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Vietnam Economy and Container Shipping Industry: An Overview

PRIVATE & CONFIDENTIAL

Presented by

Jayendu Krishna

Director-Deputy Head Drewry Maritime Advisors

Email: krishna@drewry.co.uk



Agenda

- 1 Drewry Introduction
- 2 Macroeconomic overview of Vietnam
- 3 Trends in Container Shipping Industry
- 4 Decarbonisation and its implications for container ports and terminals



Maritime Advisors

Rigorous analysis – Practical advice



Drewry Introduction



ABOUT DREWRY: **Maritime Research and Consulting Services**

Rigorous analysis, practical advice

01

Drewry is the leading international provider of research and consulting services to the maritime and shipping industry

50

Founded in **1970**: More than **50** years continuously charting and assessing the world's maritime markets

90

More than **90** full time employees and associates serving our clients from offices in London, Delhi, Shanghai and Singapore

04

We serve our clients through **four** business units:

[Maritime Research](#)

[Maritime Advisors](#)

[Supply Chain Advisors](#)

[Maritime Financial Research](#)



The primary source of market insight, analysis and advice trusted by a global audience of maritime and shipping industry stakeholders.

Drewry : What sets us apart



Our combination of sector knowledge, rich market insight and commercial awareness enables us to deliver the performance, profitability and competitive advantage our clients seek.



Research is in our DNA

Drewry Maritime Research

An indispensable reference since 1970, providing rigorous analysis and insightful commentary on past, present and future sector performance.

We offer a comprehensive range of titles and online services that keep our clients up-to-date with developments in every key maritime sector, from dry bulk to chemicals, LPG to ferries.

SECTORS COVERED

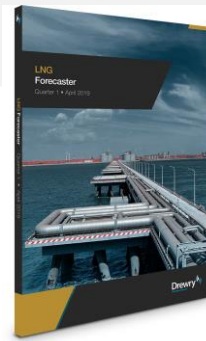
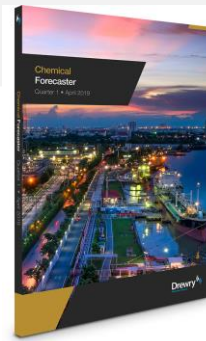
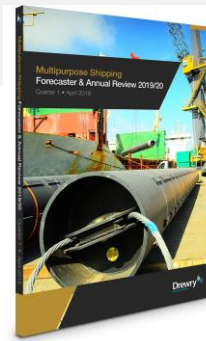
- Containers
- Dry Bulk Shipping
- Ports and terminals
- Tanker Shipping (Product/Crude)
- Chemical Shipping
- LNG / LPG
- Multipurpose Shipping
- Ship Operations
- Reefer

RESEARCH TYPES

- Monthly market insights
- Quarterly market forecasts
- Annual sector reviews and forecasts
- Spotlight analysis/Special situations
- Impact analysis

AUDIENCES SERVED

- Ship owners and operators
- Importers/exporters
- Banks/Financial Institutions
- Port Authorities/Technical operators
- Equipment manufacturers
- Government agencies
- Investors



Ocean freight procurement solutions

Drewry Supply Chain Advisors

Our dedicated team of ocean freight and logistics professionals work with some of the world's largest retailers and manufacturers, helping them benchmark their ocean freight costs and optimise their ocean freight procurement.

We combine the latest market intelligence with powerful procurement technologies and proven best practices to give procurement and logistics operations teams greater visibility and control.

FACT-FIND

Understand market and validate decisions

Freight cost benchmark intelligence, market outlook and peer group insights



IMPROVE

Improve performance and predictability

Best practices and tools and templates to ensure smooth and efficient process



PLAN

Inform strategy and prepare plan

Establish target rates, freight spend budget and develop bid strategy



IMPLEMENT

Outcome-focused approach

Efficient bid administration, better procurement outcomes and carrier management practices



End-to-end control and visibility of



ocean freight procurement and operations

DMFR service straddles Investment research, Financial advisory to Valuation of assets.

Drewry Maritime Financial Research

1

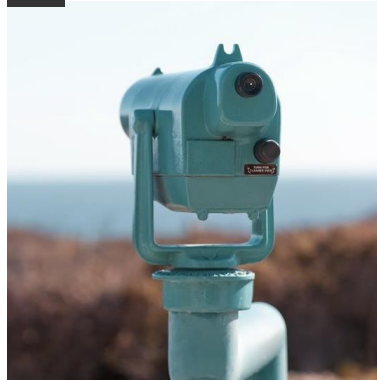


Investment Research

DMFR can provide objective, tailored research solutions to institutional investors, as well as a selection of multi-client reports on maritime, shipping equities and bonds:

- Equity research
- Spotlight reports
- Ask an analyst service

2

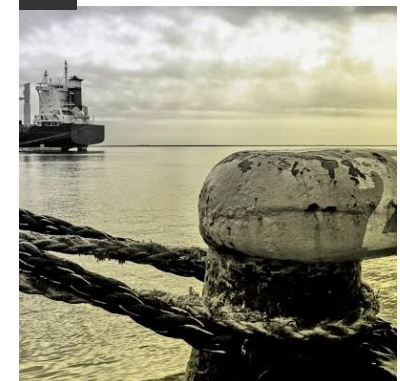


Financial Advisory

Leveraging our extensive market knowledge and understanding, we provide advisory services to assist companies, investors and financial institutions.

- Industry Sections for security offerings (IPO's, private placements, bond offerings)
- Project Assessments (financial & commercial due diligence, cash flow projections)
- Risk Management (Credit and counterparty risk management)

3



Valuations

We provide clients with multiple valuation assessments ranging from companies and financial instruments to vessels, terminals and fleets.

- Company valuation
- Fairness opinion
- Charter free and charter attached valuations
- Residual value forecast
- Freight rate forecast

Drewry Maritime Advisors: Shipping Advisory Capability

Drewry provides expert advice to Financial Institutions, Shipping Companies, Private Equity firms and Industrial Users covering the full spectrum of commercial and technical aspects of the shipping market. Our team is made up of industry professionals, economists and technical experts, providing rigorous analysis and a practical understanding of all shipping markets.

The Shipping team provides strategic, commercial, financial and technical advisory services to industry players and investors. Our approach is to provide a bespoke package to each client, working to ensure that each project focuses on achieving its core objectives and that the analysis we prepare answers the client's fundamental questions. These questions range from whether it is the right time to invest in the sector to how to manage seafreight to ensure corporate competitiveness.

In all our projects, our starting point is an in-depth understanding of the characteristics and dynamics of the relevant shipping market and a clear view of the outlook for the sector's earnings and asset values. The advisory team works closely with Drewry's individual shipping Research teams, who provide up to date analysis on key commodities, market rates and asset values, the newbuild orderbook and other key industry trends.

This understanding of the market underpins our work in **market analysis, commercial and technical due diligence, valuation, fairness opinion** and **investment** appraisal. We prepare **earnings** and **asset value projections** under a variety of scenarios and combine this with financial modelling and analysis to allow clients to see the likely outcomes of planned investment.

The outlook for the market and specific commodity sectors is used by our advisors in **seafreight strategy** and **CoA tendering advice**. The advisory team has the experience to assist in **seafreight contract negotiations**.

Drewry's in-house technical experts are able to offer a full range of technical services including desktop technical due diligence, health and safety due diligence, **operating cost benchmarking** and **physical inspection** of vessels.

The combination of commercial, financial and technical expertise means that Drewry's shipping team has the complete set of capabilities required to service all stakeholders within any shipping market.

Commercial and market assessment

- Market outlook
- Projections of earnings and asset values
- Investment due diligence of target company
- Network design and modelling
- IPO/Private placement support
- Seafreight strategy development for industrial users
- Freight rate benchmarking
- Freight cost assessment model for contract negotiation
- Counterparty due diligence and Credit analysis
- Contract of affreightment tendering advice
- Strategic planning and investment
- Mergers and Acquisition assistance
- Market entry and exit

Technical due diligence of vessels

- Assessment of vessel seaworthiness
- Desktop technical due diligence
- Health, Safety and Environment due diligence
- Oversight supervision of vessels under construction
- Operating cost benchmarking
- Physical inspection of vessels

Financial assessment

- Financial modelling
- Earnings benchmarking
- Fairness opinion
- Vessel valuation (Charter free, Charter attached)
- Residual Value assessment

Drewry Maritime Advisors: Ports and Terminals Advisory Capability

Drewry provides expert advice to Financial Institutions, Port Authorities, Terminal Operators, and Governments covering the full spectrum of commercial and technical aspects of ports and terminals. Our team includes industry professionals, economists and technical experts who together bring rich experience and practical understanding of the global ports industry.

