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**"CHARTERING STRATEGIES USED BY HELLENIC
SHIPPING COMPANIES AND THE EFFECT OF THE
COVID-19 OUTBREAK ON THEM"**

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Διπλωματική εργασία

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"This Diplomatic Thesis was unanimously approved by the Three-member Examining Committee appointed by the General Assembly of the Department of Maritime Studies of the University of Piraeus in accordance with the Operating Regulations of the Master's Program in Maritime Studies. The members of the Committee:

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The approval of the Thesis by the Department of Maritime Studies of the University of Piraeus does not imply acceptance of the views of the author

FOREWORD/ ACKNOWLEDGMENTS

In this particular paper, the chartering strategies of Greek shipping companies and the effect of the covid-19 pandemic on them are investigated. For the needs of collecting the necessary informational material, electronic sources were drawn up, with a focus on the annual reports of shipping companies in Greece, as the center of gravity of this work is them.

This is a survey carried out in the context of the needs of my Diploma thesis. At this point, therefore, I would like to warmly thank my professor supervisor, Mr Polemis Dionysios, who with his contribution and guidance agreed to the implementation of this work in a smooth and clear manner. Furthermore, I would also like to thank my family, without whose moral support it would have been difficult to complete my postgraduate studies and the final completion of my Diploma thesis.

TABLE OF CONTENTS

STATEMENT OF AUTHENTICITY/ COPYRIGHT MATTERS	2
THREE-MEMBER EXAMINATION COMMITTEE PAGE	3
FOREWORD/ ACKNOWLEDGMENTS.....	4
TABLE OF CONTENTS	5
CATALOG OF TABLES / DIAGRAMS	8
ABSTRACT.....	9
INTRODUCTION	10
CHAPTER 1. GENERAL INTRODUCTION TO SHIPPING COMPANIES	11
1.1. The Importance of Shipping Strategies in Maritime Business.....	11
1.2. Risks Inherent in Maritime Business	12
1.3. Factors Affecting Profitability	15
1.4. Factors Affecting the Demand	16
1.5. Factors Affecting the Supply	20
1.6. Cyclical Nature of Demand of LPG Transport	23
1.7. Factors Affecting Operations of Shipping Companies	25
CHAPTER 2.DEFINITIONS BASED ON CHARTERING.....	28
2.1. Charter Types	28
2.2. Bareboat Charter	29
2.3. Time Charter	30
2.4. Pool Arrangements.....	31

2.5. Spot or Voyage Charter.....	33
2.6. Off Hire	34
2.7. Charter Hire Rates.....	35
2.8. Time Charter Revenues / TCR and Factors Affecting Charter Hire Rate	38
2.9. Net Pool Revenues-Related Party	40
2.10. Purchasing a Ship with Charter.....	41
3rd CHAPTER. CHARTERING STRATEGIES OF SHIPPING COMPANIES - IMPACTS OF THE COVID-19 PANDEMIC ON CHARTERING.....	43
3.1. The Chartering Strategy of DRY BULK Companies. Methods of Chartering .	43
3.1.1. DANAOS Company	45
3.1. 2. DIANA Company.....	49
3.1.3. GLOBUS Company.....	54
3.1.4. NAVIOS Company	58
3.1.5. SAFE BULKERS Company	61
3.1.6. SEANERGY MARITIME Company	63
3.1.7. STAR BULK Company	65
3.2. The Chartering Strategy of WET BULK Companies	67
3.2.1. DORIAN LPG Company	67
3.2.2. DYNAGAS LPG Company	68
3.2.3. GASLOG Company	70
3.2.4. PERFORMANCE SHIPPING Company	72
3.2.5. PYXIS TANKERS INC Company.....	73

3.3. Chartering Strategies of Mix Fleet Companies	76
3.3.1. NAVIOS Company	76
3.4. The Impact of COVID-19	78
4th CHAPTER. CONCLUSIONS/SUGGESTIONS	81
REFERENCES	84
A. ENGLISH REFERENCES	84
B. INTERNET	86

CATALOG OF TABLES / DIAGRAMS

Table 1. Consequences and Likelihood of each Risk	12
Table 2. Identifying the Risk Level	13
Table 3. Criteria that affect the Demand in Maritime.....	18
Diagram 1. The Supply and Demand Side of a Shipping Market	22
Diagram 2. BDI Recession Values for the Years from 2008-2018	38
Figure 1. Time Charter Details	40

ABSTRACT

The main title of this thesis is chartering strategies used by Hellenic shipping companies and the effect of the Covid-19 outbreak on them. This is a bibliographic work, based on the bibliographic overview of information and mainly on annual reports regarding three types of shipping companies in Greece (dry bulk, wet bulk, mix fleet). It is of the utmost importance to study the chartering strategies of these companies. Moreover, a further investigation is conducted on the effect of the covid-19 pandemic regarding the extent to which the pandemic affected their strategies.

From the bibliographic investigation of the issue, the following conclusions emerged. The strategy followed by the companies as a whole is to engage in short-term or immediate chartering. However, this option, with the current circumstances of the pandemic and the Russia-Ukraine war, gives every opportunity to eventually have volatility in dry bulk vessel charter prices, which means a decrease in BDI, a decrease in interest rates, a decrease in ship values and in charter profits, limited liquidity, reduction in cash flows, inability to comply with loan agreements and inability to pay dividends.

Keywords: strategies, chartering, Greece, shipping, companies, covid-19.

INTRODUCTION

The aim of this thesis is to be examine the chartering strategies of the Greek shipping companies and the effects of the covid-19 pandemic on them. Specifically, the chartering practices and strategies of Greek shipowners are investigated. A partial goal is to reveal which tactics are used by Greek shipping companies and how vulnerable are the methods of this management from a possible crisis, such as that of the covid-19 pandemic. This is a basic research objective, which is also the central research question of this study. In particular, the most appropriate technique for conducting this investigation was to gather information from the annual reports provided only by the publicly traded shipping companies of Greece, with any additional information retrieved from the internet.

Therefore, the structure of the work follows the main purpose and objective of the study of this subject, which is the investigation of the ways and strategies.

Thus, initially, in the first introductory chapter, a review is made of shipping companies in general, i.e. giving more weight on the risks they undertake, the factors that influence them, etc. The second chapter focuses on the definitions of concepts according to chartering. The third chapter studies the chartering strategy adopted by dry bulk, wet bulk and mix fleet companies and the impact of the covid-19 pandemic on the chartering strategies of the aforementioned Greek ship-owning companies. The last chapter, finally, is the one that captures the final conclusions and results from the previous overview and suggestions are mentioned.

CHAPTER 1. GENERAL INTRODUCTION TO SHIPPING COMPANIES

1.1. The Importance of Shipping Strategies in Maritime Business

As referred in the title of this thesis the reader will come to know key information regarding the Hellenic Shipping Companies that are listed in the Stock Exchange of N.Y, particularly their chartering strategies and how they were affected by the COVID-19 outbreak. In the beginning, the different kinds of chartering methods will be analyzed. Secondly, each company will be presented separately, in order to determine the chartering strategy each one is using. Finally, we will get a better analysis of these strategies and the effect of the crisis following the COVID-19 outbreak and how those companies adapted successfully or not on the latter event.

