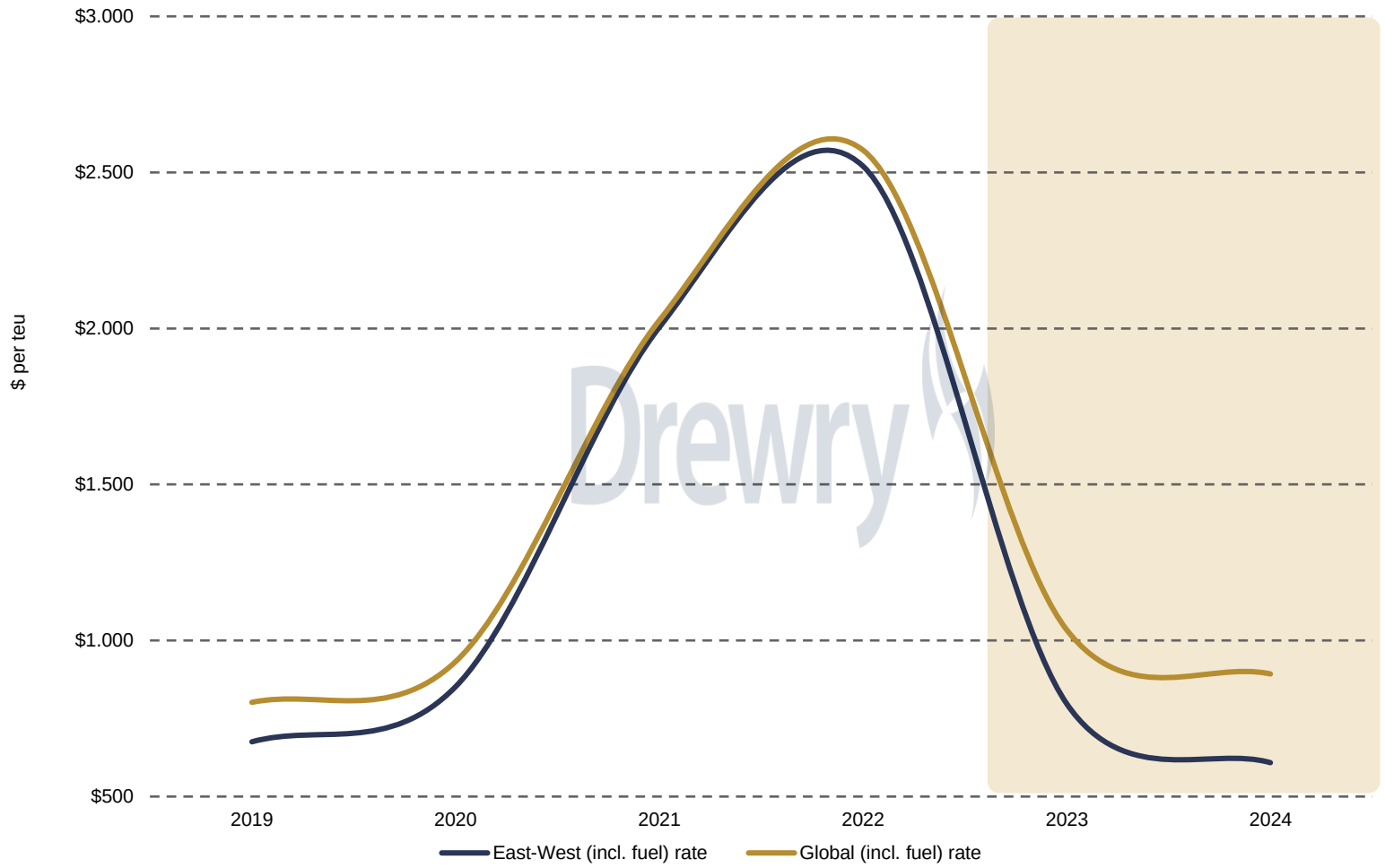
Supply chain congestion caused by COVID cut effective capacity and was the main cause of the booming market in 2021-2022. Nearly resolved now leading to a large injection of effective capacity



* Basis same port productivity as 2019.
Note: Figures above bars are % reduction.

- Drewry now forecasts a 59.8% reduction in global freight rates for 2023, followed by a drop of 13.7% in 2024.