The global Ports and Terminals team provide strategic, commercial and technical advisory services. Our rich industry knowledge and expertise is complemented by the practical, hands-on experience of our advisors.

For every project we take care to craft a bespoke package that focuses on your core objectives and commercial needs whilst answering the fundamental project-specific questions you may have.

Whether commissioning our commercial advisory team to provide strategic analysis, commercial due diligence or market analysis, you can rely on our independence and rigour to provide sound professional advice. We can provide an in-depth assessment of the characteristics, dynamics and trends of the port market, conduct customer analysis or evaluate the port competitive environment to help you overcome challenges or realise asset opportunities. Given the breadth and depth of experience across the team, we are well placed to support both strategic goal setting and business planning processes.

Drawing on our extensive in-house databases we can help you assess the impact of liner network strategy, vessel upsizing and the development of key trade lanes within the ports and terminal sector.

Our approach to financial modelling and forecasting utilises our rich market intelligence and analysis, producing models that reflect the unique competitive environment in which your asset resides. The advisory team can provide volume, revenue, B/S, P&L, cash flow forecasts and asset valuations. This work can also support investment and divestment appraisals, where we can advise on market entry strategies and financial return projections.

Our in-house technical experts, who are port engineers, are also able to support feasibility and pre-feasibility studies as well as offer technical due diligence and asset risk services. This combination of technical and commercial expertise ensures a consistent and co-ordinated approach, whilst providing an independent view of the asset infrastructure, key material risk and capacity expansion plans.

Strategic and Commercial assessment

- Commercial due diligence
- Market analysis and outlook
- Strategic analysis and planning
- Asset risk analysis
- Investment and divestment appraisals
- Competitive assessments
- Feasibility and pre-feasibility studies
- Concession design
- Bid process support
- Financial modelling
- Tariff assessments and structures
- Maritime policy
- Network analysis

Operational and Technical

- Capacity assessment, capacity bottlenecks and expansion assessment
- High level assessment of technical risks of project
- Maintenance strategy review and replex strategy review
- Capex review
- Opex review
- Lenders Technical Advisor, Vendor's Technical Advisor, Buyer's Technical Advisor

Drewry's competitive advantage: Drewry Maritime Advisors

Advisory team with board-level experience.



Extensive Research Catalogue

- Global Container Terminal Operators Annual Review
- Container Freight Rate Insight (tracked weekly)
- Container Forecaster (Quarterly)
- Container Census & Leasing and Equipment Forecaster
- Equity Research on container ports and shipping covering over 17 companies.



Comprehensive internal databases

- Route Capacity Database: All direct services in major routes (Average ship size, Frequency, Lines)
- Boxbase: Tracks container port throughput of all major container terminals
- Macroeconomic database (GDP, Export and Import etc)
- Drewry Research Database: Container Ship fleet, earnings and asset values
- Proprietary AIS analytics



Relevant sector studies

- Container shipping advisory experience straddles strategic advisory to investment assessment
- Due Diligence of Terminal Asset in Thailand
 - Commercial Due Diligence of a portfolio of terminal assets in Thailand
 - Thailand Container Terminal Market Assessment
 - Terminal Investment Opportunity Assessment
 - Prospects of container ships larger than 18,000 TEU
 - Global container terminal portfolio due diligence of the top container terminal operator



Industry consultant for majority of IPO and Bond

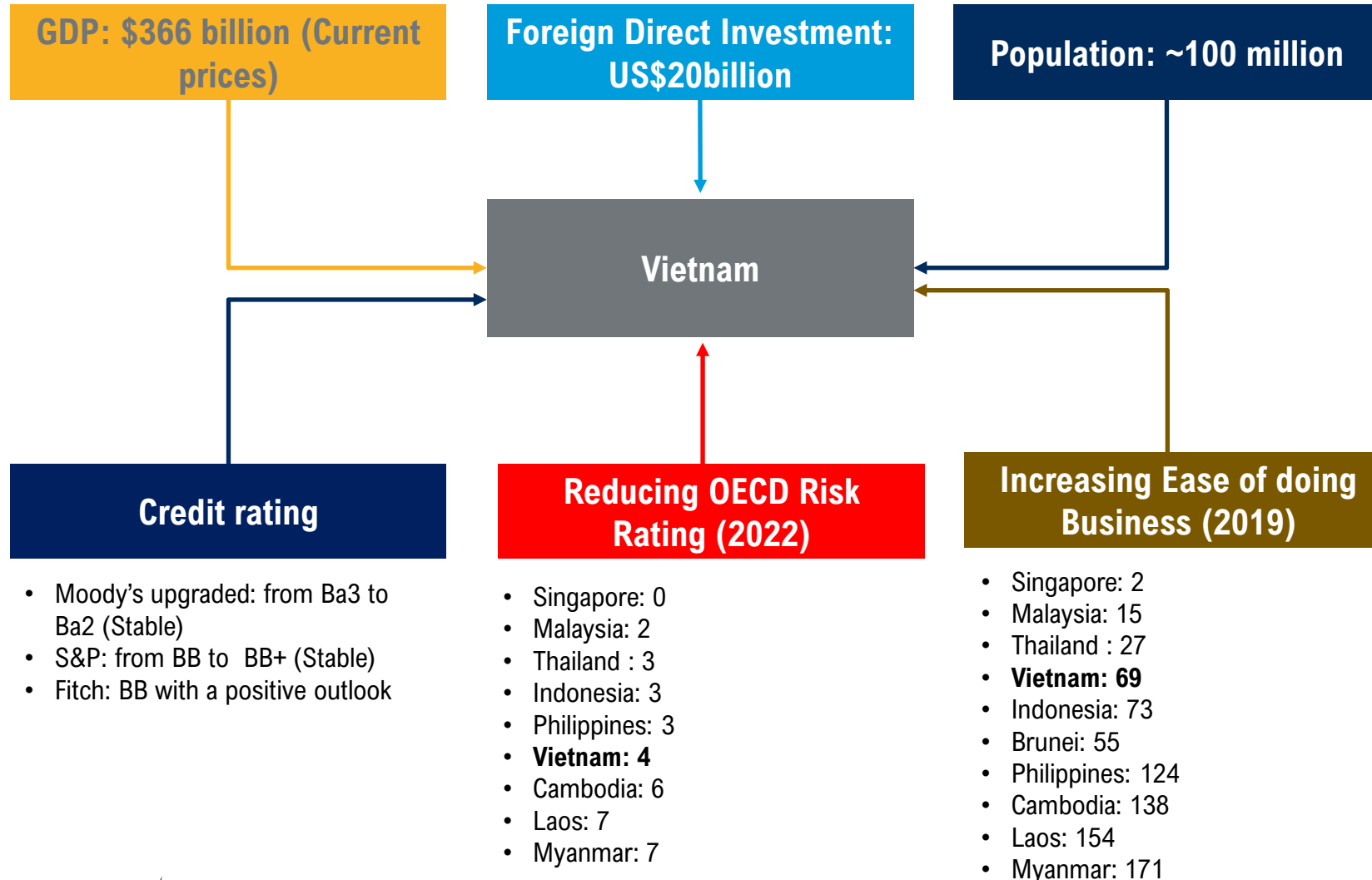
- DP World
- Box Ships Inc.
- Pelindo II
- Pelindo III
- Qinhuangdao Port
- Global Ports Investments
- SITC
- Westports (Port Klang)
- ICTSI
- Hutchison Ports