Greece is a country heavily linked with the seaborne transportation industry and has the second largest fleet worldwide. During the last epidemic, a huge impact on the global economy was witnessed, thus affecting the aforementioned sector greatly, in which case it is necessary to detect and evaluate the methods that the Greek shipping companies used to adapt to the circumstances. Apart from introducing the various chartering methods and a chance to get acquainted with the Greek shipping companies, the presentation and analysis of each company's shipping strategy will help us determine the best method or combination of methods. That way in case of an outbreak of a similar crisis in the future, the Greek maritime shipping market will be given a way to adapt to the new changes much faster and more effective by implementing the aforementioned strategies. Plainly, the maximization of income and reduction of losses of shipping during the next incoming crisis by implementation of the best fitting chartering strategy is the sole purpose of this thesis.

1.2. Risks Inherent in Maritime Business

Similar to every organization and business, every shipping company face risks, therefore risk assessment assist greatly to make appropriate decisions. While evaluating options, it is important to analyse the level of risk in any introduction of a solution or prevention option. Addressing financial risks, health risks, security risks, environmental risks and other business risks are analysed during the assessment. The proper analysis of these risks provides the appropriate information that is critical in order to make the right decisions, since it helps those involved to evaluate the factors that influence the final decision. A key and primary step in risk assessment is identifying the risk and grouping it into appropriate risk headings, but also the effect of the risk on the company's people, information, physical assets, finances and reputation. The next stage is the determination of the consequences and the probability of each risk, using a certain scale (Mousavi et al., 2017), as shown in the following table.

Consequences		Likelihood	
Level	Descriptor	Level	Descriptor
1	Insignificant	A	Almost certain
2	Minor	B	Likely
3	Moderate	C	Possible
4	Major	D	Unlikely
5	Catastrophic	E	Rare

Table 1. Consequences and likelihood of each risk

Source: Mousavi et al., 2017

It is also important to consider the consequences of the risk in order to assess the level of risk, as shown in the following table.

Criteria	Weight (%)
C2 - Digital vulnerability and cybersecurity threat	24.1
C1 - Industry 4.0 technologies	22.3
C5 - Climate change	17.5
C4 - Disruptive innovation	13.4
C3 - Political imbalances and protectionism policies	10.6
C7 - Change in business model	8.8
C6 - Return of production (Localization)	5.6
C8 - Urbanisation	4.0
C9 - Ageing	3.0

Number of respondents: 24

Table 2. Identifying the risk level

Source: Mousavi et al., 2017

Finally and continuing the reference to the risk assessment process, it is important to examine ways to deal with risks and to look for opportunities for improvement, while in addition to communication, consultation, monitoring and review is also important (Mousavi et al. , 2017).

Regarding the mentioned risks, these are the following:

- the volatility and decline that may occur in the level of profitability and growth, factors that depend on the demand for container ships and the global economy, as well as on charter prices for cargo ships
- the consequences of the covid-19 pandemic and a worldwide effort to limit its spread, thus to limit its effects on the global economy, on the demand for

maritime transport of containerized cargo, the capacity and availability of charterers to cover their duties, the prices chartering of container ships, laundry yards, wharfage and repairs, crew changes and financing

- the volatility in the container shipping market and the difficulty in finding profitable charters for the vessels

- the inability of the contracting parties to perform the tasks, in accordance with the charter agreement losing customers who are a key source of revenue

- the global economic situation and the consequences on customer confidence and charter costs

- the disruption of the global financial market and the movements of governments that may affect the operation and efficiency, the financial condition of the company and its cash flows to reduce exports or increase trade protectionism, which would adversely affect charterers' business, financial condition, profitability of operations and cash flows, the ability to expand relationships with existing clients/charterers to acquire new time charters, upon which the company's profitability and growth largely depends, the fluctuation or decline in container prices, with the reduction in the prices of the whole being burdened with impairment charges

- the investment value of common shares may fluctuate and affect the efficiency of operations the need for capital expenditure, with the aim of maintaining fleet functionality, which may reduce the amount of cash available for other purposes, the "aging" of the fleet, in which case the operating costs will increase in the future, the increased technological competition that contributes to the reduction of charter income and the reduction of the value of ships failure to protect, breach of security and failure of availability of information systems through which business operations are conducted may adversely affect business efficiency the unfavourable conditions in container transport, as a result of the lack of diversification, which can lead to the reduction of the ability to respond to payment tasks and profitability (Danaos Corporation, 2023, pp 5).

1.3. Factors Affecting Profitability

It is a fact that the macro-environmental factors, with a typical example of the technological progress of communication, the steady development of the world economy, the fact that the world population is constantly increasing, gives the possibility to grow accordingly and the global shipping industry. As far as shipping goods worldwide is concerned, it appears that suppliers, aka shipping companies, have bargaining power and that the threat of new product substitutes entering is limited, making it a steadily lucrative environment. On the contrary, buyers (companies that ship their goods) are unable to affect the prices as much as the suppliers. According to the life cycle of the shipping sector, shipping is in a mature stage. Its future is promising because it is constantly developing. However, the main goal of every company is to achieve maximum profitability. This is possible through the redesign of its functions. It should be focused on the needs of its customers. This will help to develop relevant products and thus increase its revenue. Every company should proceed to explore new markets through the emerging economy. This will contribute to increasing market share and increasing its revenue (Cheng & Chay, 2007).

Briefly and comprehensively, therefore, the factors that will contribute to the profitability, cash flows and efficiency of the investment of shares are the following:

Prices and periods for which the charter is leased.

The levels of vessel operating costs.

Depreciation expenses.

Financing costs.

The consequences of the covid-19 pandemic.

The Ukraine-Russia war.

The fluctuations that exist in exchange rates (Diana Shipping Inc, 2023, pp 21).

1.4. Factors Affecting the Demand

Globally, the manufacturing industry is slowing down and this is a consequence of the global economic crisis since 2008 and especially since 2012, with the typical decline in global trade in basic commodities with GDP (Gross Domestic Product) growth rates. In 2016, as in 2001, the GDP growth rate hovered around 13%, which affected commodity trading. Between 2001 and 2008 there was an increase in container transport with an average of 10.8% per year and the corresponding growth for the years 2011-2016 was 3.9%. From these statistics, one finds with this longitudinal study that the world classical model of globalization is constantly changing (Saxon & Stone, 2017).

In 2018, a research was published, through which the criteria that affect the trade of containers, market demand in general in the shipping sector were investigated. The criteria investigated were the following:

- Industrial 4.0 technologies, where it is a digital transformation of the industry. 8 main technologies are mentioned, the intelligent robots whose response is very fast and flexible to the requests of the customers, with the Internet of Things (IoT) and the analysis of big data as a typical example. These technologies have a significant impact on production and services. 3D printers help reduce transportation requirements, and the direction of transportation turns to shipping raw materials. Through autonomous devices, labor demand is reduced and delivery efficiency is increased. Furthermore, through industrial robots, production efficiency increases and production costs and labor dependency are reduced.