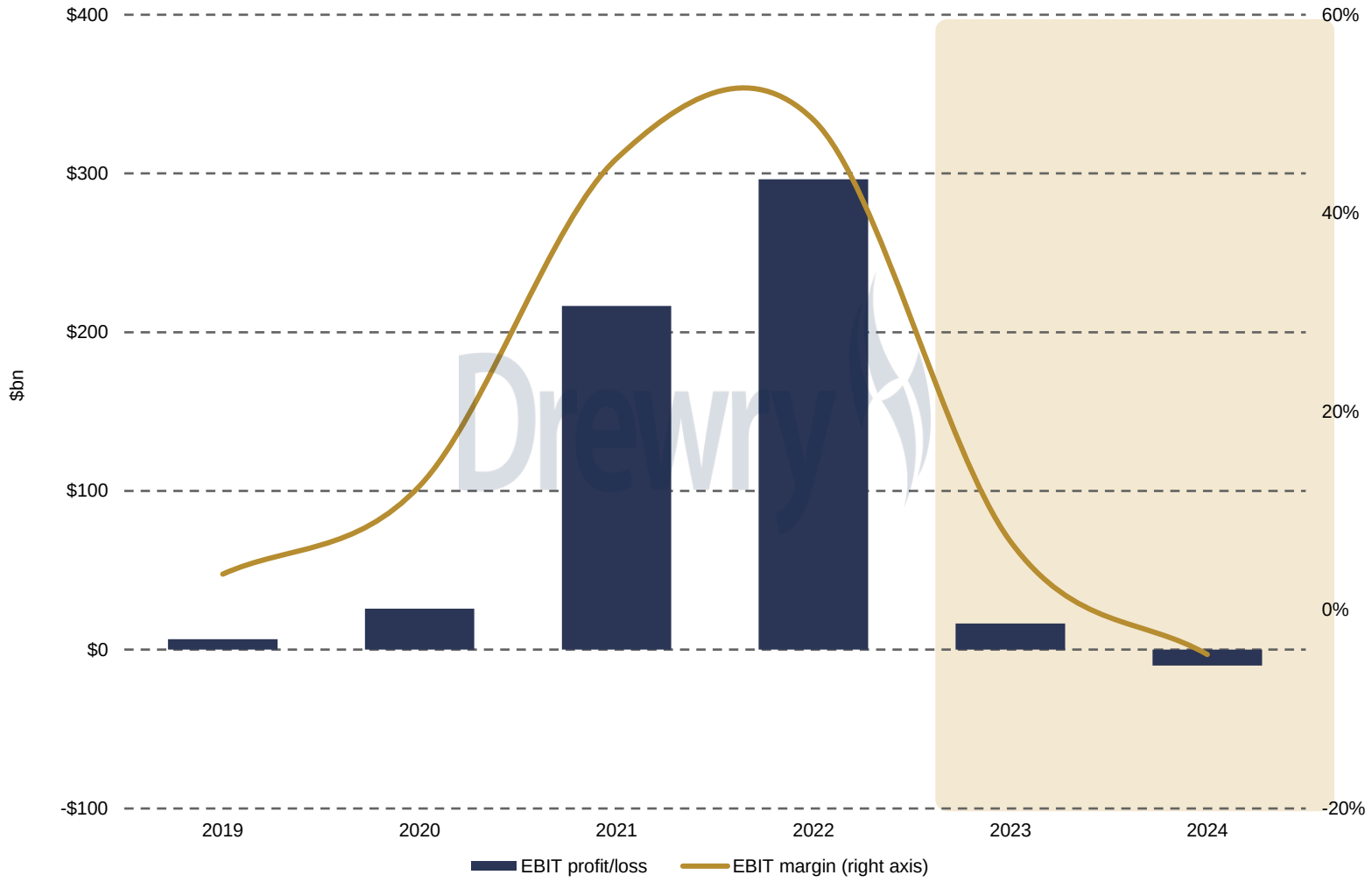
Drewry's Annual Freight Rate Forecast



Source: Drewry Maritime Research

- It has been clear for a long time that carriers' party is winding down with only soon-to-expire lucrative contracts keeping profits at their current elevated levels.
- Once those longer-term deals are signed at lower rates we shall see exactly where lines stand.
- Those expiring contracts will provide some overhang into 1H23 so we continue to believe that lines will make a profit this year with a revised EBIT forecast of $16.5 billion.