Macroeconomic overview of the world and Vietnam



Vietnam Economy: Key drivers



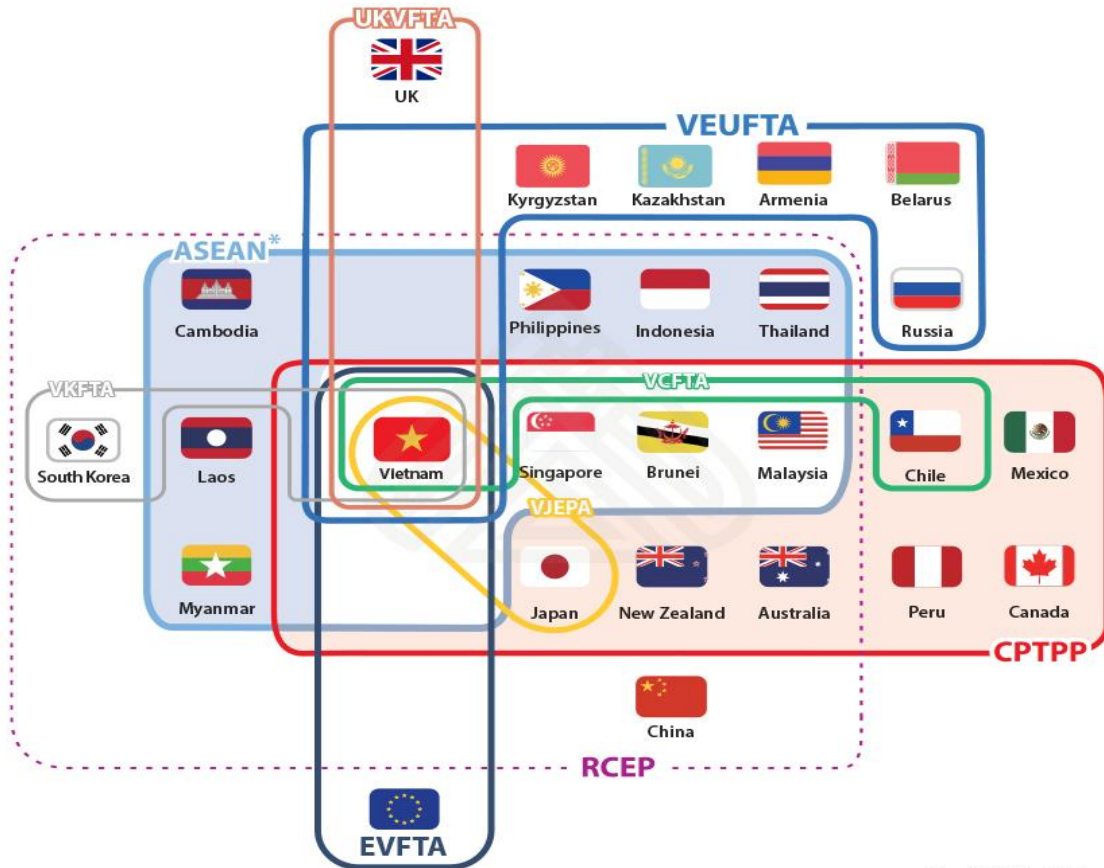
Key takeaways

- Young, educated, competitive workforce
- OECD risk rating has gone down from 5 to 4 in recent years
- Improving credit rating of the sovereign bond, just a notch below investment grade.
- Improved in corruption index from 112 in 2011 to 87 in 2021.

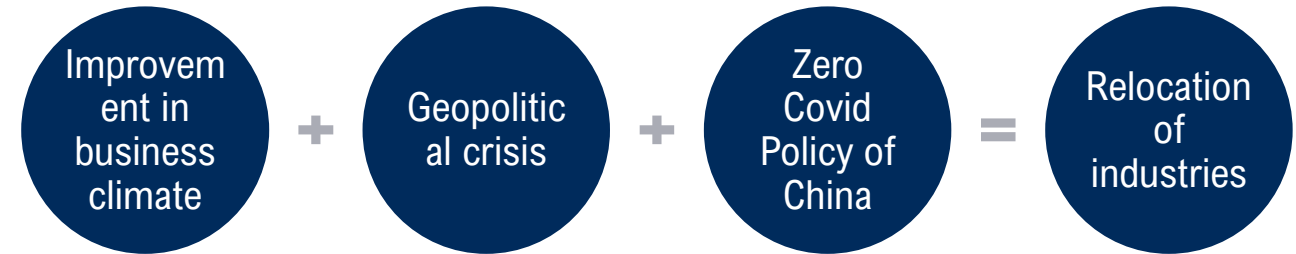
Vietnam Economy: Key drivers

Improving business climate, free trade agreements, and geopolitical environment has led to the relocation of industries from China to Vietnam.

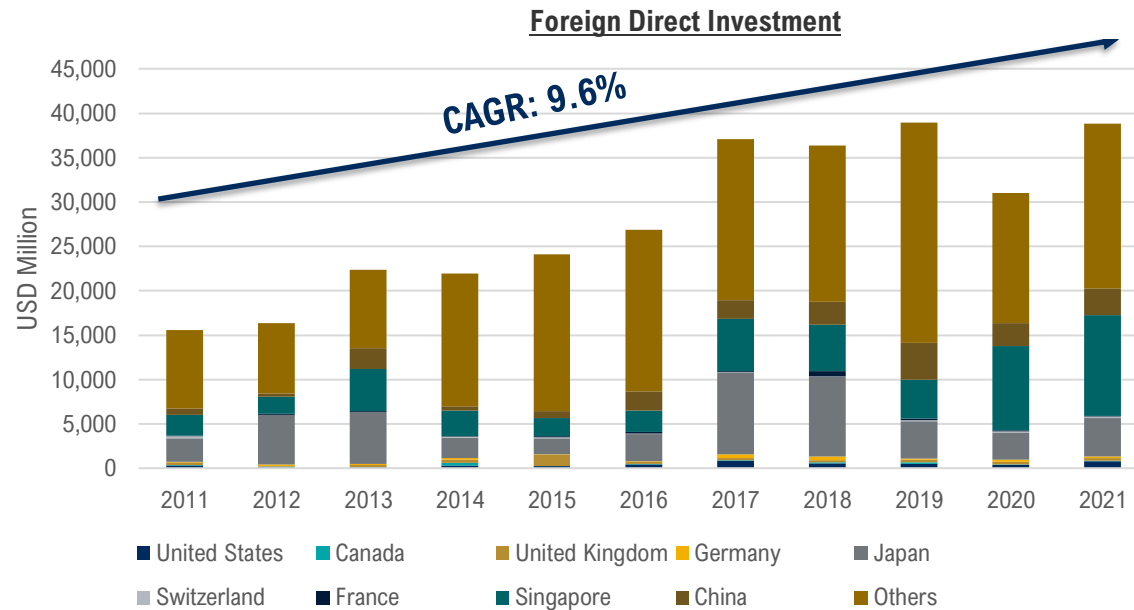
Free Trade Agreements



Graphic © Asia Briefing Ltd.

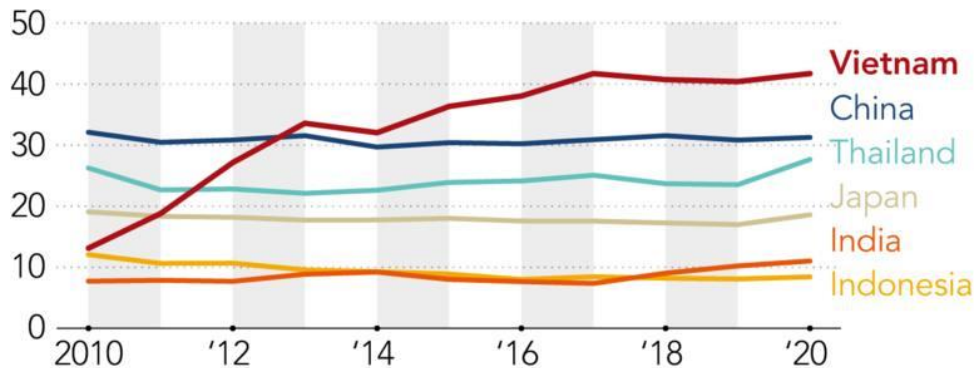


Vietnam becoming an attractive destination



Vietnam's jump in high-tech exports

(Percentage of manufactured exports that are high-technology in selected Asian countries)



