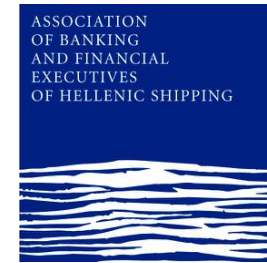


Topic: Globalization of Chinese Ship Finance and Its Role in the Chinese-Hellenic Relationship

题目：中国船舶金融在全球化和中希关系中的作用

George Xiradakis



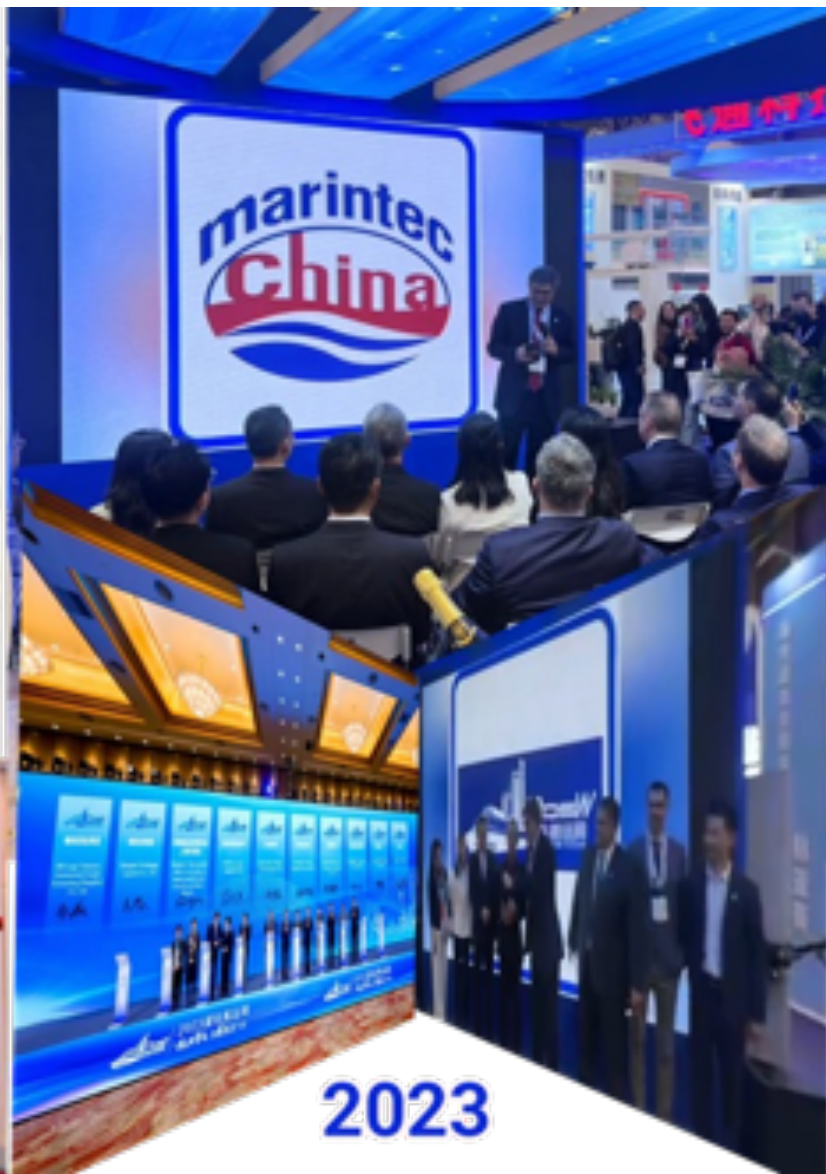
President



**Founder
Managing Director**

希腊航运银行和财务高管协会主席、XRTC 商业顾问公司创办人兼常务董事 乔治·希拉达基斯 先生

SHANGHAI 7/12/2023







Greek Shipping in Numbers

Greece : Among Top Shipowning Nations

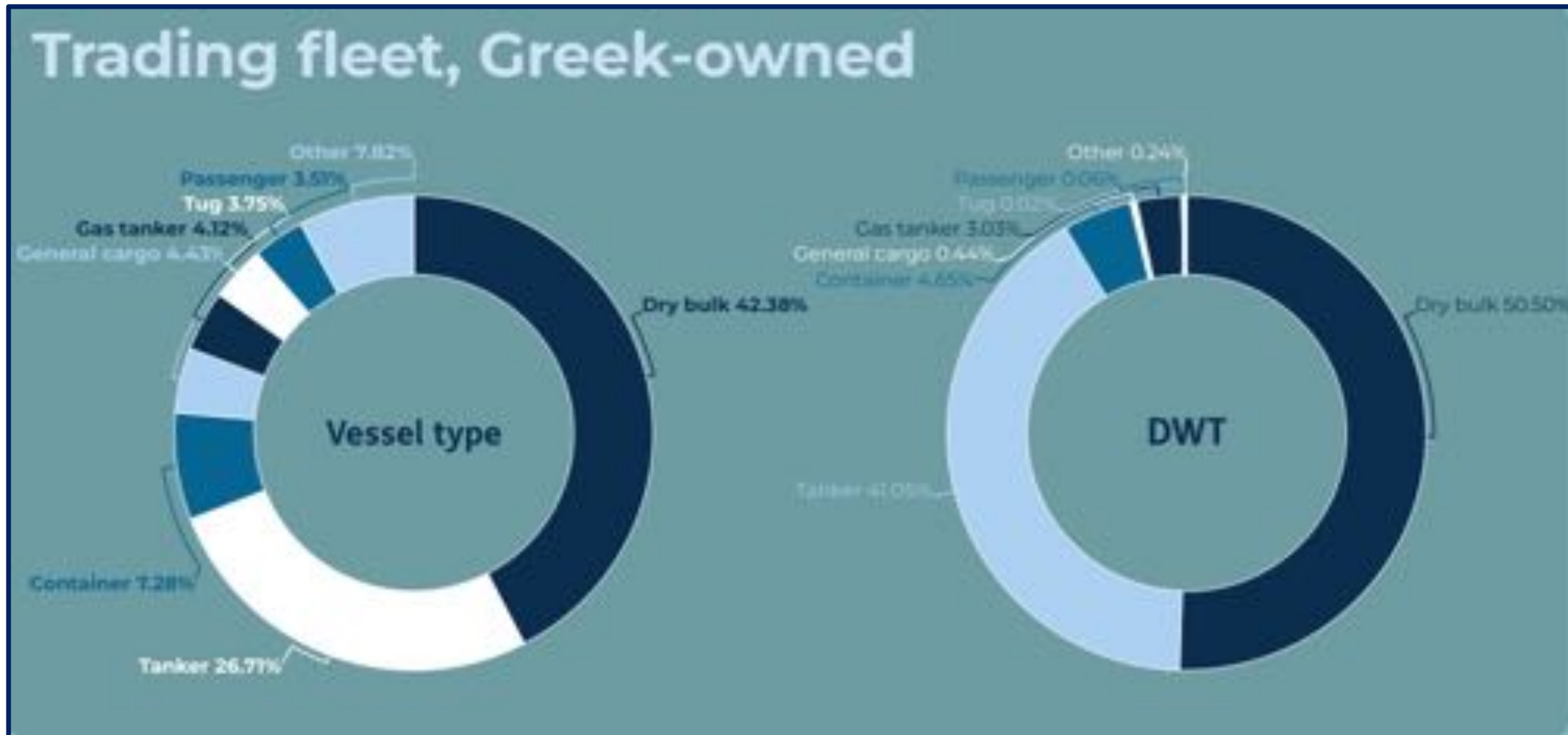
Top Owing Nations by Value (USD Bn)

	Owner Nation	Number of Vessels	Total Value	
	Japan	5,974	\$193.64	
	China	7,114	\$182.49	
	Greece	4,709	\$152.69	
	USA	2,404	\$97.89	
	Singapore	2,860	\$71.92	
	South Korea	1,728	\$62.99	
	Norway	1,731	\$58.81	
	Germany	2,224	\$52.03	
	United Kingdom	1,317	\$49.32	

- Greece remains a global shipping stronghold, while Greek Ship Owners, as leaders in the sector, control 15,4% of the global fleet in terms of capacity and 6.7% of the world fleet in the number of vessels.