Forecast Carrier Industry Ebit Profit/Loss And Ebit Margins



Source: Drewry Maritime Research

Summary of Market Threats

RISK	LEVEL OF UNCERTAINTY	DISRUPTION IMPACT	REMARKS
Carrier Behaviour			Currently displaying below expectation capacity management
Global Economy			Improving outlook, but concerns over banking crisis
Geopolitical Situation			Super power games are heating up, could divide trade nations
Port Congestion/Labour issues			Port congestion rapidly improving, labour disputes intensifying
Regulatory/ESG			Operations under increased threat of regulatory intervention
Black Swan Risks (i.e. Extreme climate events)			Frequency of extreme events impacting shipping on the rise

Drewry

Energy transition

Ports and the energy transition

Ports as actors in the energy transition

Carbon pricing

New vessel fuels

- Ports are increasingly active in the energy transition
- Carbon pricing coming in the EU
- New vessel fuels emerging

Key areas of emerging activity

Wide scope emerging for port involvement in the energy transition

Decarbonising port operations

Gateways for new fuels

Offshore wind installation and support

Bunkering

Renewable energy generation

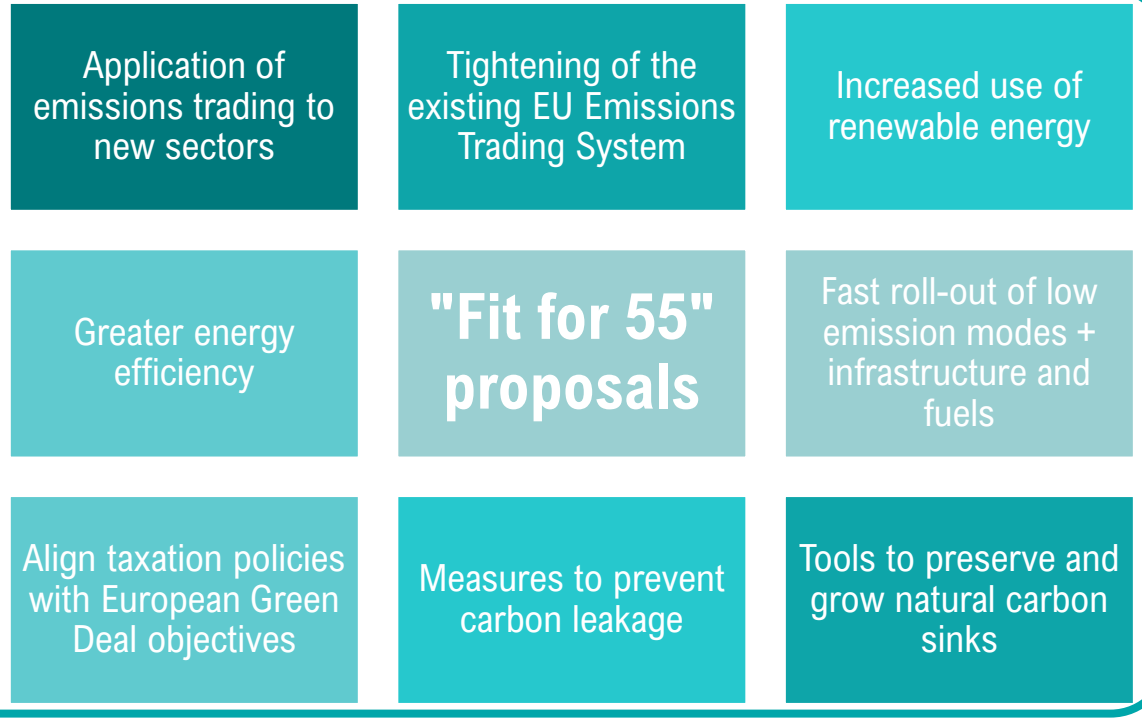
- Port operations: shore power for vessels; electrification of cargo handling; hinterland connectivity; Smart Grid power management; managing vessel arrivals
- New fuel gateways: hydrogen hubs; ammonia terminals
- Offshore wind: turbine manufacture and assembly; installation; O&M; repowering
- Generation: wind; solar (including rooftop solar)
- Bunkers: key element of decarbonising shipping

Drewry

Fit for 55

The European Green Deal and Climate Law aim at making Europe the first climate-neutral continent by 2050, transforming the EU economy and society to meet climate.