- Digital vulnerability and cyber security threat where digital markets have become more important. Of course, with the digital market, the risks are high and appropriate measures need to be taken (see data breaches and attacks).

- Political imbalances and protectionist policies, with an estimated \$56 billion in extra costs to the global supply chain due to sudden weather changes, forced migration and crime.

- Disruptive innovation, where technology is a threat to existing transport patterns and infrastructure.

- Climate change, with increasing rainfall affecting the integrity of radar and radio equipment on ships, with port drainage systems being inadequate and storage areas being damaged.

- The return of production/localization, which is increasingly dependent on labor, which means that production will return to developed countries and this will briefly affect the global supply chain.

- The change in the business model, where the needs and expectations of customers are increasing, the emerging competitors are a significant threat, and the cost of mitigating risk is increasing, all of this pressures executives to lead to a dynamic business model. Urbanization, where the world is increasingly moving to cities, so it is now considered important to develop production facilities around cities and thus urban logistics is expected to gain more importance.

- Aging, where, mainly in developed countries, the average age is increasing more and more and this makes services more and more important and encourages an increase in the habit of using, instead of purchasing products, an element that has a negative effect on the global trade of goods (BSI , 2016)

Criteria	Description
Global Economic Growth	Overall economic activity drives demand for goods, which in turn affects the volume of maritime shipping.
International Trade Agreements	Trade agreements or tariffs can increase or decrease the flow of goods between countries.
Oil Prices	Fluctuations in oil prices affect both the cost of shipping and the demand for energy-related goods.
Consumer Demand and Spending	Changes in consumer behavior, including trends and purchasing power, impact the demand for shipped goods.
Technological Advancements	Innovations such as automation and digitalization can influence shipping efficiency and costs.
Regulatory Environment	Environmental regulations, safety standards, and trade policies can affect operational costs and demand.
Global Supply Chain Dynamics	Disruptions or shifts in the global supply chain, such as those caused by geopolitical events, influence demand.
Seasonal Variations	Certain times of the year, such as holiday seasons or harvest periods, increase the demand for shipping.
Competitor Activities	The actions of competitors, such as new routes or pricing strategies, can impact demand in specific markets.

Table 3: Criteria Affecting Demand in Maritime Shipping

Source: Rodrigue, J-P. (2020)

The demand for ships is and has been significantly affected by the following factors:

Global and regional economic and political conditions.

Global or local issues related to health, but also outbreaks of diseases or pandemics, with the COVID-19 pandemic as a typical example.

Disturbances and developments in international trade, but also the consequences of changes in exchange rates and perhaps the gap between supply and demand.

Changes in shipping and other transportation patterns, as well as changes in freight distances due to geographic changes in where goods are produced.

Changes in maritime and other transport standards.

Supply and demand for dry bulk products and commodities.

Changes in the production of goods and raw materials.

The distance of dry bulk products necessitates movement by sea.

Developments in international trade.

Supply and demand for products shipped on dry bulk vessels.

Fuel prices for ships.

The possible equipment of the ship with washing machines.

Weather conditions and crop yields.

Armed conflicts, wars, terrorist activities, piracy.

Natural or man-made disasters and global pandemics.

Political, environmental and other regulatory developments, but also changes in macroeconomic policy followed by governments and the implementation of stimulus programs or their withdrawal, the reduction of imports and exports, trade wars, policies implemented by the central bank and contracts or protocols on pollution, limits on CO2 emissions or consumption of carbon-based fuels

The embargo and the strikes.

The technical developments in ship design and construction.

Days of waiting at the ports and the congestion there.

International sanctions or policy changes that encourage or weaken imports or exports from specific countries, embargoes and nationalizations accordingly (Navios Maritime Holdings Inc., 2023, pp. 17).

1.5. Factors Affecting the Supply

The factors that exert a significant influence on the supply of capacity are the following:

Ships out of service by number and those in quarantine or awaiting crew changes, due to sanitary or other restrictions and those ships lying in tank, awaiting or undergoing repairs or not available for charter.

The rate at which older ships are broken up.

Traffic and congestion in ports and canals, but also canal improvements which have a significant effect on ships. Because they occupy them, while they were designed for older canals, or to be closed or obstructed, by accident, war or other cause.

The deliveries numerically of the newly built.

Casualties of vessels.

The weather conditions.

The number of shipyards and the capacity availability of the shipyards.

The economics of slow steaming.

The conversion of many dry cargo ships to tankers.

The existence or non-existence of financing for new ships or to facilitate the sale and purchase transactions of the ships.

The price of steel, fuel and other raw materials that the national or international environment or other regulations and standards, as well as IMO rules, are changing, deeming it is necessary to reduce the use of high-sulphur fuels, to install additional ballast water treatment systems and rules, in order to reduce the emissions of carbon dioxide that may contribute to the reduction of ship capacity, depreciate capacity prematurely or other measures that hinder the profitability, operation or useful lives of ships (Navios Maritime Holdings Inc., 2023, pp. 18).

In general, the provision of shipping services is dependent on the existing size and capacity of the fleet, but also the activity of newbuilding and dismantling. Factors that have a significant impact on fleet supply are:

The cost of building a ship.

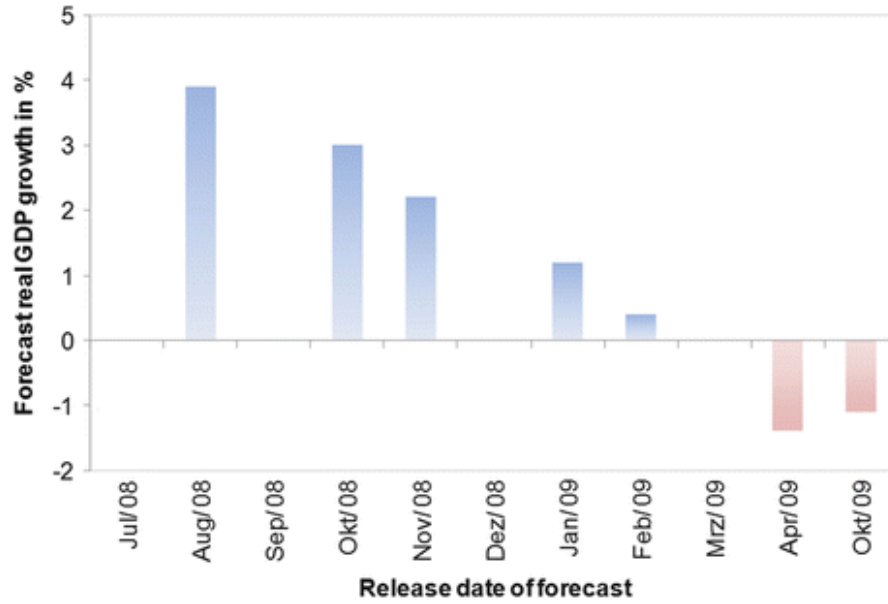
The availability of financing.