Ship Type Analysis of the Greek-Owned Fleet

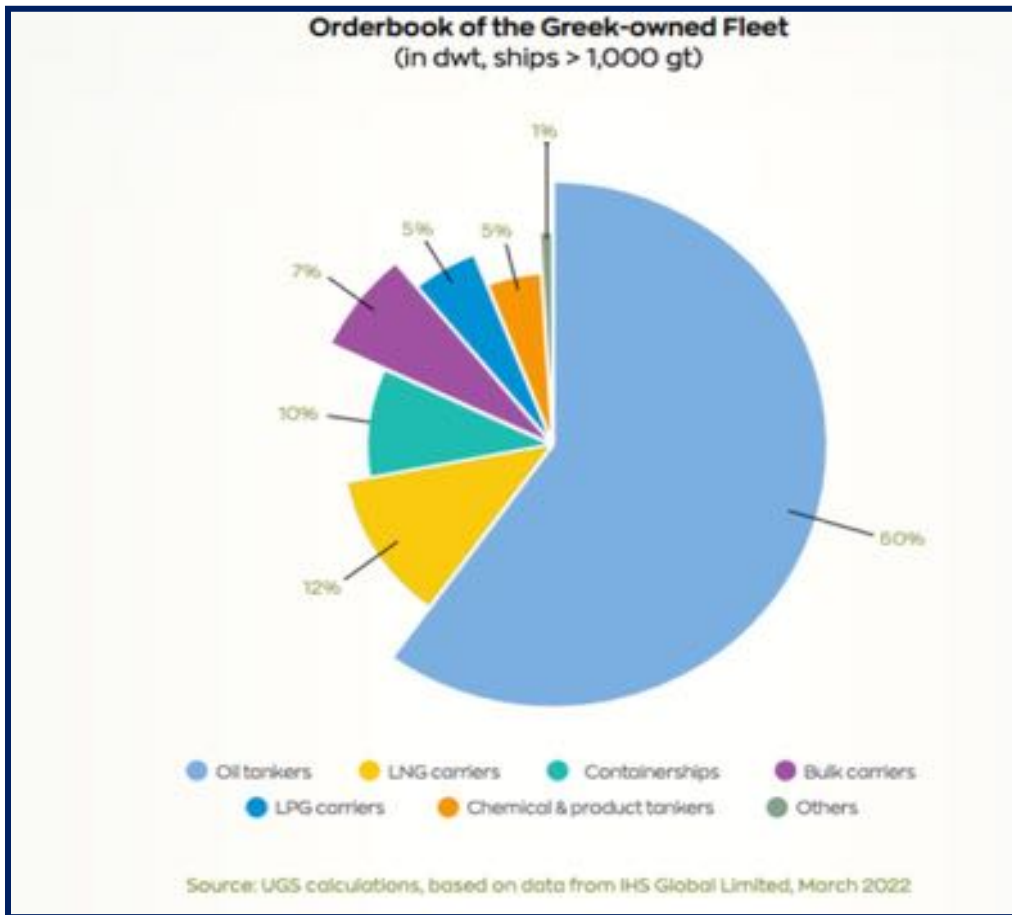
(in dwt, ships > 1,000gt)



Sale & Purchase



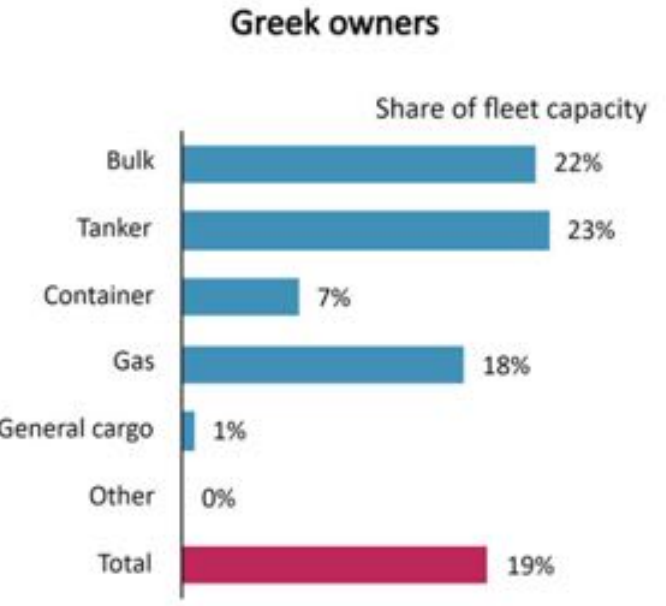
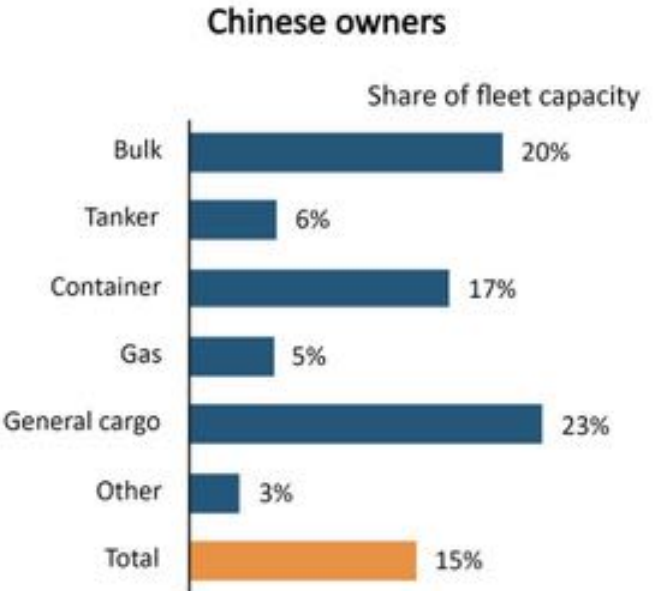
- In terms of S&P, Greece was the second top seller of secondhand vessels in 2022, with 428 vessels sold and a total value of USD 11.7 bn.
- Greece came behind China who sold 532 ships, receiving USD 12.93 bn.
- Greece was also the second biggest spender last year, splashing out USD 9.77 bn on a total of 376 vessels.
- Once again, Greece trailed behind China who spent an impressive USD 14.92 bn on 542 vessels. The UAE ranked third with USD 5.14 bn spent on 271 vessels



Orderbook of Greek Owned Fleet

Greek and Chinese companies
own 34%
of the global fleet's
cargo capacity

BIMCO SHIPPING NUMBER OF THE WEEK



Source: BIMCO, Clarksons Research

Facts & Figures on the fleet

While Greece has maintained its position as the world's leading shipping nation, China has emerged as a major shipping nation. According to BIMCO, China now owns the second-largest fleet of cargo-carrying ships behind Greece, which controls 19% of total capacity.

Looking by sector, Greece has a significant presence in the dry bulk, tanker, and gas carrier sectors, while Chinese shipowners have a larger share in the general cargo and container fleets thanks to Chinese state-owned COSCO Shipping. However, Chinese and Greek shipowners both have a strong focus on LNG carriers and Pure Car Carriers (PCC), with Chinese owners holding the largest orderbooks, exceeding their existing fleet by 126% and 260%, respectively, according to BIMCO.



The secret of success

Characteristics of the Chinese Shipping

- ✓ The entry of Chinese financial institutions into the leasing market has significantly contributed to the growth of the Chinese owned fleet in recent years, and five out of the 10 largest Chinese shipowners are leasing institutions.
- ✓ Combined, the ten largest shipowners' control 41% of the Chinese owned fleet.
- ✓ China's orderbook is 21% larger than that of Greece, indicating potential faster growth in the Chinese fleet in the years ahead.

Top 10 Chinese owners

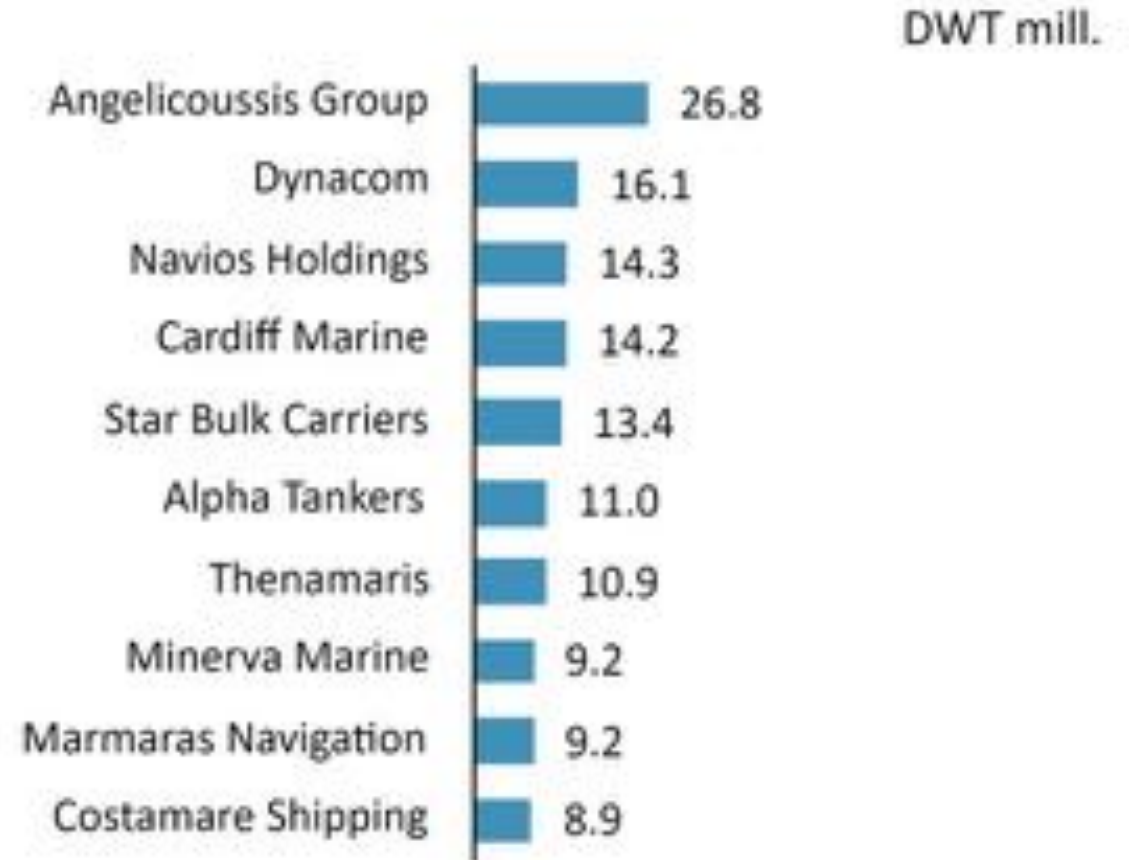


Source: BIMCO, Clarksons Research

Characteristics of the Greek Shipping

- ✓ The ten largest Greek shipowners are all “traditional” shipowners.
- ✓ Unlike the top ten Chinese owners, the top ten list of Greek shipowners is not dominated by one large owner.
- ✓ Instead, there are seven owners with fleets larger than 10 million deadweight tonnes whereas only three Chinese shipowners have such large fleets.