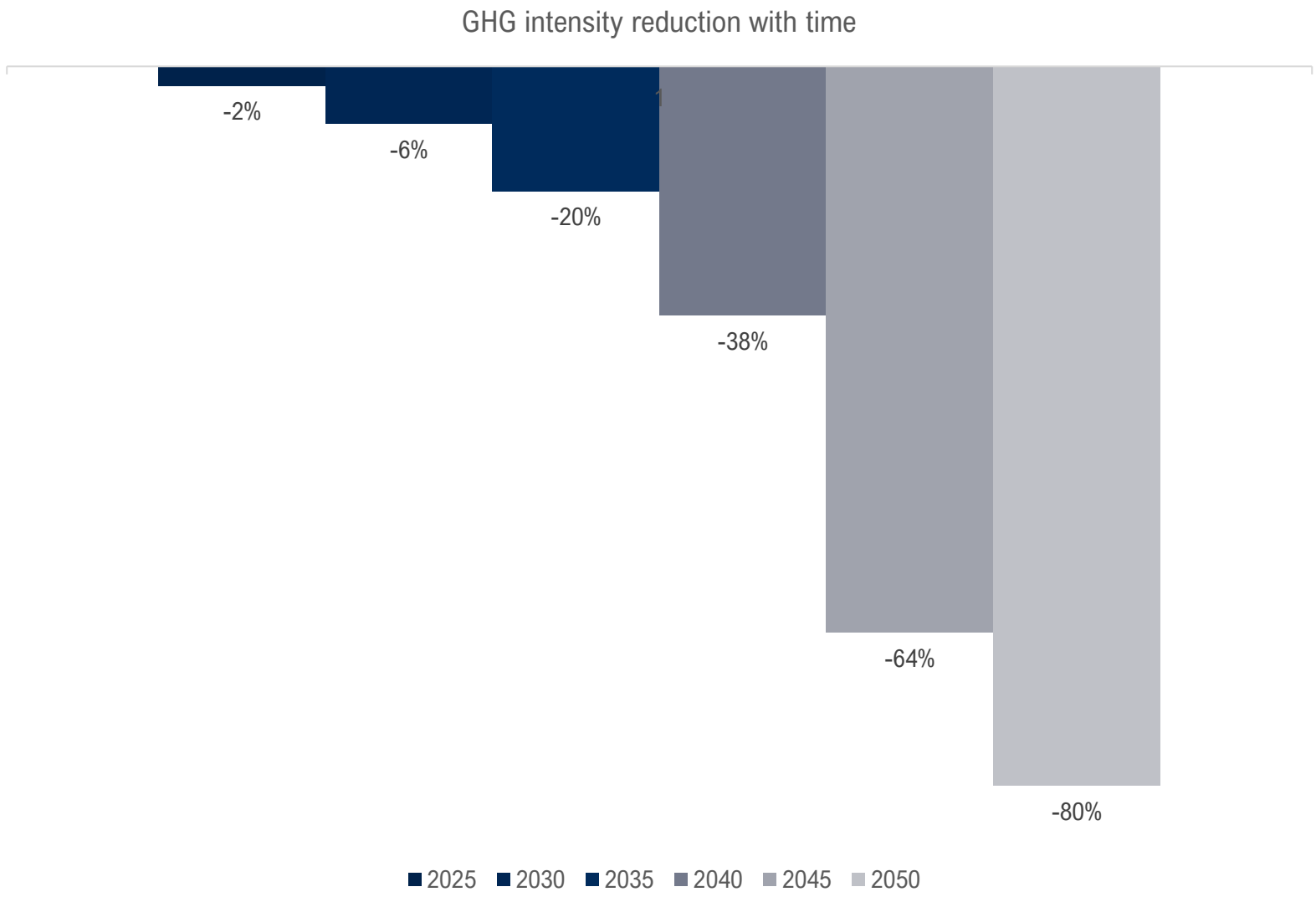
In 2021 the EC published a package of proposals ("**Fit for 55"-proposals**) with the aim to deliver on the European Climate Law target to reduce GHG emissions in the EU by at least 55% (over 1990s levels) by 2030, and enable climate neutrality by 2050. These proposals will enable the necessary acceleration of GHG emission reductions in the next decade.