The regulatory requirements for environmental standards.

Technological innovations (Stopford, 2009).

Here is a typical table/chart about the Supply and demand side of a shipping market.

Diagram 1. The Supply and demand side of a shipping market



Source: <https://lawexplores.com/demand-and-supply-of-maritime-transport-services-analysis-of-market-cycles/>

1.6. Cyclical Nature of Demand of LPG Transport

The cyclical nature of demand for LPG transportation changes chartering conditions, vessel utilization and vessel value and this is negative for revenues, profitability and financial condition. The cyclical shipping market brought a variety of volatility to profitability, charter rates and vessel values. The timing, direction and extent of changes in the LPG shipping market are unpredictable. With the reduction of charter prices, the reduction of profits will come and above all there will be no favorable re-charter terms, such as those that existed and expired. A reduction in fares correspondingly reduces the revenue, profitability, liquidity, cash flow and financial position of ships.

Clearly, both the development of the world economy and the demand for LPG transport are the ones on which the future growth of the demand for LPG transport ships depends. Future growth in LNG carrier demand will depend on the supply and demand for LPG, as well as the seasonality of demand, which is often the case in the economies of China, India, Japan, Southeast Asia, Middle East and the United States.

The factors on which the demand for LNG carriers depends are the following:

Global or regional economic, political or geopolitical conditions, armed conflicts, such as the recent conflict between Russia and Ukraine, terrorist activities, embargoes, strikes, tariffs and "trade wars", particularly in natural gas usage areas.

Changes in global or general industrial activity especially in the plastics and chemicals industry.

Changes in the cost of oil and natural gas from which the LPG originates.

Changes in the consumption of LPG or natural gas because there are new alternative energy sources or changes in the price of LPG or natural gas relative to other energy sources or other factors that are less attractive to the use of LPG or natural gas or supply and demand for LPG.

Development and position of gas production facilities.

Regional imbalances in gas production and demand.

Changes in crude oil and natural gas production levels and production by OPEC (Organization of the Petroleum Exporting Countries), the United States and other major producers and inventories.

The distance of movement of LPG by sea.

Global natural gas production.

The competition between gas carriers.

Alternative means of transportation, pipelines for LPG, which are currently minimal, connecting production areas and industrial and residential areas of LPG use, or converting existing non-oil natural gas pipelines to oil pipelines in these markets.

Changes in the price of crude oil and changes in the West Texas Intermediate and Brent Crude Oil pricing benchmarks, and changes in trading patterns.

Development and exploitation of alternative fuels and production of unconventional hydrocarbons.

Government regulations and environmental restrictions on offshore natural gas transportation.

Local and international politics, economic and weather conditions.

Economic slowdown due to public health events such as the ongoing COVID-19 pandemic.

Internal and external tax policies.

Accidents, severe weather, natural disasters and other similar incidents related to the natural gas industry.

Lastly, sanctions mainly on Iran, Russia and Venezuela, but also elsewhere (Dorian LPG Ltd., 2023, pp. 48).

1.7. Factors Affecting Operations of Shipping Companies

The main factors that had a significant impact on the results and will continue to have a corresponding impact on the operational results and the financial position in the future are the following:

The days of ownership: The number of ships in the fleet is a major factor that determines revenue. The total costs are increasing as the fleet also increases.

The charter prices: Revenue comes in relation to the charter prices received by the vessels. Vessel charter rates are based primarily on demand and supply of LNG carrier capacity¹ when vessels are chartered, which is influenced by LNG market trends, for example demand and supply for natural gas and mainly LNG and supply of LNG carriers located for gainful employment. The charter prices are dependent on whether the vessels are used with multi-year charter or charter with initial terms of less than two years. As of the date of the annual report, each vessel in the fleet is employed under multi-year charters with staggered expirations, which minimizes the

¹ LNG is Liquefied Natural Gas and reference to the concept and its significance in shipping is discussed in subsection 2.15. below.

potential for cyclical fluctuations in prevailing charter rates when an attempt is made to charter the vessels from scratch after their respective existing charters have expired and when an attempt is made to charter the ships acquired in the future.

The utilization of the fleet: Historically, the fleet has had minimal unscheduled off-lease days. Of course, the increase in annual days off lease limits usage. The effectiveness of ensuring proper occupancy, the ability to reduce off-hire days and the time to position the vessels all have a significant impact on the results of operations. By reducing the use of the fleet, there is also a significant impact on the financial results.

Operating costs: The level of vessel operating costs and crew, insurance and maintenance costs relate to operating costs. The ability to control vessel operating costs has a significant impact on financial results. These costs include wages and other costs, insurance costs, repair and maintenance costs, spare parts and consumable stores, fuel costs, tonnage taxes and other costs. Also, factors other than control, for example developments in the market for insurance premiums and the value of the US dollar compared to the currencies given by the costs and especially the costs of berthing and maintenance of ships may contribute to increase the vessel operating costs.

The timely delivery of vessels that may be acquired in the future.

The ability to maintain stable working relationships with existing charterers and the ability to increase charterers numerically by developing new working relationships.

The performance of the charterer's obligations under the charter agreement.

The effective and efficient technique of managing the ships under the management agreement.

The ability to obtain acceptable financing with a capital commitment financing obligation.

The supply-demand relationship for LNG transportation services.

The ability to obtain and maintain regulatory clearances and meet technical, health, safety and compliance standards in accordance with consumer requirements.

Economic, regulatory, political and governmental conditions affecting LNG shipping and engineering, and the structural changes occurring in the LNG market that have a significant impact on LNG supply that may even provide more flexibility and make other energy sources even more competitive with global LNG usage.

The ability to successfully employ vessels at economically attractive rates and the expiration or termination of charters in a different manner.

The accessibility of the capital necessary to acquire additional ships or to implement a business strategy.

The level of debt, the corresponding interest expenses, debt amortization and the timing of capital installments.

The level of general and administrative expenses, such as salaries and expenses of consultants.

The charterer's right to prematurely terminate the charter under certain conditions.

The efficiency of the counterparties, who are few in number, but also the ability of the charterer to make charter payments.

The level of distribution to other categories of units (Dynagas LNG Partners, 2023, pp. 53).

CHAPTER 2. DEFINITIONS BASED ON CHARTERING

2.1. Charter Types

The options available for chartering any kind of vessels are the following:

Voyage Charter: In a voyage charter, the shipowner contracts to lease the vessel for a particular voyage between specified ports. The shipowner retains responsibility for the vessel's operation, encompassing crew management, fuel costs, and port fees, while the charterer is obligated to pay the freight charges for the cargo being transported. This type of charter is the most prevalent in the shipping industry.

Time Charter: A time charter entails the charterer leasing the vessel for a predetermined duration. Throughout this period, the charterer exercises operational control over the vessel, making decisions regarding its itinerary and the cargo to be transported. Despite this control, the shipowner remains responsible for the vessel's management, which includes crewing and maintenance. The charterer, in turn, covers the costs of fuel and port expenses.