Top 10 Greek owners



Source: BIMCO, Clarksons Research

The Characteristics of Greek Shipping

Greek shipping is primarily a Small and Medium-sized Enterprise driven industry specialized in bulk/tramp shipping, which is a genuinely entrepreneurial sector with characteristics of a perfectly competitive market.

This is because the sector comprises thousands of companies worldwide, not dominated by a limited number of very large corporations-alliances, as in liner shipping

Vessels owned by Greek shipowners are hired out to charterers under time charter party contracts or they operate their vessels on spot market.

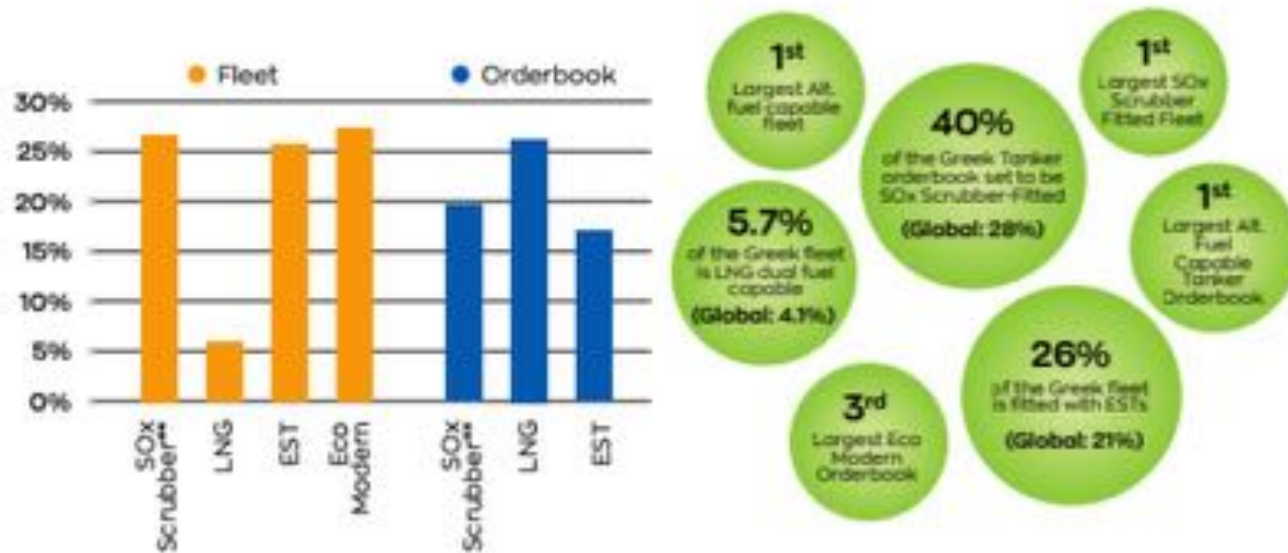
Shipping is one of the cornerstones of the global economy. Greek shipping is the mainstay of the EU-controlled fleet and a key facilitator of international trade, while constituting a major pillar of the Greek economy.

The Greek-owned fleet is among the most modern and safest fleets in the world, exhibiting long-standing maritime know-how and expertise.

Greek-owned Fleet: Environmental Equipment Summary

Higher Shares of Scrubber-Fitted, LNG Fuelled & EST*- Fitted Vessels

Environmental Equipment, % Total Greek-owned in GT terms



Source: Clarksons Research. Data as of 1st April 2022. Includes vessels of 1,000+ GT only.
 *Energy Saving Technology **Includes vessels pending retrofit.