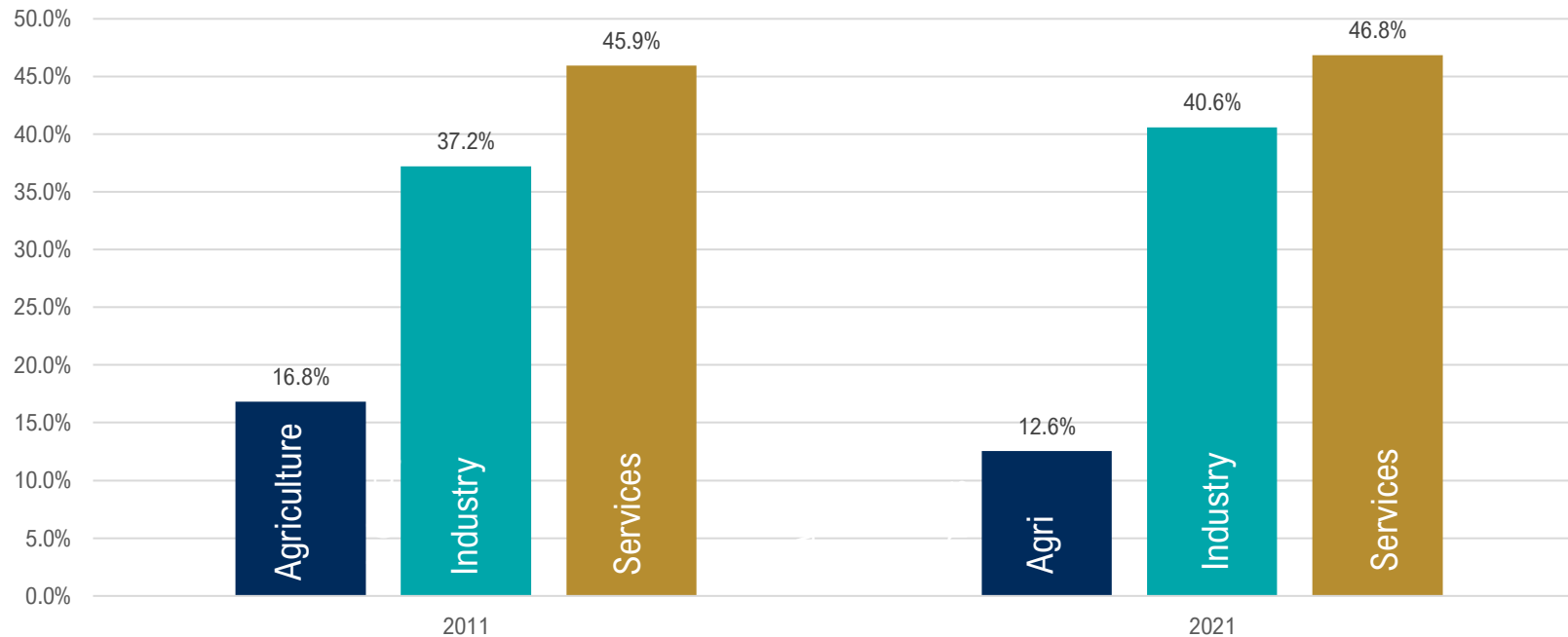
Source: World Bank

Key takeaways

- FDI was about USD15.4 billion during Jan-Sept 2022, an increase of 16% over 2021. Robust growth in FDI from Singapore, Japan and China are the main sources of FDI. It has been spurred by Free Trade Agreements signed.
- Samsung has completed the construction of a US\$220 million R&D centre in Hanoi.
- Apple, Google, and Microsoft have been moving some of their production to Vietnam from China.
- Major sectors of growth: Technology, textile and garments, footwear
- Vietnam has surpassed Bangladesh in textiles.
- Vietnam exports over 1 billion pairs of footwear every year

Vietnam: structure of the economy

Sectoral contribution: Gross domestic product at current prices by economic sector



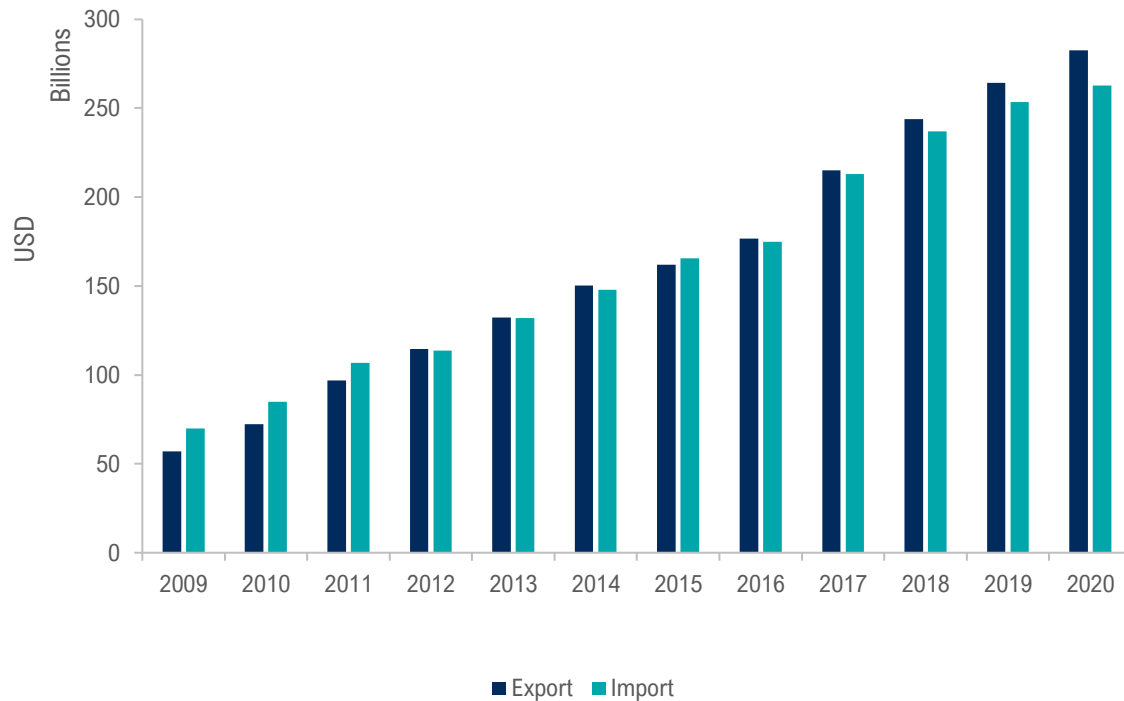
Key takeaway

- Services play a dominant role in the economy.
- Manufacturing (Industry) has significantly contributed to the growth of the economy.
- In recent years Manufacturing sector has been contributing over 50% to the growth of the economy.

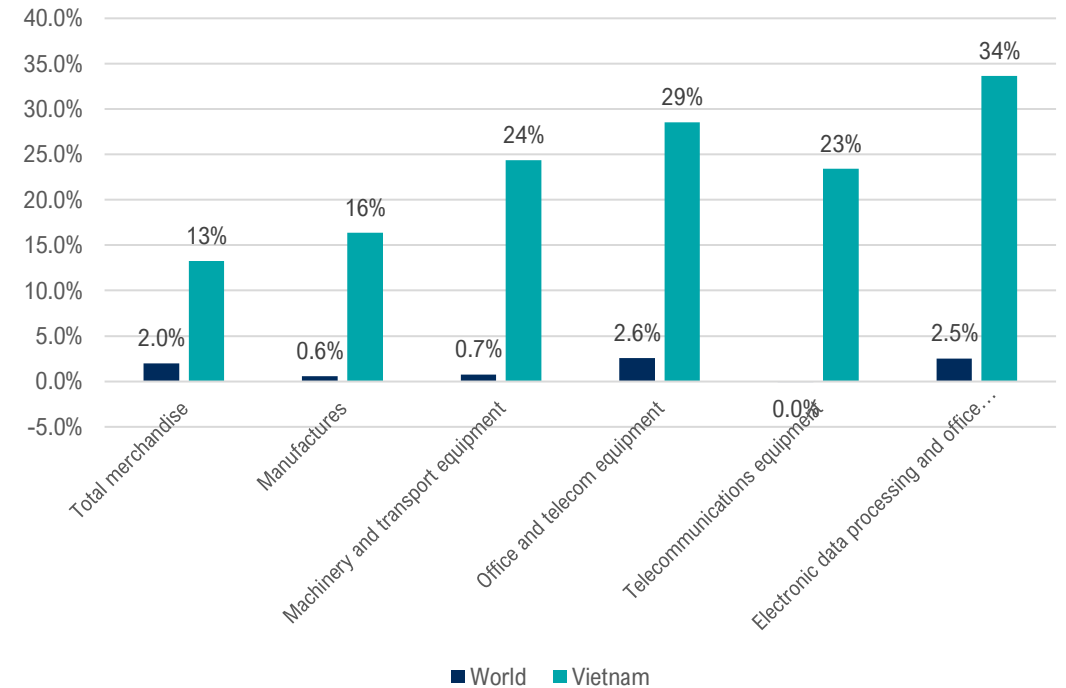
Vietnam: Export and Import

Vietnam's export has grown much more rapidly compared to that of world in most of its top 10 exported items.