Bareboat Charter (or Demise Charter): In a bareboat or demise charter, the charterer assumes complete control of the vessel, including all responsibilities for crewing, operating, and maintaining it. The shipowner leases the vessel without providing crew or provisions. The charterer pays a fixed rental fee for the vessel and is fully responsible for its operational management and upkeep (Elements of Shipping, by Alan Branch, 2007).

Pool Charter. This is a type of charter, with the ship owner giving a portion of the total revenue generated from the pool towards the expenses of the pool. The distribution of the amount per ship participating in the pool is determined by agreement, which is

based on the award margins of each ship in the pool based on the age, design and other efficiency characteristics of the ship (Performance Shipping Inc., 2023).

The above types of charters will be furthermore examined in the following subsections.

2.2. Bareboat Charter

In a bareboat or demise charter, the charterer assumes significant levels of control and responsibility over the vessel. According to *Elements of Shipping* by Alan Branch, the key aspects are as follows:

Operational Control: The charterer has full operational control of the vessel. They are responsible for deciding the routes, ports of call, and cargo to be transported, essentially operating the ship as if it were their own.

Crewing and Management: The charterer must provide and manage the crew. This includes hiring, training, and paying the crew members, as well as ensuring compliance with safety and regulatory requirements.

Maintenance and Repairs: The charterer is responsible for the vessel's maintenance and repair. This responsibility covers routine maintenance, addressing wear and tear, and performing necessary repairs to keep the ship in good operational condition.

Insurance and Compliance: The charterer is tasked with insuring the vessel and ensuring it meets all legal and regulatory requirements. This includes obtaining hull and machinery insurance and adhering to international and local regulations.

Costs and Expenses: The charterer bears all operational costs, such as fuel, port charges, and other expenses associated with running the vessel. They pay a fixed rate for the lease of the vessel, with all additional costs falling on them.

Risk and Liability: The charterer assumes most risks and liabilities related to the vessel's operation, including those associated with the cargo and any potential damage or legal issues arising during the charter period.

In summary, a bareboat charter grants the charterer extensive control and responsibility, similar to that of a shipowner, while the shipowner's role is limited to providing the vessel without crew or provisions (Elements of Shipping, by Alan Branch, 2007).

2.3. Time Charter

In a time charter, the charterer assumes specific levels of control and responsibility over the vessel. According to *Elements of Shipping* by Alan Branch, the key aspects are as follows:

Operational Control: The charterer has operational control over the vessel for the duration of the charter period. They direct where the vessel should go, the routes to be taken, and the cargo to be transported. However, the charterer does not own the vessel but uses it as if it were their own for the specified period.

Crewing and Management: The shipowner remains responsible for providing and managing the crew. This includes hiring, training, and paying the crew members, as well as ensuring compliance with safety and regulatory requirements. The charterer does not handle crew management but gives operational directions to the crew.

Maintenance and Repairs: The shipowner is responsible for the vessel's maintenance and repairs. This includes routine maintenance and addressing any wear and tear that occurs during the charter period. The charterer is not responsible for the vessel's upkeep beyond normal wear associated with its operational use.

Insurance and Compliance: The shipowner is responsible for insuring the vessel and ensuring it meets all legal and regulatory requirements. The charterer must ensure that the vessel is used in compliance with these regulations but does not need to arrange insurance for the vessel.

Costs and Expenses: The charterer is responsible for operational costs such as fuel, port charges, and other expenses incurred during the charter period. The charterer pays a fixed daily or monthly rate for the use of the vessel, and all operational costs are borne by the charterer.

Risk and Liability: The charterer assumes risks and liabilities related to the operation of the vessel during the charter period. This includes any issues arising from the cargo or voyage. However, the shipowner retains responsibility for risks related to the vessel itself.

In summary, a time charter provides the charterer with substantial control over the vessel's operations for a defined period while leaving the vessel's management, maintenance, and insurance responsibilities to the shipowner (Elements of Shipping, by Alan Branch, 2007).

2.4. Pool Arrangements

In pooling arrangements within ship chartering, several key aspects define the levels of control and responsibility. According to Elements of Shipping by Alan Branch, these arrangements are characterized by the following:

Operational Control: In a pooling arrangement, multiple shipowners or operators combine their vessels into a single pool. The pool's central management, often known as the pool operator or manager, has control over the operational aspects of the vessels. This

includes determining which vessel will be used for specific voyages and coordinating the deployment of the vessels within the pool.

Crewing and Management: Each vessel owner remains responsible for providing and managing the crew for their own vessel. The pool management oversees the scheduling and deployment of the vessels but does not directly manage the crews. Crew management remains under the purview of the individual vessel owners.

Maintenance and Repairs: Responsibility for maintenance and repairs typically remains with the individual vessel owners. Each owner is responsible for the upkeep and repair of their own vessel. The pool management ensures that vessels are maintained in a condition that meets the pool's operational standards but does not handle maintenance directly.

Insurance and Compliance: Each vessel owner is responsible for arranging insurance for their own vessel and ensuring compliance with relevant regulations. The pool management may set standards or requirements for insurance and compliance but does not handle these matters directly for individual vessels.

Costs and Expenses: Operational costs, such as fuel and port charges, are shared according to the terms of the pooling agreement. The pool's revenue and expenses are typically distributed among the participating owners based on the pool's agreed formula. Each owner bears costs related to their own vessel but shares in the collective pool's financial results.

Risk and Liability: Risks and liabilities are shared among the participants in the pool according to the pooling agreement. The pool management handles operational decisions, but individual vessel owners retain liability for their own vessels. Risks related to the performance and operation of each vessel are borne by the respective owner.

In summary, pooling arrangements allow shipowners to consolidate their vessels under a central management system, providing shared operational control while retaining individual responsibilities for vessel management, maintenance, and insurance (Elements of Shipping, by Alan Branch, 2007).

On April 2015, Dorian LPG Ltd. and Phoenix Tankers Pte. Ltd. Started the Helios LPG Pool LLC (or the Helios Pool), a joint venture equally owned by both sides. The company claims that operating its vessels in this pool leads them to more efficient market coverage and utilization. Ships operating in the pool are managed by both Dorian LPG Ltd. and Phoenix. The net pool revenues are being shared between the members of the pool, regardless of the ship that generated them. Although certain technical characteristics weigh more, the net pool revenues are distributed as a variable rate time charter to each participant. The vessels entered in the pool are either chartered on the spot market or undertake any time charter with an original duration less than two years.

2.5. Spot or Voyage Charter

In a voyage charter, the charterer has specific levels of control and responsibility over the vessel, as outlined in Elements of Shipping by Alan Branch. The key aspects are as follows:

Operational Control: Under a voyage charter, the charterer hires the vessel for a specific voyage between designated ports. While the charterer specifies the cargo and the ports of call, the shipowner retains overall operational control of the vessel for the duration of the voyage.