Investing in new, energy efficient ships

The Secret of Success





CASH

CREDIBILITY

LONG LASTING RELATIONS

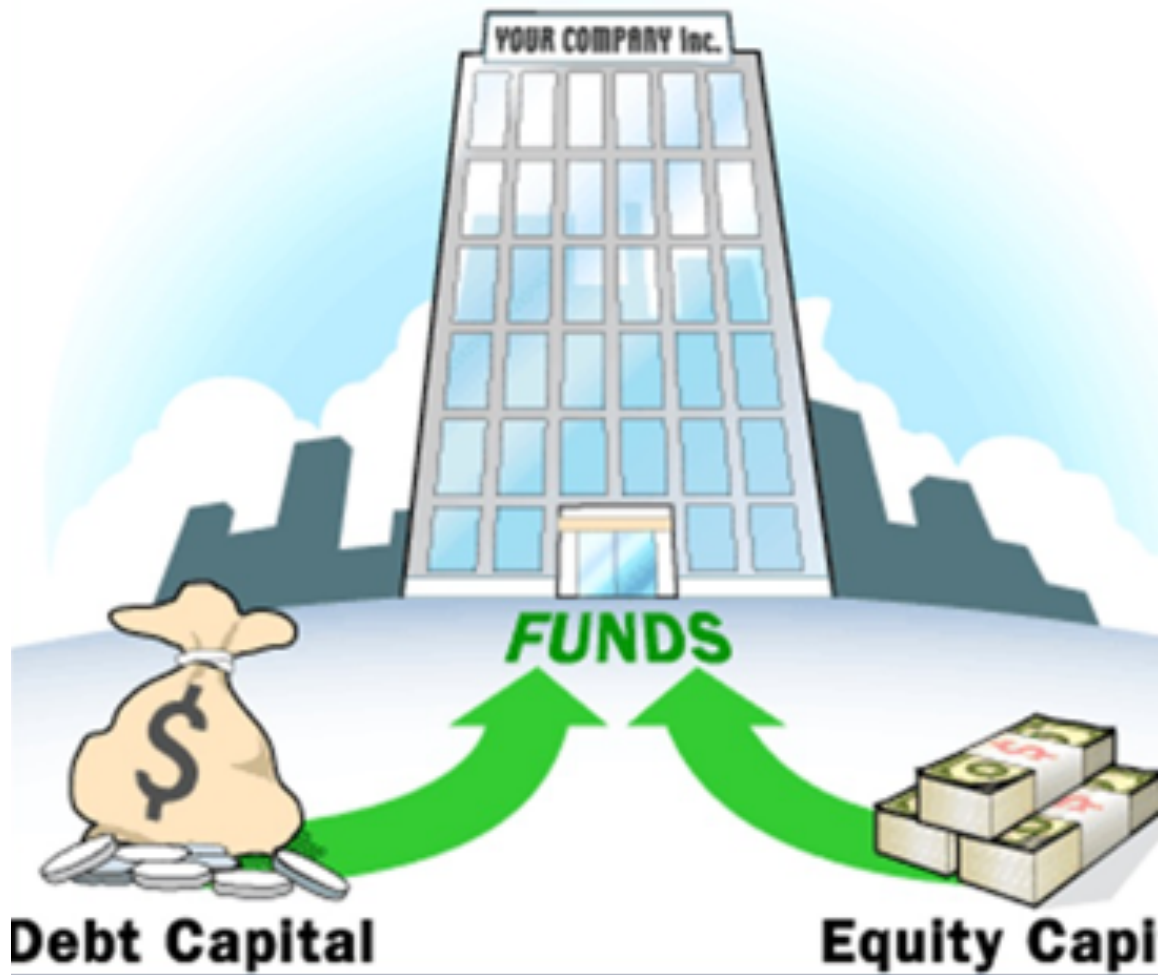
EXTROVERSION

POWER

LOYALTY

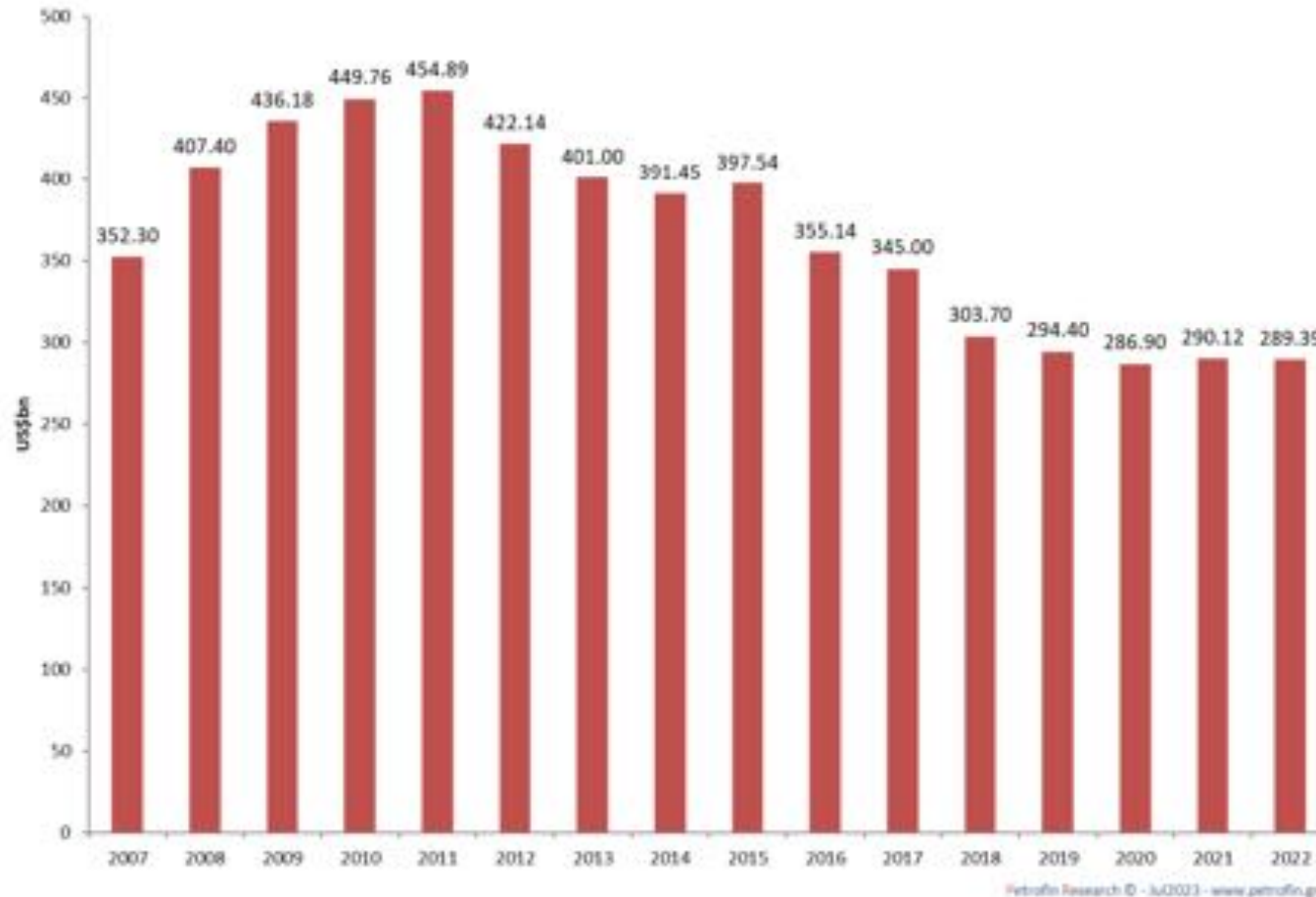
The background features a dark teal color with several stylized arrows of varying lengths and directions. One prominent arrow is red and points towards the top right. Other arrows are dark blue and point in various directions. On the left side, there are stylized, light grey clouds. The text 'Shipping Financing' is centered in a white, sans-serif font.

Shipping Financing

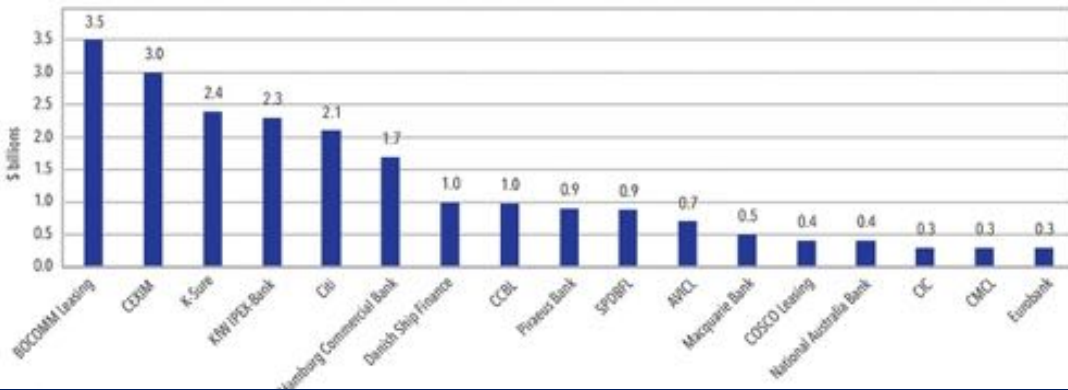


Historically, the most common way of financing ships has been through debt and equity.

Top 40 banks lending to shipping from end 2007 to end 2022



Selected Lenders' New Business Volume - 2022



BANKS

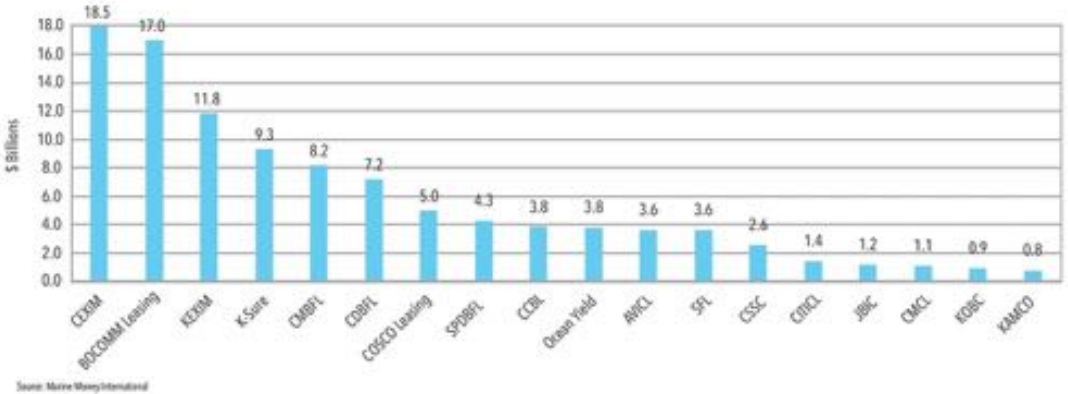
Former leading German lenders (DVB, Nord LB, HSH Nordbank) have exited Shipping

Data from 49 banks for 2022 :

- 18 banks increased their portfolio
- 25 banks reduced their portfolio
- 6 banks' portfolio remained unchanged

Greek banks (Piraeus Bank, Alpha Bank & Eurobank) are included in the Lenders with new volume.

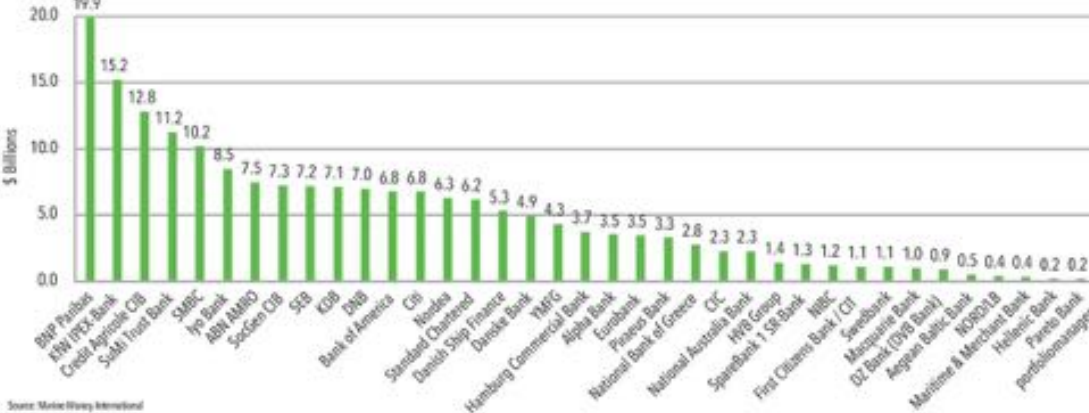
2022 Shipping Portfolio League Table - Non-Banks



NON-BANKS

Based on \$ 1 bn or more increase in 2022 portfolios, Chinese lessors (BOCOMM, CITICL, CMBFL, SPDFL) show a notable growth.