Vietnam's Export and Import Value

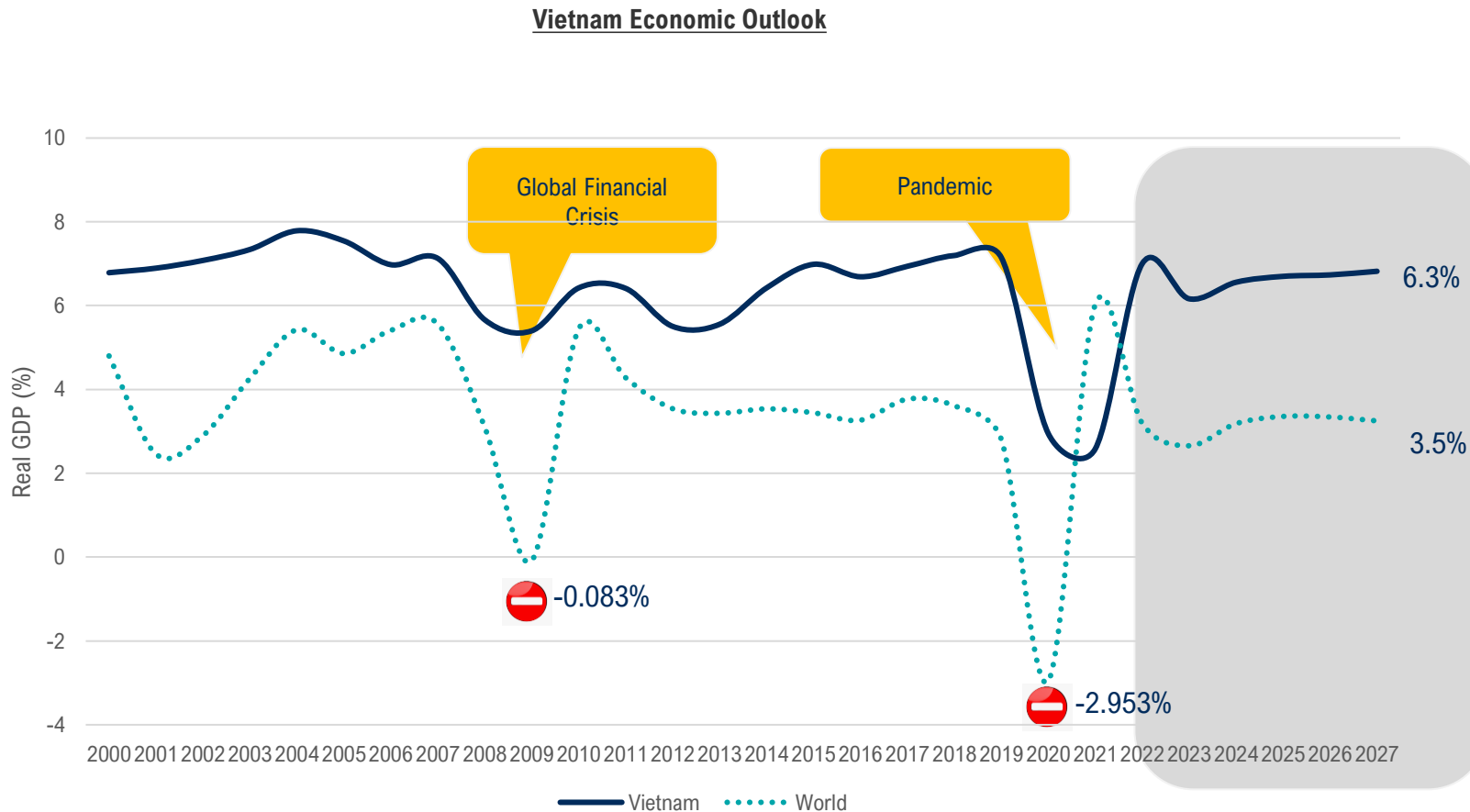


10 year export CAGR: World vs Vietnam



As a comparison, the share of China has gone down from 41% to 37% in Clothing and Accessories and 72% to 65% in Footwear between 2016 and 2021. Similarly in furniture, it has gone down from 64% to 53% during the same time period.

Vietnam: Macroeconomic outlook



Key takeaway

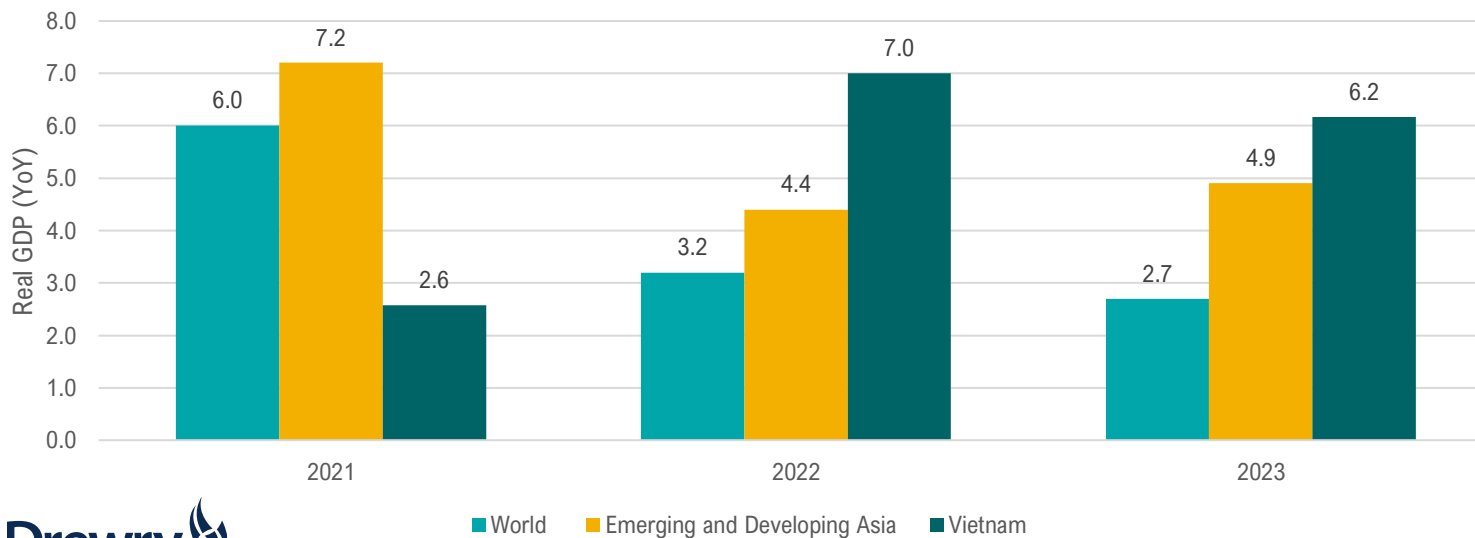
- Vietnam's economy highly coupled with the global economy
- On a comparatively high growth path pre-pandemic
- Vietnam's economy is comparatively more stable.
- Above 6% of real GDP growth is expected over the next five years.

Global economy vs Vietnam

World Economic Outlook



Vietnam Economic Outlook



Key takeaway

- After a brief spurt after Covid, major economies are heading for a downturn
- Russia-Ukraine war
- Spiralling inflation
- Vietnamese economy defying global trends.