Crewing and Management: The shipowner is responsible for providing and managing the crew. This includes hiring, training, and paying the crew members, as well as ensuring compliance with safety and regulatory requirements. The charterer does not manage the crew but interacts with them regarding cargo operations and voyage instructions.

Maintenance and Repairs: The shipowner remains responsible for the vessel's maintenance and repairs. This includes routine upkeep and addressing any issues that

arise during the voyage. The charterer does not bear the responsibility for maintenance beyond ensuring the vessel is properly loaded and unloaded.

Insurance and Compliance: The shipowner is responsible for insuring the vessel and ensuring it meets all legal and regulatory requirements. The charterer must ensure that the cargo and its handling comply with regulations but does not need to arrange insurance for the vessel.

Costs and Expenses: The charterer pays freight for the cargo transported on the vessel. The shipowner covers operational costs, including fuel, port charges, and other expenses related to the vessel's operation during the voyage. The charterer is responsible for the costs associated with loading and unloading the cargo.

Risk and Liability: The shipowner assumes the risks and liabilities related to the vessel's operation during the voyage. The charterer assumes responsibility for risks associated with the cargo and its transport, including any potential damages or issues arising during the voyage.

In summary, a voyage charter involves the charterer paying for the transportation of cargo on a specific voyage, while the shipowner maintains control over the vessel's operation, management, maintenance, and insurance (Elements of Shipping, by Alan Branch, 2007).

2.6. Off-Hire

As a vessel is off-hire or not offered for service, then a charterer is not required to commit to repay the hire and the company is responsible for all costs, such as the cost of any cargo lost as boil-off during the "off-hire" period of the ship. In the majority of cases, the charters allow for annual compensation for the planning of repairs, in order to

proactively maintain the seaworthiness of the vessel. For vessels that are destined for short-term spot purchase, the advantage of inactivity is used, so that the necessary maintenance is possible. Vessel maintenance closely follows the highest standards, based on the manufacturer's maintenance program (Gaslog Ltd, 2023, pp. 49).

A ship is considered “off-hire” under time charter if a predetermined period of time, other than the period annually allowed, is available when the ship is not intended to be used by the charterer primarily due to its operational deficiencies, the maintenance of a certain speed, inspection purposes, equipment failures, lack of personnel or because the ship's officers or crew neglects to perform their duties, mainly consisting of deviations from its course, delays due to an accident, due to quarantine, ship detentions or other similar problems. Every ship is dry-docked at least once every five years, to be specially inspected, as necessary, by a classifier, deemed off-hire for this period. Finally, the ships of the above-mentioned shipping company are in a scheduled charter status, according to the time charterers (Gaslog Ltd, 2023, pp. 49).

2.7. Charter Hire Rates

Charter rates vary depending on the size categories of the dry bulk vessel. The volume and shape of trades in minimal commodities, usually in bulk, have a significant impact on the demand for larger vessels. Consequently, the rates and vessel values of larger vessels usually have greater volatility. On the other hand, trading more small bulk commodities makes the demand for smaller dry bulk carriers much greater. Correspondingly, both charter rates and vessel values for these vessels fluctuate less (Seanergy Maritime Holdings Corp., 2023, pp. 37).

The charter rates for dry bulk vessels are proportional to the underlying balance of supply and demand of the vessels, although additional factors also affect it. At the same time, the pattern regarding charter rates shows the diversity of charter types and the

diversity of dry bulk ship categories. Of course, precisely because the demand for larger dry bulk vessels is affected by the volume and shape of trade in almost minimal commodities, the charter rates and vessel value of larger vessels have greater volatility compared to the volatility of smaller vessels (Seanergy Maritime Holdings Corp., 2023, pp. 37).

In the time charter market, there is a wide variation in prices, which depends on the duration of the charter and certain factors related to the ship, for example age, speed and fuel consumption. In the spot charter market prices are also affected by the size of the cargo, the goods, port and channel fees and also the area where the ship starts and ends its trip (Seanergy Maritime Holdings Corp., 2023, pp. 37).

Charter rates for dry bulk vessels are in line with the balance between vessel supply and demand, although additional factors play a significant role. Furthermore, charter rates of larger vessels are influenced by volume and patterns in charters of smaller vessels, mainly in major dry bulks. In the time charter market there is a wide variety of rates, which depends on the duration of the charter and certain ship factors, most important being age, speed and fuel consumption (Diana Shipping Inc., 2023, pp 42).

In the voyage charter market, prices are influenced by a variety of factors, such as type of cargo, cargo size, port and channel charges, as well as the area of origin and destination. In general, the maximum cargo size corresponds to a lower price per ton than the smallest cargo size. Routes with expensive ports or canals are priced higher than routes with low port charges that have no transit canals. Voyages with a port of loading in a port area, where cargo is discharged from ships or a discharge port in an area with cargo loading ports have lower prices, because on these voyages there is an increase in the use of vessels, to reduce the unloading section which is involved in the calculation of the return charter to loading area (Diana Shipping Inc., 2023, pp 42).

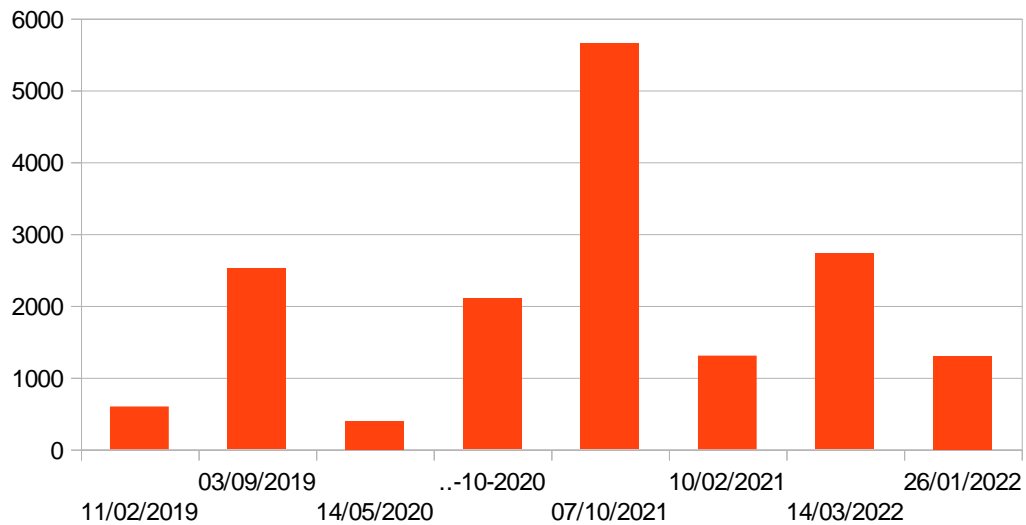
In the dry bulk shipping sector the reference charter prices that may be under monitoring are the freight indices issued by the Baltic Exchange. These reports are based

on true charter hire prices entered by market participants and daily charter rates offered on the Baltic Exchange by major freight brokers. The Baltic Exchange Index is an index with a huge history. The Baltic Capesize Index and the Baltic Handymax Index are more recent, but affect significantly the size of charters given by brokers all around the globe (Diana Shipping Inc, 2023, pp 42).