2022 Shipping Portfolio League Table - Banks Only

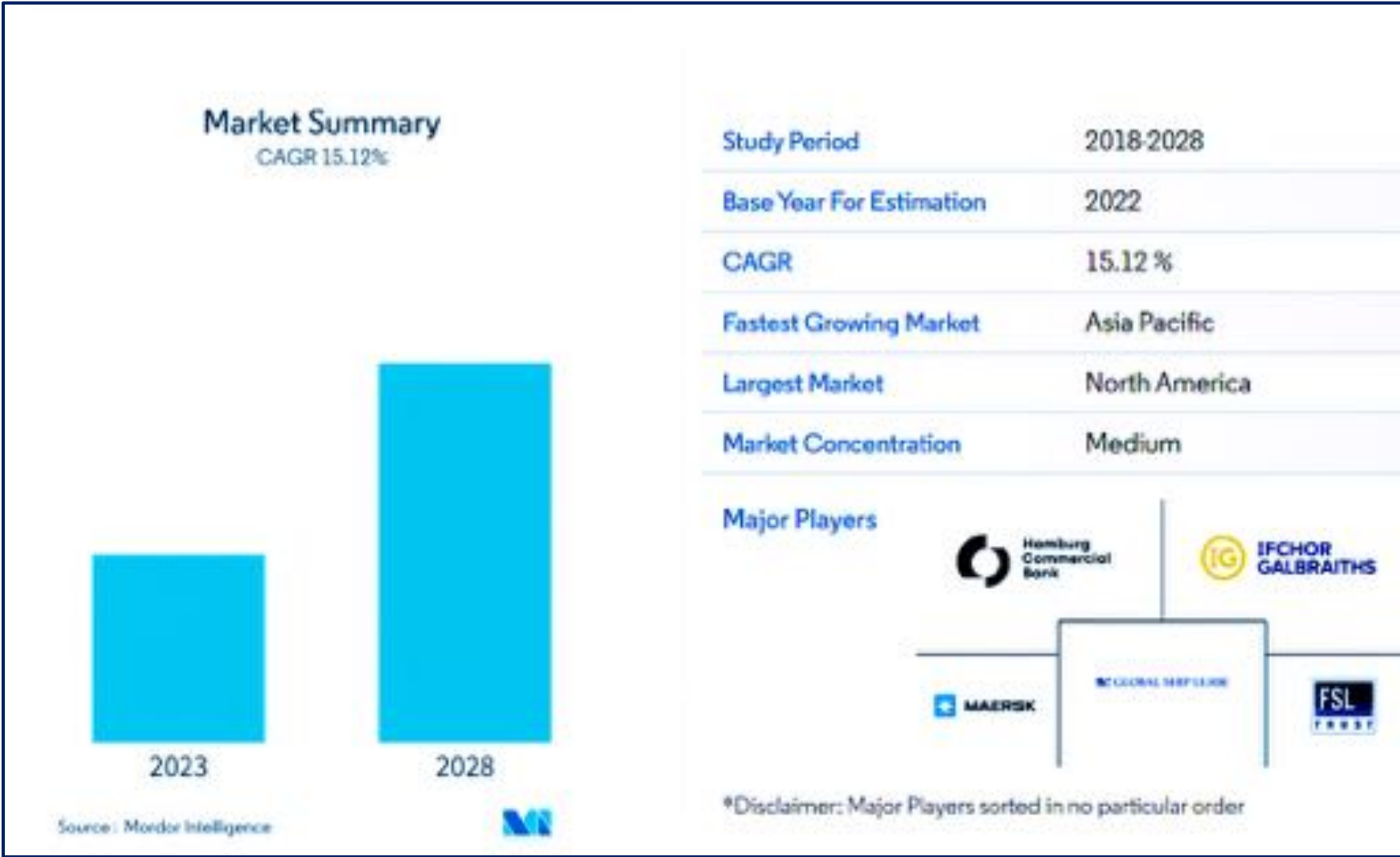


Ship Financing evolution

The growth of the global fleet continues to be funded primarily from non-banking sources, such as leasing, alternative lending, private equity from Funds, public markets and investors.

Over the last 10 years, SHIP LEASING has become a very significant competitor and a serious alternative to bank finance for the provision of ship finance. It was characterized by the presence of long-term charters which underpinned the shipping risk.

Chinese financial sector grew initially to serve Chinese shipping clients and local shipbuilding and subsequently international clients on an international basis. Most Chinese banks developed their own leasing subsidiaries which have come to dominate the global shipping leasing business.



Ship Leasing Market Size

Ship Leasing Market - Growth Rate by Region (2023 - 2028)



The Global Ship Leasing and Financing market is anticipated to rise at a considerable rate between 2023 and 2030.

Source: Mordor Intelligence



NEW CHALLENGES in Ship Finance

The rising US interest rates from close to 0% to over 5% has rendered many vessel cash flows weaker in supporting the high prevailing vessel prices, especially for eco vessels.

The rising liquidity of owners having benefited from the good markets, did result in early prepayment of loans.

Funds engaged also in lending have begun to increasingly include ESG criteria, with a strong preference towards sustainability loans and vessels engaged in renewables.

It is noticeable that loan terms for eco vessels are better than for non eco vessels.

NEW CHALLENGES in Ship Finance

- ✓ Although ESG indicators can often be considered as 'non-financial', the way they are managed by a company may have financial consequences.
- ✓ The capital invested by funds in companies that meet the ESG criteria, has increased by 170% from 2015 to 2021 and the capital invested in green euro bonds, increased sevenfold over the same period.
- ✓ Furthermore, organizations such as Moody's, Bloomberg, MSCI and Fitch, establish specialized rating standards for the ESG criteria.
- ✓ **European Banks** are increasingly focusing on meeting the ESG criteria for their investment and financing decisions, as climate risk will soon be integrated by the ECB into prudential supervision, with the aim of reducing the risk to banks posed by non-sustainable investments.

«ESG»



NEW CHALLENGES in Ship Finance «Poseidon Principles»



POSEIDON
PRINCIPLES

The framework of the Poseidon Principles constitute the epicenter of the “E” pillar of ESG, while at the same time being widely recognized by the most prominent shipping financing institutions, as will be analyzed further in the following section named “ESG-linked ship finance”.

Poseidon Principles constitute a widely used industry framework for evaluating and reporting policies that are in line with the IMO environmental strategies, as well as measuring the degree of conformity of funded shipping companies which form part of financial institutions’ (mainly banks) portfolios.

NEW CHALLENGES in Ship Finance «Poseidon Principles»



POSEIDON
PRINCIPLES

- ✓ By the end of 2022, 30 shipping banks representing around \$200bn of available ship finance (two thirds of the market) had signed up to The Poseidon Principles.
- ✓ Signatories include a standardized loan covenant clause in each new finance agreement, requiring shipowners to provide specific data to their financiers.
- ✓ To measure and manage progress, lenders and lessors will apply a principle of 'climate alignment' to all credit products where a vessel or vessels fall under the purview of the IMO. They also commit to sharing 'climate alignment' scores on an annual basis.

- **IMO 2020 Sulphur Limit**
- Tier III NOx
- Green House Gas Reduction Targets
- Ballast Water Management
- Recycling

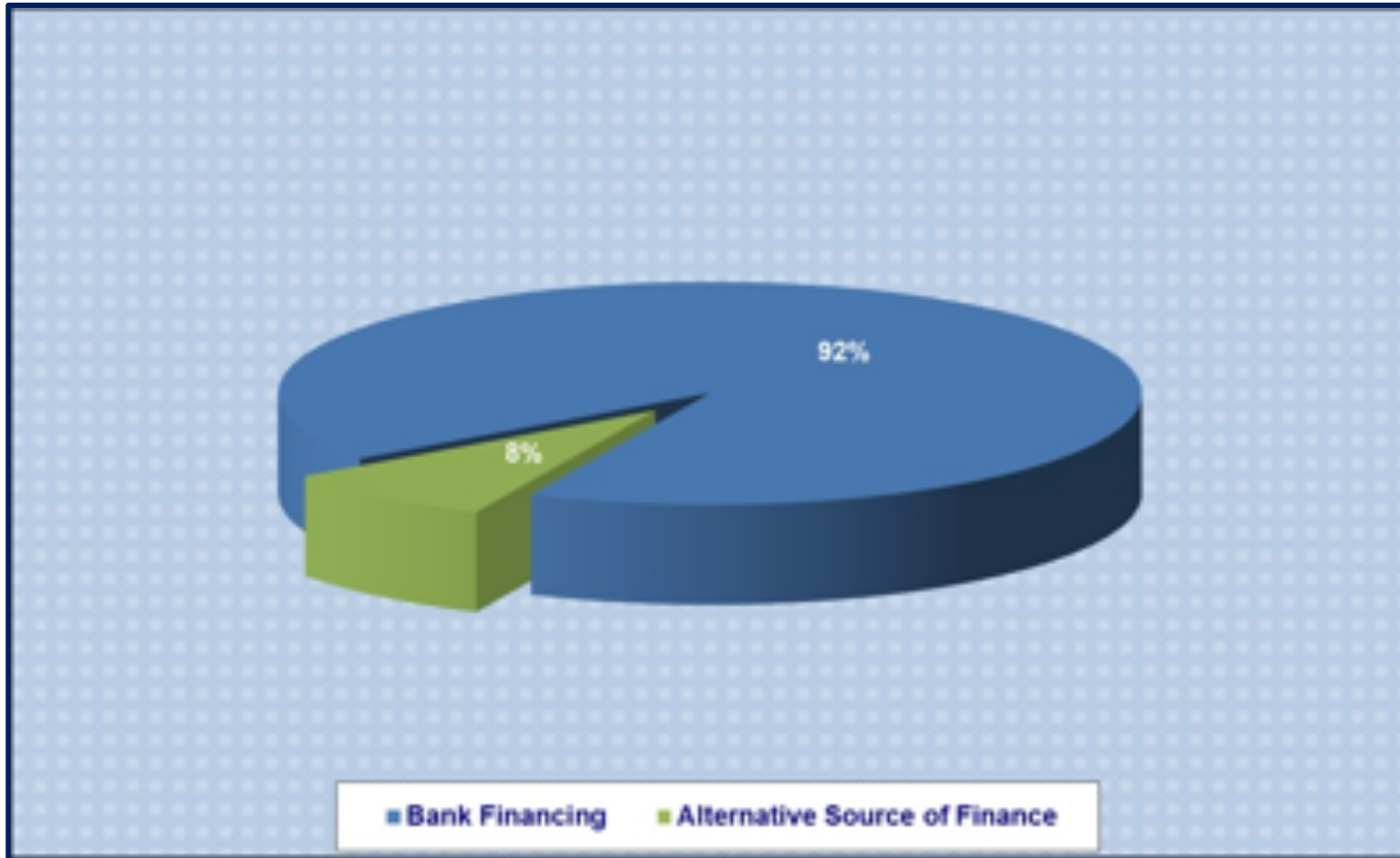


IMO regulations, regarding dual fuel, clean fuels and ammonia are in process, EEXI and CII being major milestones from 2024 onwards.