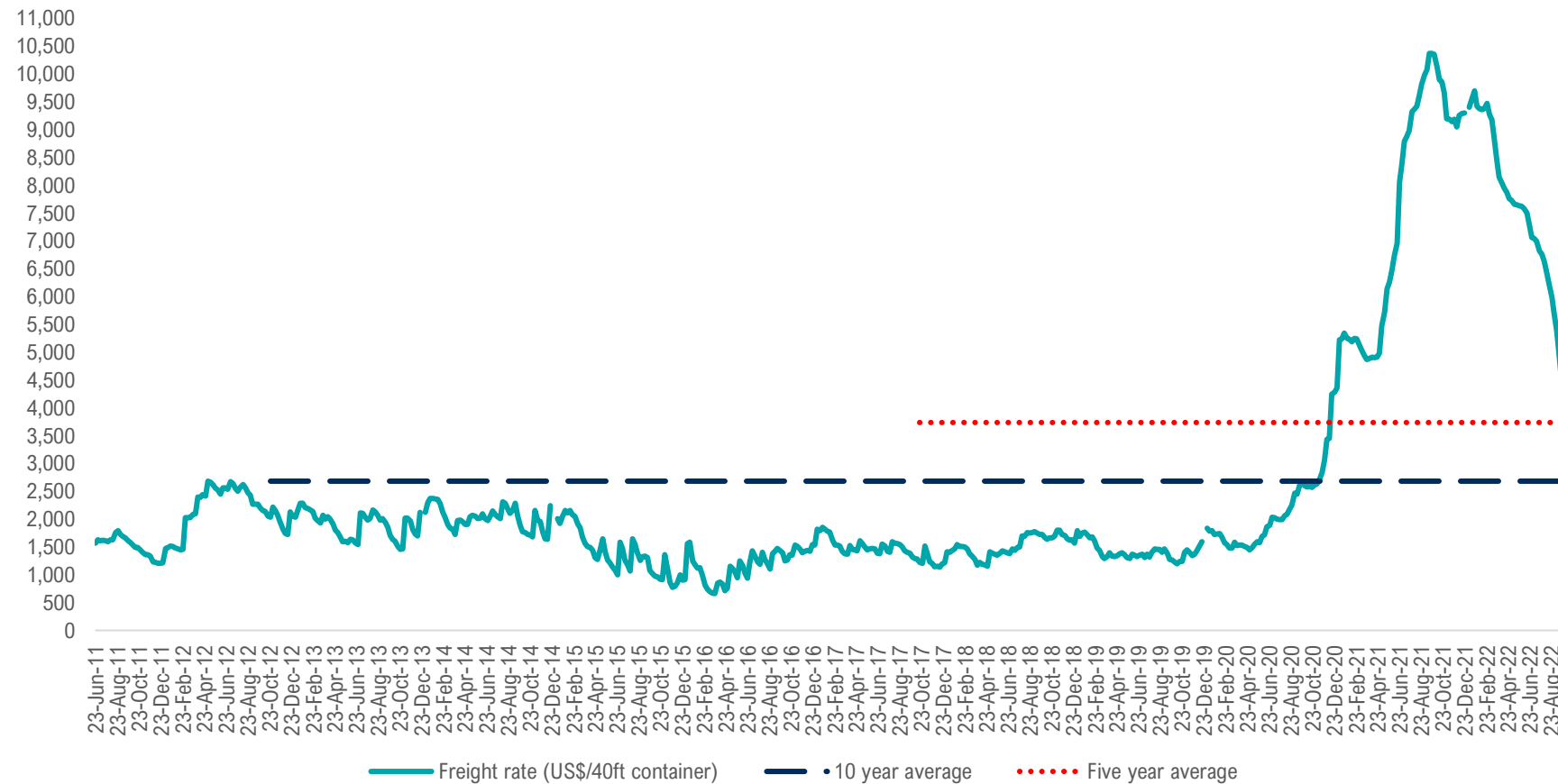


Container shipping industry



Drewry container freight rate index

World Container Index (WCI)



Note: World Container Index (US\$/40ft container) is composite freight rate of eight major container trade route. It is assessed by Drewry.

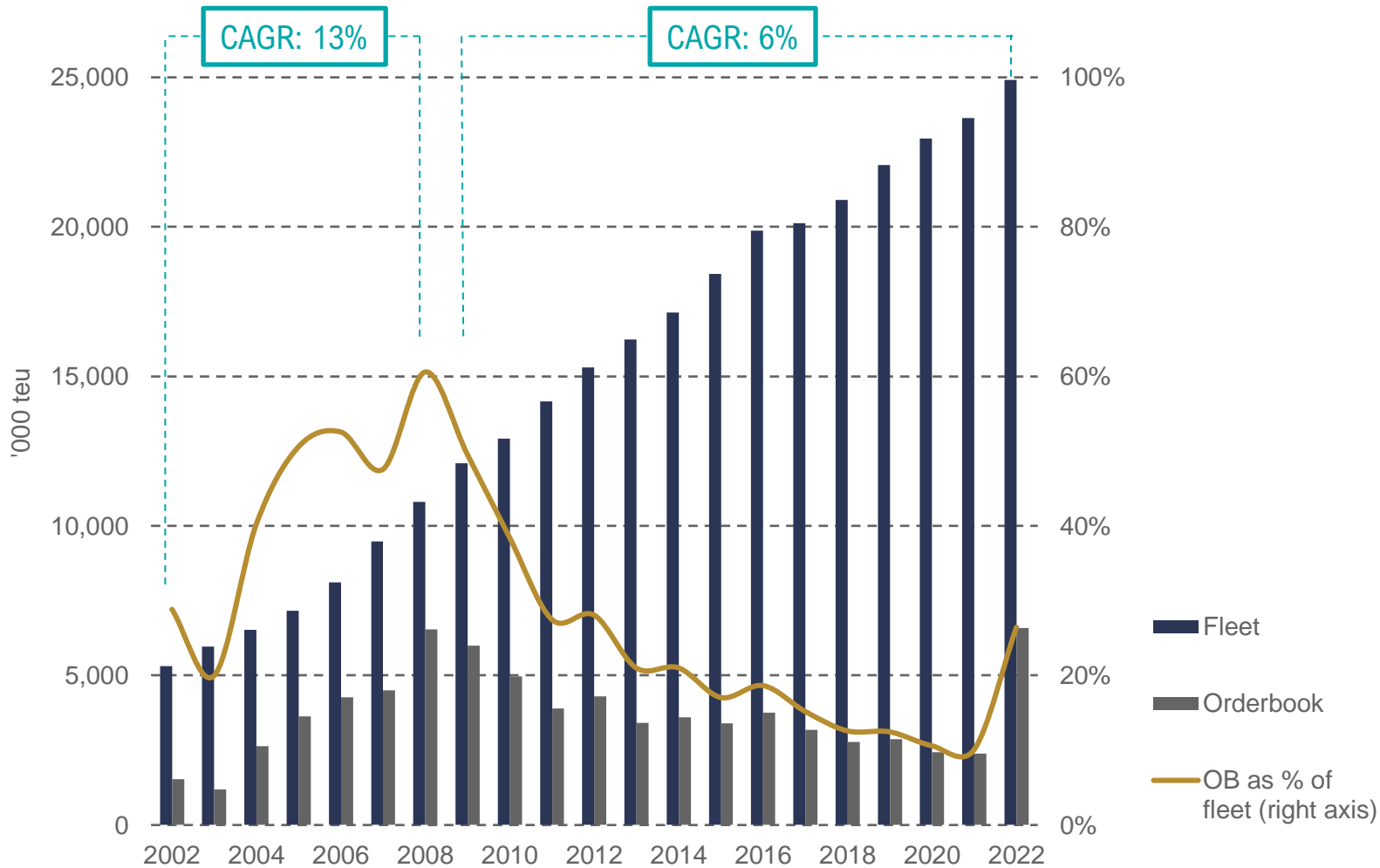
Source: Drewry



Key takeaway

- WCI has dropped by 28% when compared with the same week last year.
- The latest Drewry WCI composite index of \$3,383 per 40-foot container is now 66% below the peak of \$10,377 reached in September 2021.
- It close to the 5-year average of \$3,723.
- High profits for container shipping lines achieved by current freight rates has increased scrutiny.
- Since 2Q20 the industry's rolling EBIT profit is running at over \$400bn
- Drewry is predicting EBIT profit of \$275bn in 2022, reducing to "only" \$100bn in 2023