The Baltic Dry Index or BDI is a daily charter average across 20 time charter and spot charter vessels for Capesize, Panamax, Supramax and Handysize dry bulk carriers starting at 595 for the month February 2019 and reach up to 2518 for September 2021. Also, the BDI was 1303 in February 2021 and reached 5650 in October, while in January 2022 it decreased to 1381. The BDI has since seen a rebound from in January 2022 and on April 19, 2022 it reached 2115 (Diana Shipping Inc, 2023, pp 42).

Over the past 25 years, dry bulk charter rates have been in a cyclical state and changes in vessel supply and demand have pushed rates to peaks and thresholds. More generally, spot/voyage charter prices will have more volatility than time charter prices because there are short-term movements in demand and market sentiment. The BDI is in recession from 2008 to 2018 (Globus Maritime Limited, 2023, pp 52). The following table shows the BDI values for these years.

Diagram 2. BDI Values from 2008 to 2018



Source: (Globus Maritime Limited, 2023, pp 52).

2.8. Time Charter Revenues / TCR and Factors Affecting Charter Hire Rate

A shipping's company revenue mainly derives from the number of ships available in the fleet, from the number of days the ships are in operation and the size from the daily charter fees of the vessels, in turn, in which case they are affected by a variety of factors, which are the following:

- The duration of the charters.
- The decisions to acquire and dispose of vessels.
- The time it takes to position the vessels.
- The time the vessels are in dock for repairs.

- The cost of maintenance and upgrades of the vessel.
- The age of the vessels, the condition they are in and their specifications.
- The level of supply and demand in the dry bulk shipping sector.
- Other factors influencing spot market charter rates for dry bulk vessels (Diana Shipping Inc, 2023, pp 18).

With the hire of the vessels in time charter, the prices in the future in the particular market may vary than the existing ones during the entrance of the vessels in time charter. Time charter agreements can put the counterparty at risk. Also, in conditions of market recession, charterers may try to renegotiate the terms of the charters or distance themselves from their duties arising from the contract. In the event that the counterparty is not faithful to their duties according to the agreement made, then damages arise that negatively affect the business activity, financial condition, work efficiency and cash flows (Diana Shipping Inc., 2023, pp 18).

From the previous information derives that the vessels that are time chartered for a certain period of time produce more predictable cash flows during this period, but also limit the profit margins of vessels operating in the spot charter market within possibly favorable market conditions. Vessels in the spot charter market make profits with little predictability, but they allow their charterers to increase those profits during periods of improved fares, although owners may be at risk because charter rates will fall, which may affect their financial efficiency (Diana Shipping Inc., 2023, pp 18).

Also, the time charter equivalent/TCE is the net revenue over the expenses of the trip at the time, if divided by how many days the company operates at that time. Voyage costs can be port charges, warehouse charges, channel charges and other supplies (Seanergy Maritime Holdings Corp., 2023, pp. 60).

The following table reflects such factors for the periods indicated:

	As of and for the Year Ended December 31,		
	2021	2020	2020
Fleet Data:			
Average number of vessels (1)	36.6	40.8	45.0
Number of vessels at year-end	33.0	40.0	42.0
Weighted average age of vessels at year-end (in years)	10.4	10.2	9.5
Ownership days (2)	13,359	14,931	16,442
Available days (3)	13,239	14,318	16,192
Operating days (4)	13,116	14,020	15,971
Fleet utilization (5)	99.1 %	97.9 %	98.6 %
Average Daily Results:			
Time charter equivalent (TCE) rate (6)	\$ 15,759	\$ 10,910	\$ 12,796
Daily vessel operating expenses (7)	5,596	5,750	5,510

The following table reflects the calculation of our TCE rates for the periods presented:

	Year Ended December 31,		
	2021	2020	2020
[in thousands of U.S. dollars, except for TCE rates, which are expressed in U.S. dollars, and available days]			
Time charter revenues	\$ 214,203	\$ 169,733	\$ 220,728
Less: voyage expenses	(5,570)	(13,525)	(13,542)
Time charter equivalent revenues	<u>\$ 208,633</u>	<u>\$ 156,208</u>	<u>\$ 207,186</u>
Available days	13,239	14,318	16,192
Time charter equivalent (TCE) rate	\$ 15,759	\$ 10,910	\$ 12,796

Figure 1. Time charter details

Πηγή: <https://www.dianashippinginc.com/wp-content/uploads/2022/09/diana-shipping-inc.-annual-report-2021.pdf>

2.9. Net Pool Revenues-Related Party

Already on April 1, 2015, the operation of the pool for the Dorian company began. The net income from the joint venture, the party connected to each ship of the group, is estimated according to the profit sharing agreement, which is determined according to the pooling agreement. Specifically, the pool manager proceeds to estimate

the pool's net revenue, using gross revenue, deducting the travel expenses of each vessel in the pool and again deducting the general and administrative expenses of the pool, while distributing the net revenue from the pool as time charter hires to anyone who participates in accordance based on the following:

The points in the pool, where the characteristics of the ship are taken into account, for example the ability to carry cargo, fuel consumption and speed

The number of days the ship was in the pool.

The recognition of net pool revenue-related party each month is done, whilst the vessel participates in the pool, at which point a reliable estimation of the percentage of net revenue from the pool is made monthly. Finally, the assessment of group income concerns income from operating leases (Dorian LPG Ltd., 2023, pp. 128).

2.10. Purchasing a Ship with Charter

With the acquisition of a ship that is on time charter, the amount of the component is amortized due to the favorable or unfavorable terms regarding the terms of the purchase and is included in the cost of the ship in question, for the remaining period of the lease (Globus Maritime Limited, 2023, pp 74).

Therefore, once the ship is purchased, the company undertakes or renegotiates a time charter, taking into account the stages, before the ship is ready to start operating and these stages are the following:

The approval and consent of the charterer for the shipping company as the new owner is taken into account.

The consent of the charterer for a new technical manager is taken into account.

Sometimes the charterer's consent to a new flag for the vessel is considered.

The arrangement for a new crew for the vessel and, when the vessel is on charter, sometimes the charterer must give approval for the crew.

Replacement of all leased equipment on board such as gas cylinders and communication equipment.

Negotiation and conclusion of new insurance contracts for the vessel through insurance brokers of the shipping company.

Registration of the ship in a flag state and the execution of similar inspections, in order to obtain new marketing certificates from the flag state.

Implementation of a new scheduled maintenance program for the vessel.

Ensuring that the new technical manager obtains new certificates of compliance with the flag state's ship safety and security regulations (Globus Maritime Limited, 2023, pp 74).