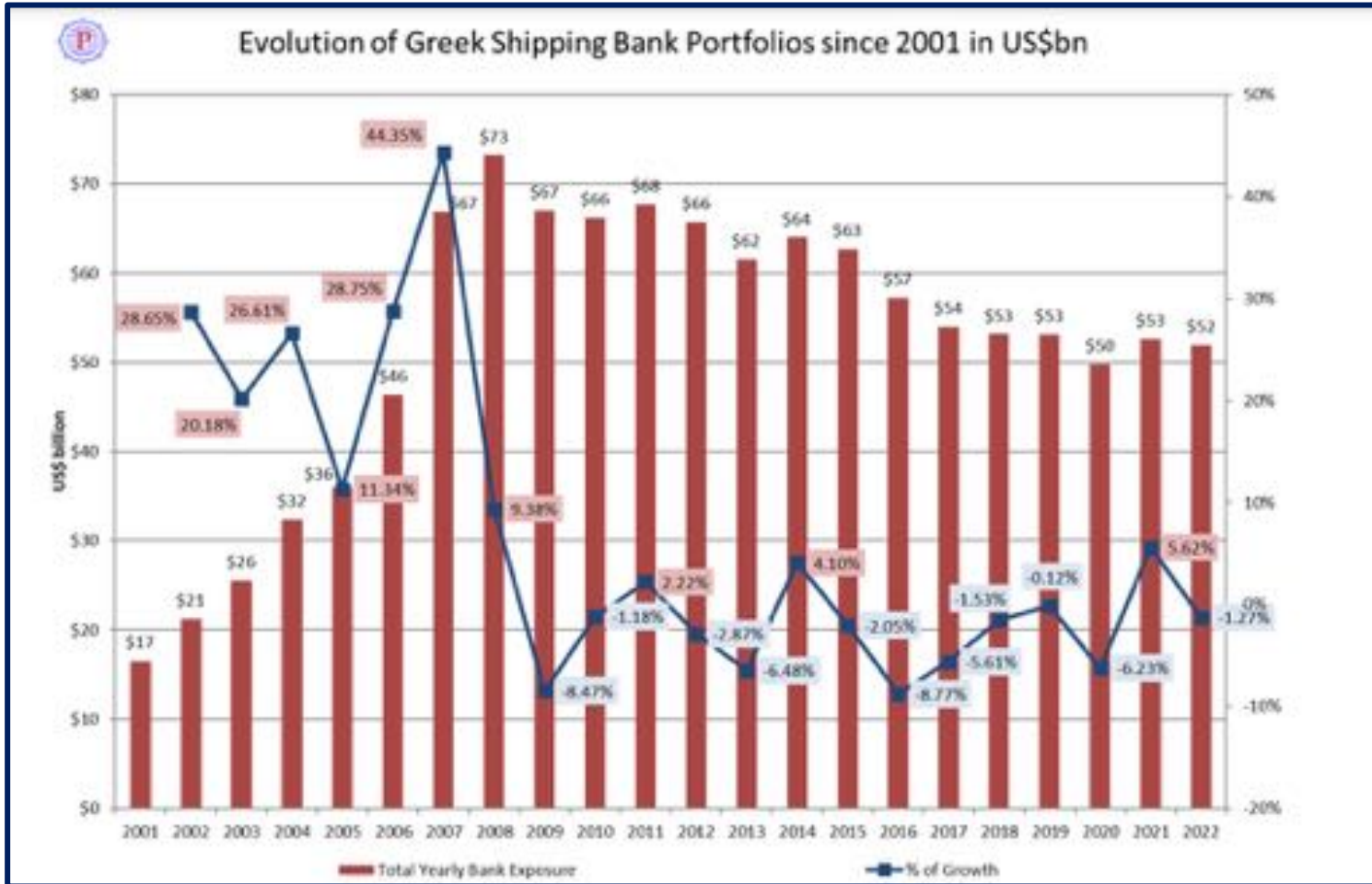
Regulatory Challenges



Greek Shipping Finance



**Greek
Shipping
Finance
is
dominated
by Banks**

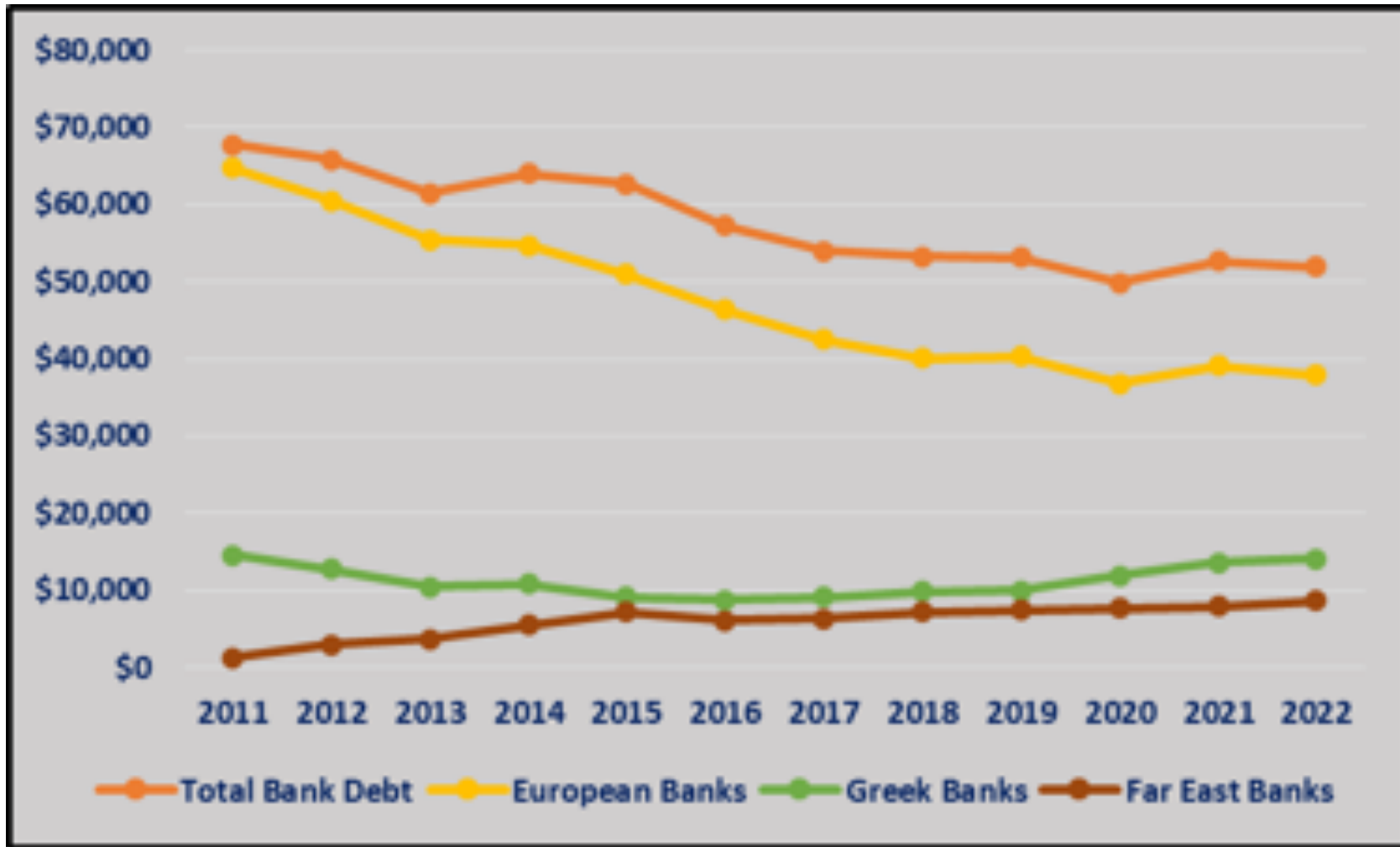


Greek Bank shipping finance continues to decrease as banks (mostly Europeans) are pulling out from shipping

2012	
Greek Shipping Banks Financing	\$65,800
	(US\$ bn)
European Banks	\$60,500
Far East	\$3,000
North America	\$1,780
Australia	\$500
2022	
Greek Shipping Banks Financing	\$51,900
	(US\$ bn)
European Banks	\$37,840
Far East	\$8,600
North America	\$5,070
Australia	\$418

Greek Shipping Finance is dominated by European Banks

European banks still account for the vast majority of total loans at 74%, continuing, however, a steady decrease



Evolution of Greek Shipping Bank Financing

Key points on Shipping Finance

Over the past decade we have seen large changes to the ship financing landscape towards greener projects. The most obvious green financiers are the Poseidon Principles banks that according to Clarkson's account for 50% of global banks' ship finance.

The increase in base interest rates – 0.5% in January 2022 to 5% today – has in some cases tripled the total interest cost to shipowners and led to large changes in loan affordability for those seeking finance.

The Greek shipping finance as a division of global shipping finance confronts the same conditions and parameters

The ESG issues will impact Greek owners' decisions on debt.

Greek banks continue to support the industry by increasing their portfolio

Lenders from Far East provide improved terms and increase their market share.

Overall, shipping finance markets remain open across most sectors. Banks are looking to grow their portfolios and with increasing numbers of alternative funds, increased competition plays to the favour of the shipowner.



Challenges faced –
Opportunities chased



Changing Role of Vessel

The emergence of digital technologies and tools will transform the role of vessels from being a central mechanism to an enabler of value creation. These tools will create smarter, more connected distributed networks and will provide performance monitoring as well as real-time visibility of the vessels. This will massively reduce the chasm in communication between the people on the vessel and those on-shore and will create more centralized know-how where data from one vessel can be used to drive improvements in other vessels as well.



Digital Transformation

Shipping is going through a digital transformation which is driving numerous other trends in the industry. There is a large number of startups creating relevant tools. Technologies such as Internet of Things (IoT), big data, artificial intelligence (AI) and sensors are being used to optimize operations, enhance efficiency, drive down costs and increase the uptime of vessels. Implementation of these innovations will require changes operating models, use of data, cyber security as well as the role of vessels to create value.