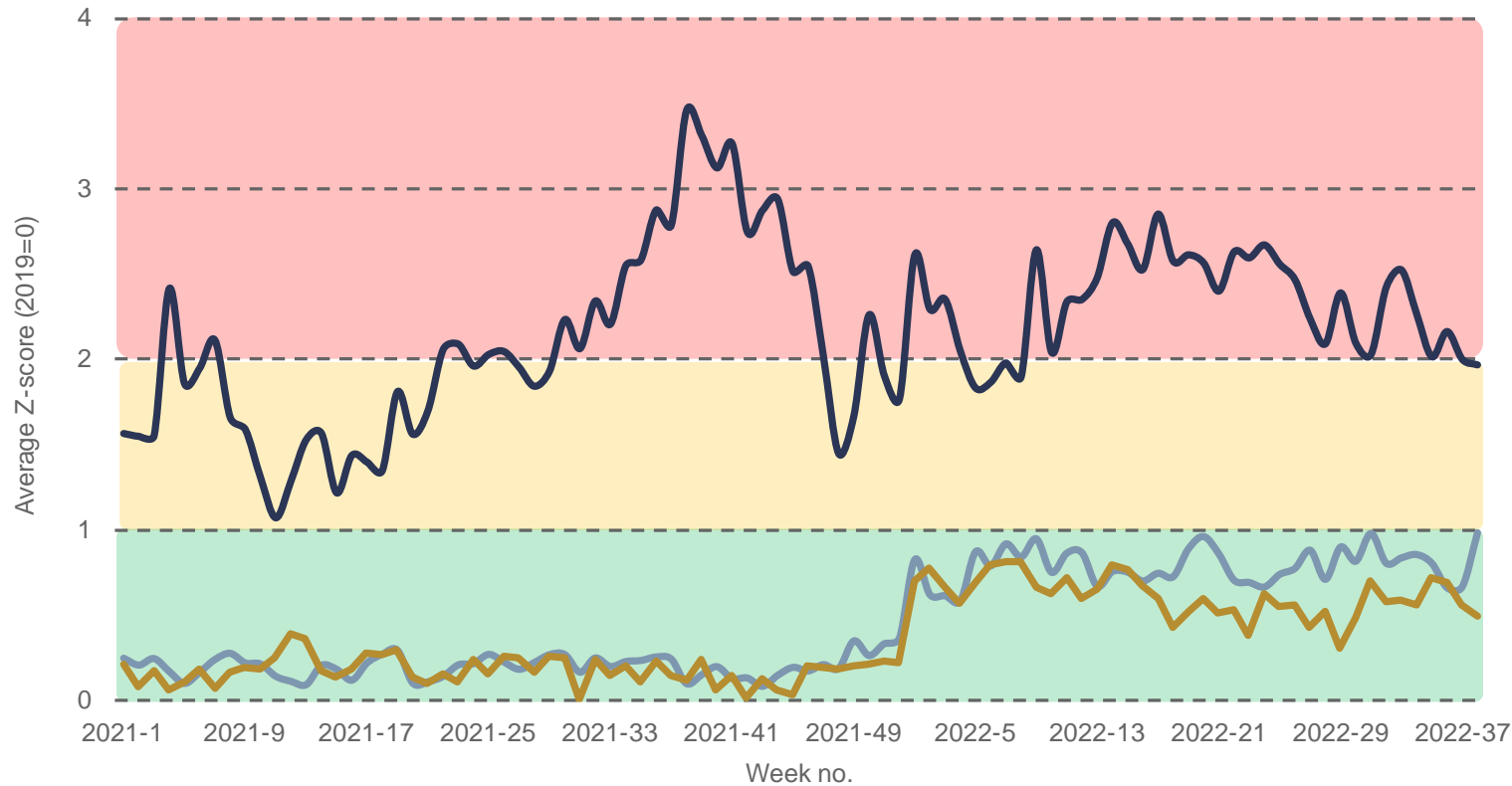
Historic container fleet growth and order book



Key takeaway

- Fleet growth: 20-year CAGR: 8.0%
- Historical high orderbook
- 2022 orderbook stands at 6.6m teu, equaling 26% of the fleet.

Drewry Port Congestion Z-score Indicator (no. of ships waiting)



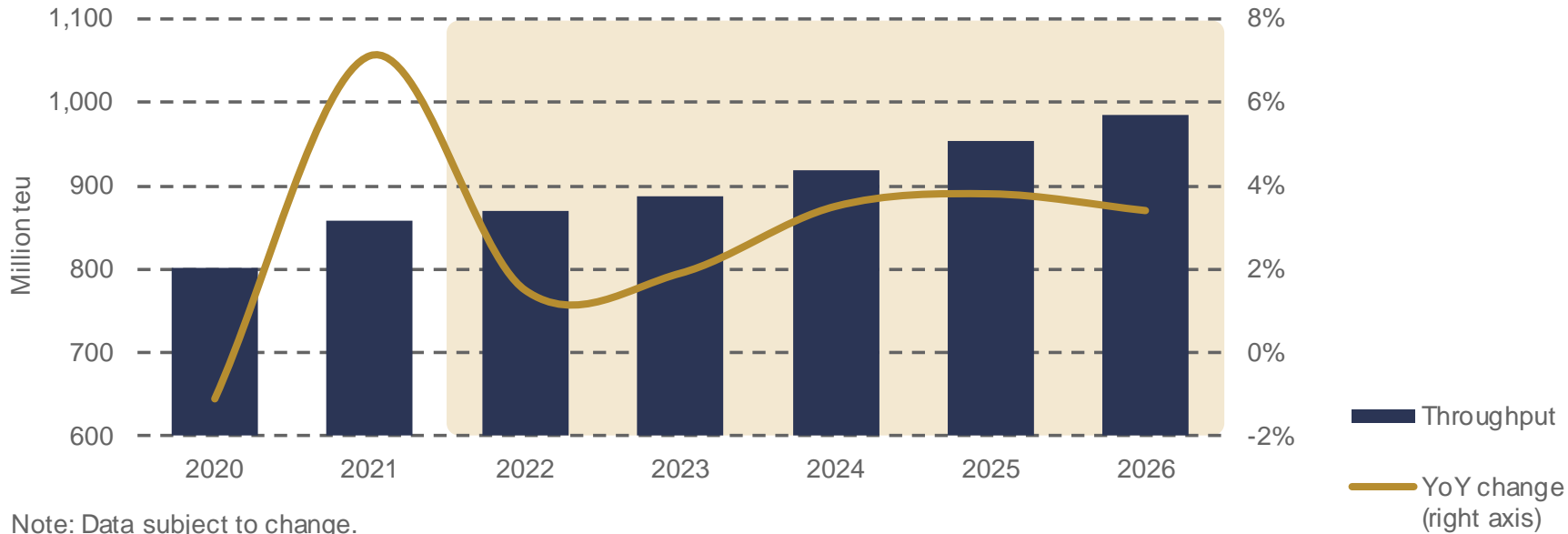
Note: Methodology changed in 3Q22; Based on the z-score deviation from 2019 averages of the number of ships waiting outside selected ports, grouped by size and region. Only considers waiting events longer than 4 hours to avoid capturing ships passing through port waiting zones.

- High volume ports
- Medium volume ports
- Low volume ports

Key takeaways

- AIS ship tracking data shows some improvement in the number of ships waiting outside of high-volume ports
- China's zero-covid stance and labour strikes worldwide present high risk for future supply chain disruption
- Drewry sticks to its end of 1H23 timetable for return of port productivity to 2019 levels (steady improvement beforehand)

Global Container Shipping Demand Outlook



Note: Data subject to change.

Key takeaways

- For 2022, we have downgraded our port handling outlook to 1.5% (previously 2.3%)
- Outlook for 2023 lowered to 1.9% (from 2.9%)
- Significant risk that economists are yet to fully grasp scale of downturn in highly volatile environment, making further downgrades probable.

5-year CAGR

- Supply forecast: 3.4% (incl. adjustments by carriers)
- Demand forecast: 2.8%
- Drewry base case forecasts indicates that container market will return to over-capacity in 2023
- More stringent capacity reducing measures liable to be challenged by regulators

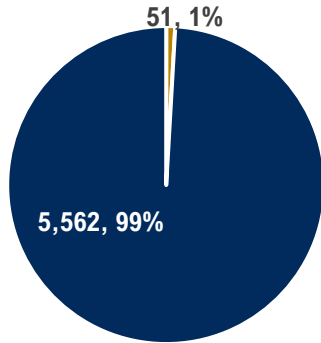


Decarbonisation in Container shipping and its impact on ports



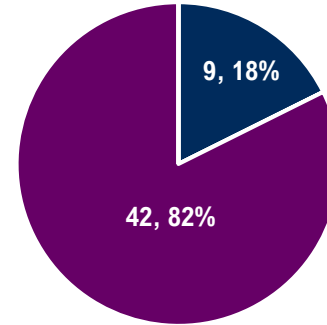
Decarbonisation: Alternative fuel uptake: Fleet

Total container vessel alternative fuel uptake



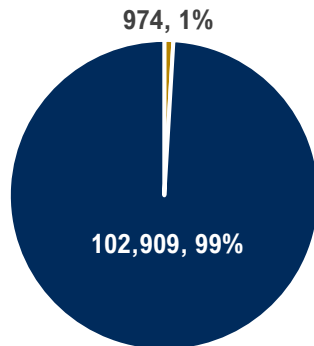
■ No. of container vessels with alternative fuel
 ■ No. of container vessels without alternative fuel

Alternative fuel uptake – Container fleet (August 2022)