Ports will play a central role in the delivery of the proposed **FuelEU initiative** - providing new infrastructure for the processing, storage and distribution of low carbon fuels which will support a material reduction in GHG emissions from shipping.

- **Introduction of a fuel standard limiting the GHG intensity of energy used in ships**
- **Obligation for most polluting ships to connect to OPS at berth (or use zero-emission technology)**
- **ETS compliance as well as reporting and verification obligations**

FuelEU Maritime

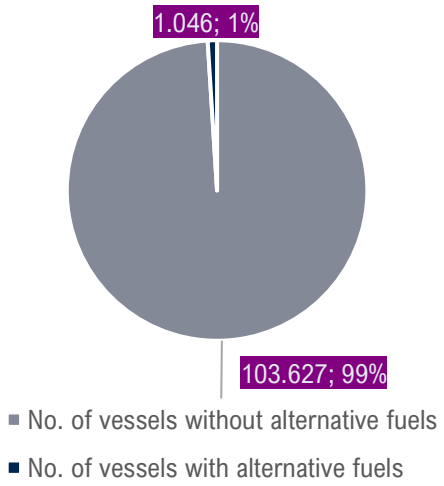


- FuelEU Maritime Regulation is expected to come into effect in 2025. GHG emission will be considered at every stage of the fuel life cycle, from well to wake.
- GHG Intensity which will be measured in gCO2(eq)/MJ, is the parameter used and will be required to improve by 2% in 2025 relative to 2020, and by 80% in 2050.
- Use of propulsion improvement devices like wind power will attract credits towards the GHG Intensity.
- Container and passenger vessels calling all EU ports for a port stay above 2 hours will require to connect to the shore power.
- Incompliance with the regulation may lead to a fine, and ban from EU waters.

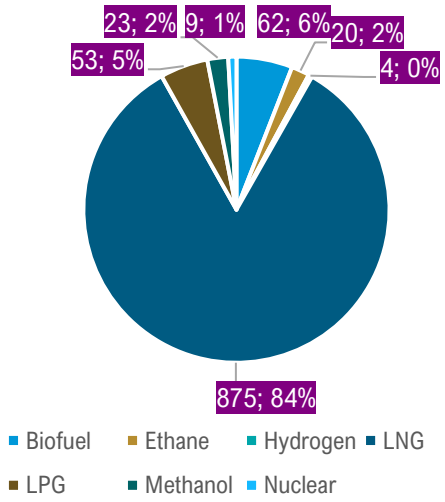
Source: Drewry

Alternative fuel uptake: Global fleet

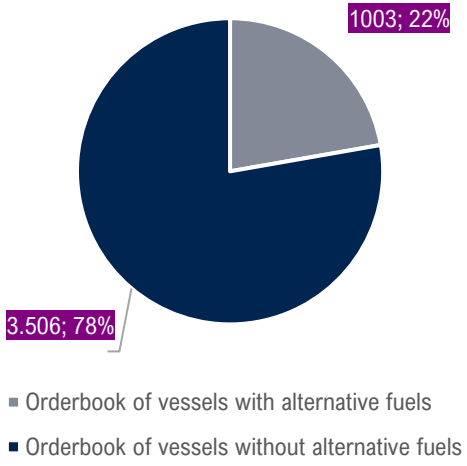
Global fleet alternative fuel uptake



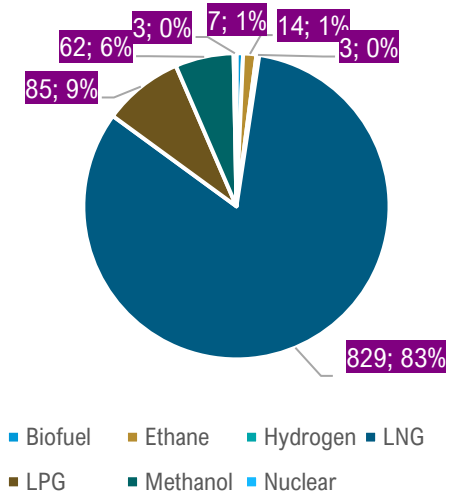
Alternative fuel uptake – total global fleet



Global orderbook alternative fuel uptake



Alternative fuel uptake - total global orderbook



Source: Drewry

LONDON DELHI SINGAPORE SHANGHAI