Transparency

With the advent of new technologies, the Shipping industry's landscape is changing rapidly. Companies are adopting blockchain to their supply chain to increase productivity, efficiency and transparency. To effectively manage the increasing supply chain pressure due to rising volume of global trade, companies are shifting to platforms that can ease their work. With the inclusion of blockchain into the operations, the companies believe that the information is traceable, demonstrable, transparent and is recorded in a way that all parties can trust the information. This is creating fresh opportunities for shipping carriers to improve operations and efficiency and helps them to maintain greater transparency.



Ongoing Consolidation

Increasing consolidation in the Shipping industry is driven by over capacity and weak global economic growth. Companies are looking for opportunities to increase market share and reach through M&A and alliances.



Sustainability

There is growing awareness regarding sustainability in shipping, and it could become a key parameter for the companies to compete with others. This is not limited to developed economies, as energy efficiency measures are also being established in developing economies through assistance provided by international organizations.

Trends & Developments



Regulatory Compliance

The emissions regulatory framework aims to reduce sulphur emissions by monitoring carbon emissions, fuel consumption and associated transport work. Ship operators are required to use far more expensive distillate fuel (gas oil) with a sulphur content of less than 0.1 percent as compared to 1.0 percent earlier.

Although distillates cost more than the fuel that most ships presently use, the price difference is expected to be greater due to uncertainties about which oil refiners will be able to produce distillate in the quantities that will be required.



Cyber Security

With new technologies pushing the industry forward at a rapid pace, new threats emerge. The omnipresent interconnectivity exposes the sector's infrastructure to more and more cyber vulnerabilities – this year alone cyber-attacks increased by 400% due to COVID-19 crisis. Cyber risk is not only tied to new digital solutions, but it is equally important to understand the human and organizational factors involved in order to get the full picture. Shipping companies need to be able to manage risk in a consistent and transparent way, for a safe and secure transition to the new connected digital market.



Financing

During the boom of 2004–08 in the shipping industry, many banks aggressively lent to shipping companies. There was considerable PE invested in the industry, providing capital for growth and restructuring of companies. The availability of this financing led to overcapacity and declining freight rates. This, in turn, led to declining profits, with a number of companies filing for bankruptcy. The heavy toxic debt burden following the 2008-09 global financial crisis and a shipping markets crash in 2010 has resulted in a substantial decline in finance from European banks in particular. Compounded by a lack of shipping finance provisions from regional banks, this has caused liquidity in the shipping industry to tighten, forcing marine operators to seek alternative finance in order to continue operations.



Response to Risk

The performance of the shipping industry is greatly dependent on other factors such as consumer preferences, trade, geopolitical factors, economic factors and global pandemics. In order to reduce disruption in their operations and loss in revenue, companies need to be able to respond quickly to these changes when they occur as well as have robust operating models which have accounted for risks that could occur.



Capacity Optimization

There is an over-supply of shipping vessels in comparison to demand leading to declining freight rates. The major driver of overcapacity has been the anticipation of continuing expansion in trade and new vessels being ordered to meet the expected demand. New container ships are ordered with few being retired.

Recognized Challenges

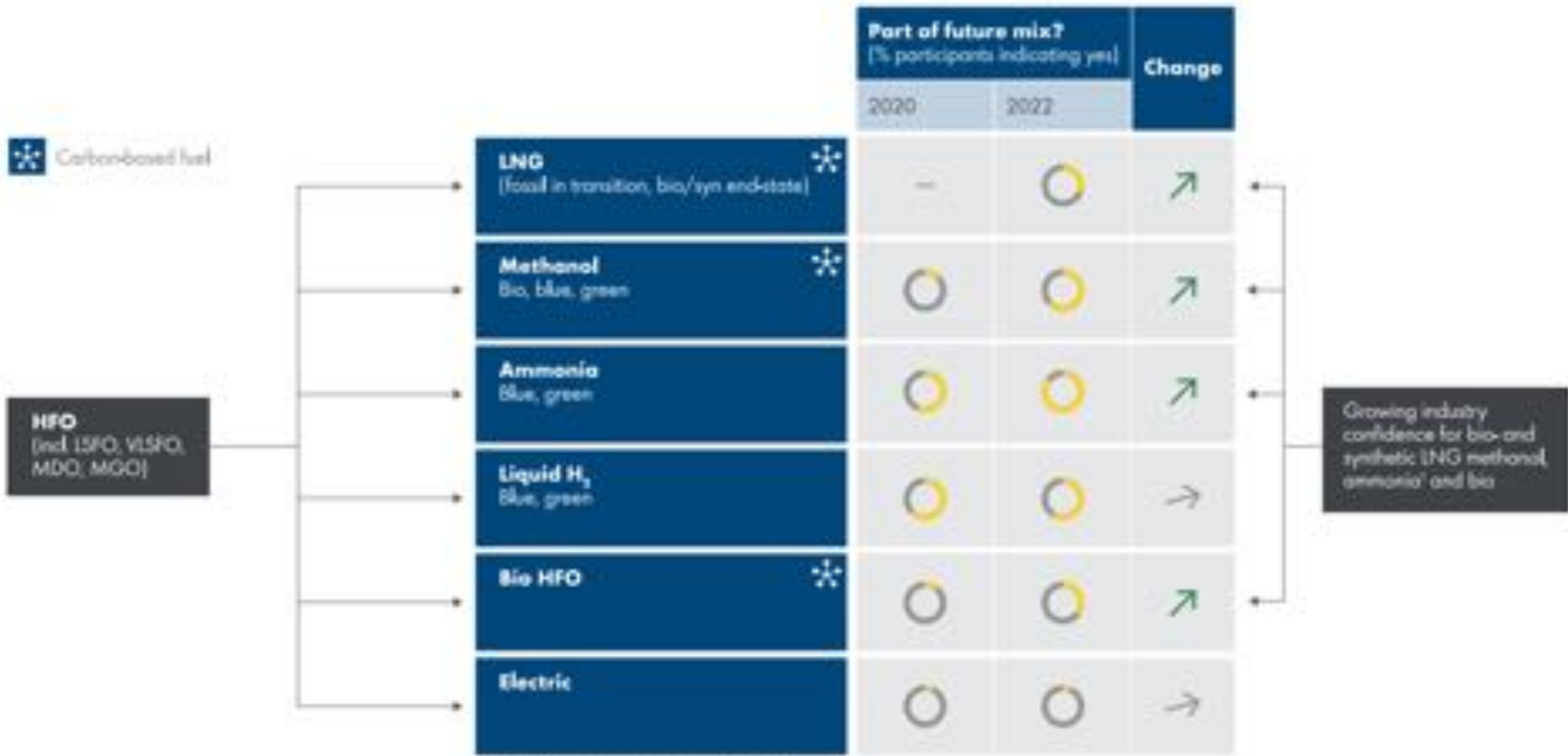


Exhibit F | Deep sea shipping decarbonization pathways
 Note: % results for ammonia are conditional on if a solution is found for the significant security challenge