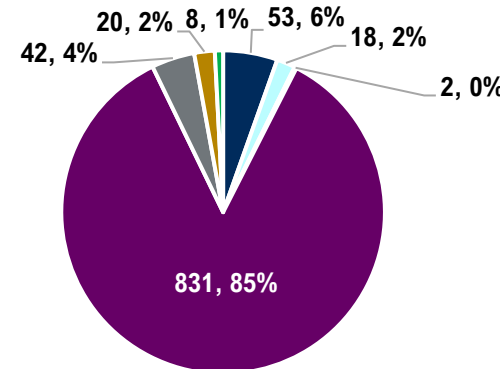
■ Biofuel ■ Ethane ■ Hydrogen ■ LNG ■ LPG ■ Methanol ■ Nuclear

Global fleet alternative fuel uptake



■ No. of vessels with alternative fuel
 ■ No. of vessels without alternative fuel

Alternative fuel uptake – total global fleet (August 2022)



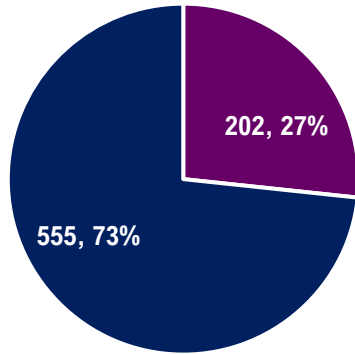
■ Biofuel ■ Ethane ■ Hydrogen ■ LNG ■ LPG ■ Methanol ■ Nuclear

Key takeaway

- Ships are required to reduce carbon emission by 11% by 2026 compared to 2019 levels.
- 0.9% of the total global fleet is capable of burning alternative fuel.
- Container vessel shipowners are slowly changing to use alternative fuels due to environmental regulations such as Paris Agreement.
- LNG and Biofuel are largely being used in the existing vessels.

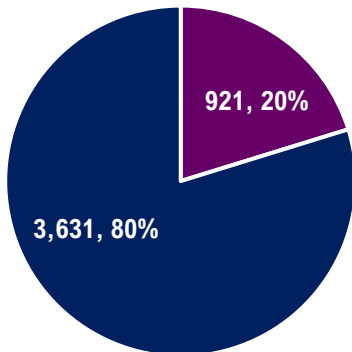
Alternative fuel uptake: Orderbook

Container vessel orderbook alternative fuel uptake



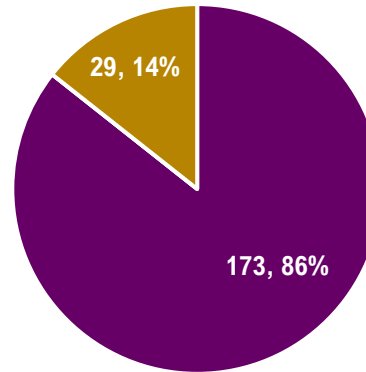
- Orderbook of container with alternative fuel
- Orderbook of container without alternative fuel

Global orderbook alternative fuel uptake



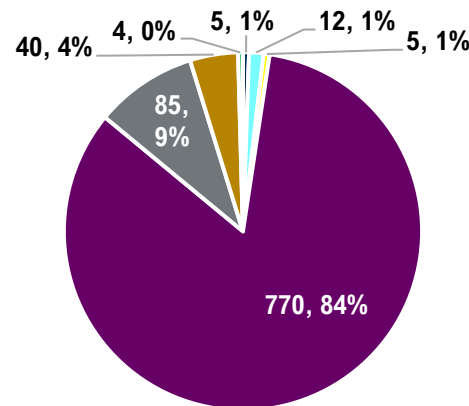
- Orderbook of vessels with alternative fuel
- Orderbook of vessels without alternative fuel

Alternative fuel uptake – Container orderbook (August 2022)



- Biofuel
- Ethane
- Hydrogen
- LNG
- LPG
- Methanol

Alternative fuel uptake - total global orderbook (August 2022)

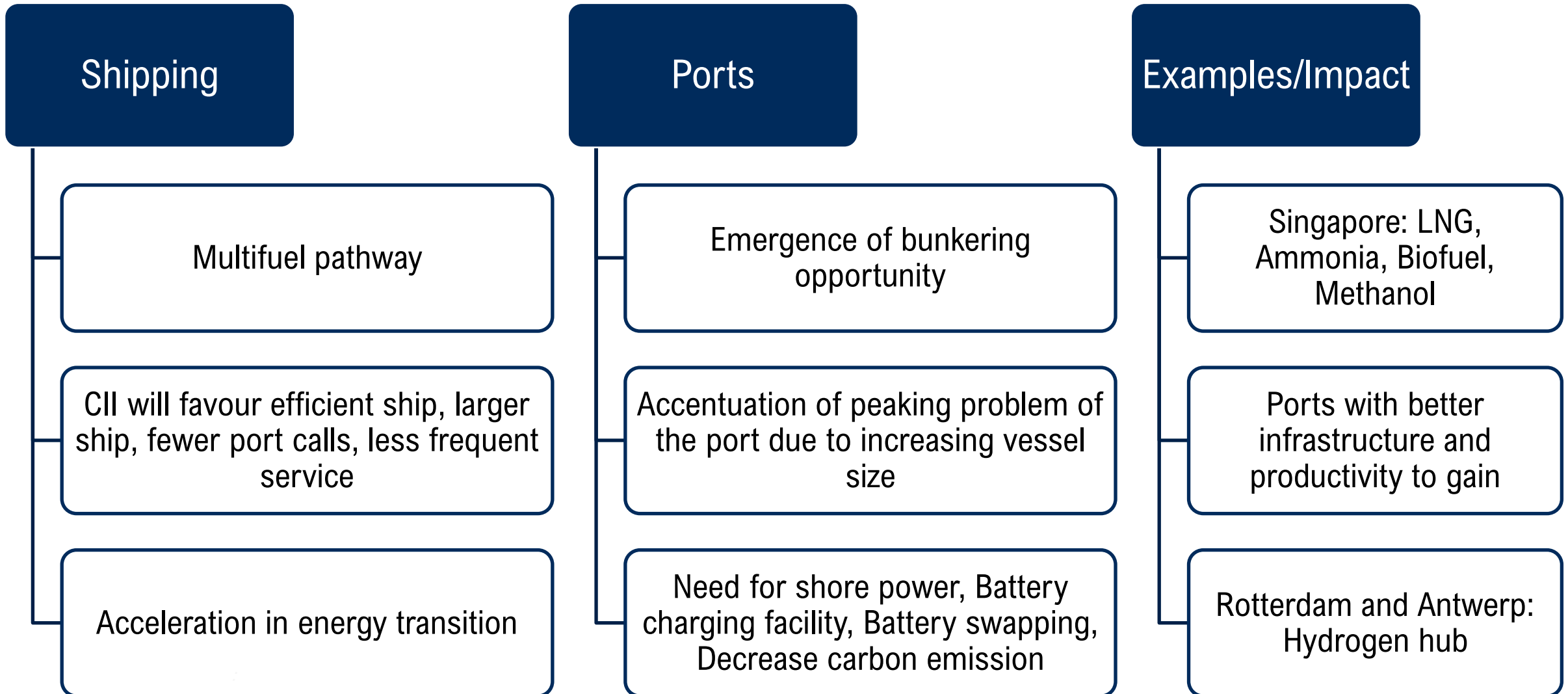


- Biofuel
- Ethane
- Hydrogen
- LNG
- LPG
- Methanol
- Nuclear

Key takeaway

- Orderbook for container vessels with alternative fuel is increasing and is presently 202 vessels compared with 51 existing alternative fuel vessels.
- LNG and Methanol is the shipowner preferred alternative fuel for container vessels in the orderbook.
- 27% of the container vessel orderbook is demanding vessel specifications with the capability of using alternative fuel.

Implications of decarbonization in shipping for ports



Q&A welcome

Principal source of material used for the presentation

- **Drewry Ports and Terminals Insight**

- Quarterly report offering:
 - Spotlight analysis: thought leadership
 - Port connectivity index
 - Global Ports Monitor
 - Regional Ports Monitor
 - Deals and developments
 - Port sector financial analysis

- **NEW** Monthly supplement providing enhanced global regional data

- Port Throughput Indices, Port Call Indices
- Port Performance Indices, Port Congestion Trackers

- **Global Container Terminal Operators Annual report**

- Terminal industry structure and performance
- League tables and performance of terminal operators
- Operator strategies, portfolios and risk profiles
- Forecast capacity by terminal operator & region to 2026
- Individual analysis of 30 terminal operators and investors

- **Container Forecaster Monthly report**

- **Drewry Maritime Financial Insight**



Combined package available on annual subscription terms





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