Deep sea shipping decarbonization paths

Source : Shell/Deloitte

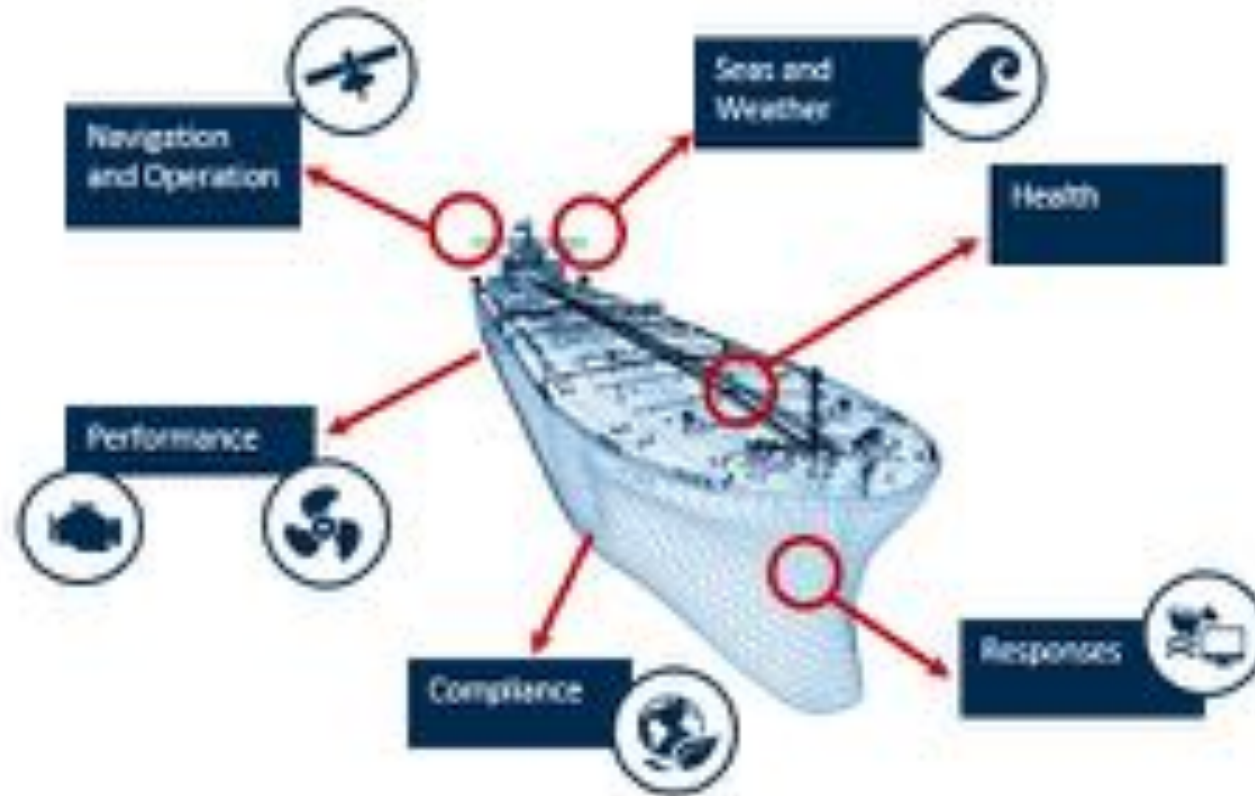


Supply Chain Innovation

Source : Deloitte

Technology to comply with regulations

Technology to improve performance and reduce cost

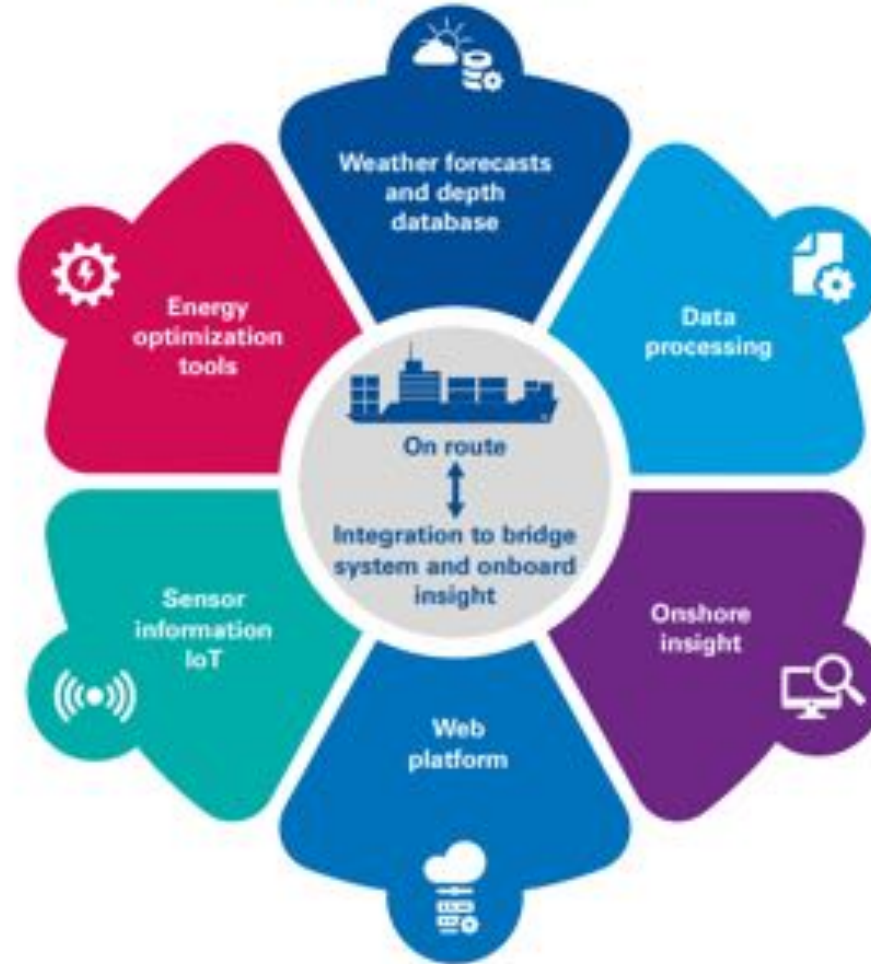


Technology Challenges & Opportunities



The path to digital transformation

Smart ship at a glance
Big data analytics



Digitalization Big Data Analytics in Ship Operations

Technology Trends

- Automation
- Data
- Connectivity
- Internet of things
- Computing power and analytics
- Augmented reality
- Machine Learning
- Artificial Intelligence

Autonomous Ship Development

- Situational awareness
- Object recognition
- Collision avoidance
- Electric and hybrid propulsion
- Predictive & preventative maintenance
- Cyber Safety

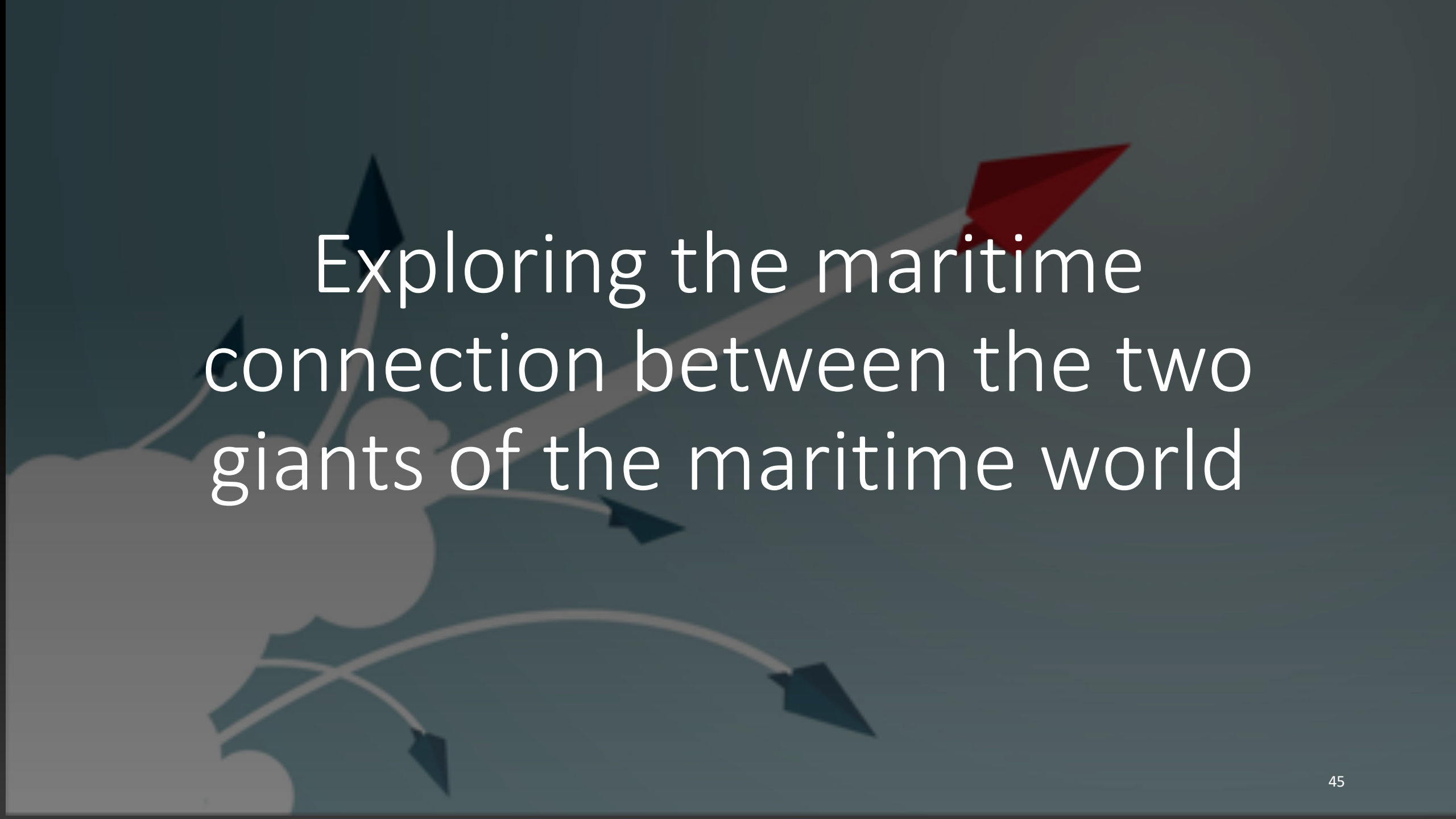
Supply Chain Enablers

- Blockchain
- Cryptocurrencies
- Trading platforms

Manufacturing Technology

- Additive manufacturing (3D printing)
- Robotics
- Standardization

Smart Shipping – New Technologies, New Players

The background features a dark blue-grey gradient. A prominent red paper airplane is shown in flight, moving from the upper right towards the center. Several light grey, curved arrows originate from the left side and point towards the right, creating a sense of movement and direction. The overall aesthetic is clean and modern.

Exploring the maritime
connection between the two
giants of the maritime world



Signing Ceremony for the opening of the Representation Office of the Association of Banking and Financial Executives of Hellenic Shipping



Steps forward

- **Cooperation Agreement between the Shanghai Lujiazui Financial City Council and the Association of the Banking and Financial Executives of Hellenic Shipping**
(February 10th , 2023)
- **Establishment of the Association's Representative Office at Lujiazui Financial District in Pudong – Shanghai**
(December 4th , 2023)

ASSOCIATION
OF BANKING
AND FINANCIAL
EXECUTIVES
OF HELLENIC SHIPPING

The Target

The Association aims at playing a collective role in recommending shipowners to financial institutions and shipyards, assisting Chinese financial institutions in managing overseas shipping assets and maintaining long-term cooperative relations between the Greek shipping industry and Chinese shipyards and financial institutions.



In Shipping the
correct selection of
the right partners
maximizes the value
of itself

MARINTEC² CHINA²

中国国际海事技术学术会议和展览会 3

SENIOR MARITIME FORUM 高级海事论坛

Innovation 创新 · Intelligence 智慧 · Low-carbon 低碳



Thank you !

For your attention