CHAPTER 3. CHARTERING STRATEGIES OF SHIPPING COMPANIES - IMPACTS OF THE COVID-19 PANDEMIC ON CHARTERING

3.1. The Chartering Strategy of DRY BULK Companies. Methods of Chartering

3.1.1. DANAOS Company



DANAOS is a Greek dry bulk shipping company. It has a long history of operating and investing in the shipping industry. It operates one of the world's largest independent shipping fleets of modern large container vessels, with a corresponding reputation as a leading provider of such services, a reputation built on its dedication, innovation, safety, efficiency and environmental responsibility. It has 71 vessels and cooperates with 43 charterers. Its ships are built from 1997-2015 (year built), with the majority of them (18/71 or approximately 25% of the ships) having been built in the year 2010-2011, specifically 9 ships in 2010 and 9 ships in 2011. The capacity of the ships is from 2,200-13,100 (capacity/TEU), with the majority (8/71 or 11%) belonging to the 2,200 capacity category (Danaos Corporation, 2023).

According to DANAOS, the ways to terminate a charterer or lose the benefits from a time charter are as follows:

1. The charterer's failure to pay the charter to the company: When a charterer fails to pay the charter due to financial difficulties, it can have serious consequences for the shipping company. This failure might result in a breach of contract, allowing the company to repossess the vessel or seek damages. The financial instability of the charterer poses significant risks to the company's revenue and cash flow, potentially jeopardizing its operations. Legally, the company may have the right to terminate the charter party agreement, reclaim the vessel, and pursue any outstanding payments or damages through legal action. To mitigate such risks, the shipping company might require advance payments, security deposits, or financial guarantees from the charterer. Regular financial assessments and early engagement with the charterer can help identify and address potential issues before they escalate into defaults. In the case of a dispute with the company, disagreements over terms, such as the vessel's condition or performance standards, might lead to a delay in payments and potentially costly legal resolutions through arbitration or litigation. Clear contract terms, a well-defined dispute resolution mechanism, and effective communication between the parties are crucial in preventing and resolving such disputes promptly. Persistent defaults, whether due to financial issues or disputes, can strain the commercial relationship, leading to the termination of the charter and possible legal action for breach of contract. Including penalty clauses for late payments in the contract can serve as a deterrent against defaults, ensuring that the charterer fulfills their payment obligations on time.

2. The exercise of certain limited Rights of the charterer to terminate his charter: The charter party agreement often outlines specific circumstances under which the charterer may have the right to terminate the contract. These situations could include issues like prolonged off-hire periods, vessel performance problems, or other breaches by the shipowner. The exercise of these rights can have significant implications for the shipping company, potentially resulting in a loss of expected income and the need to find a new charterer under possibly less favorable terms. Legally, the shipping company must carefully review the charter party to ensure that

the termination clauses are fair and balanced, protecting its interests while still providing reasonable rights to the charterer. To mitigate the risk of unexpected terminations, it is essential to draft the charter party with precise language, clearly defining the circumstances under which termination is permissible. Additionally, the shipping company must diligently meet all its contractual obligations to avoid giving the charterer any valid grounds for termination. By doing so, the company can minimize the likelihood of losing a charter due to issues within its control.

3. Not taking delivery of newbuild container ships where a contract may be concluded at an agreed time: If a charterer refuses or fails to take delivery of a newbuild vessel, it can create significant challenges for the shipowner, leaving them with a vessel that is not generating revenue as expected. This situation can lead to financial losses, particularly if the shipowner has financial obligations tied to the delivery of the vessel, such as loans or other contracts. Legally, the shipowner may have the right to sue the charterer for breach of contract and seek damages, depending on the specific terms of the newbuild contract and the reasons for the charterer's refusal. To mitigate the impact of such situations, the shipowner might include penalty clauses in the contract for failure to take delivery and require financial guarantees from the charterer. Additionally, having contingency plans in place, such as alternative chartering options, can help the shipowner minimize potential financial losses. By preparing for such eventualities, the shipowner can protect their interests and ensure that the newbuild vessel can still be put to profitable use, even if the original charterer backs out.

4. The termination of the charterer's charter because the ship cannot meet certain standards: When a vessel fails to meet guaranteed performance standards, such as speed and fuel consumption, it can lead to higher operational costs for the charterer, affecting their profitability and schedules. If the shipowner cannot remedy the situation, the charterer may choose to terminate the charter, leading to significant financial and operational consequences for the shipowner. Legally, the charterer may have the right to terminate the contract under the performance guarantee clause, and

the shipowner could be liable for damages if the vessel's failure results in losses for the charterer. The shipowner's inability or unwillingness to address the issue could exacerbate the situation, potentially damaging their reputation and future business prospects. To mitigate these risks, the shipowner should ensure that the vessel meets all performance specifications before delivery, conducting thorough tests and maintenance as needed. If issues arise, promptly addressing them or negotiating with the charterer for alternative solutions could prevent termination and preserve the business relationship. Including an agreed-upon process for resolving performance issues in the contract can also help manage expectations and provide a clear path forward in case of discrepancies, thereby protecting both parties' interests. (Danaos Corporation, 2023, pp 8).

The awarding of container transport charters is done according to various factors regarding the ship, such as the following:

1. Relationships with the Shipping Industry and reputation in relation to customer service and safety: The awarding of container transport charters heavily depends on a company's relationships within the shipping industry and its reputation for customer service and safety. Strong industry connections can facilitate better deals and more opportunities, while a solid reputation for safety and customer satisfaction makes a company a preferred partner. Companies that consistently prioritize these aspects are likely to secure more charters.

2. Experience in container transport and the quality of ship operation: A company's experience in container transport and the operational quality of its ships are critical factors. Experienced operators with a proven track record are seen as reliable and capable of handling complex logistics. The quality of ship operation, including maintenance and efficiency, reassures charterers that their goods will be transported safely and on time.

3. The economic efficiency of the ship: The economic efficiency of a ship, including fuel consumption, maintenance costs, and operational efficiency, is a key consideration. Charterers prefer ships that are cost-effective to operate, as this directly impacts their profitability. A ship that can transport more goods at a lower cost per unit is highly attractive in a competitive market.

4. The quality and experience of the seafaring crew: The quality and experience of the seafaring crew are vital for ensuring safe and efficient operations. Experienced crews are better equipped to handle challenges at sea, reducing the risk of delays or accidents. A well-trained crew also ensures that the ship adheres to international standards and regulations, which is a significant consideration for charterers.

5. The ability to finance container ships at competitive rates and financial stability: The financial stability of a company and its ability to finance container ships at competitive rates are crucial for securing charters. Charterers need assurance that the company can sustain operations and invest in necessary upgrades or new ships. Financially stable companies with access to competitive financing options are more likely to secure favorable charters.

6. Relationships with shipyards and the possibility to acquire suitable berths: Good relationships with shipyards and the ability to acquire suitable berths for shipbuilding or maintenance are essential. These relationships can lead to favorable terms, priority access, and timely delivery of new vessels. Charterers value companies that can secure high-quality berths, ensuring that their ships are built and maintained to high standards.

7. Experience in managing the construction and ability to ensure timely delivery of new vessels: Experience in managing ship construction and ensuring the timely delivery of new vessels based on customer specifications is

a significant factor. Charterers prefer companies that have demonstrated success in overseeing construction projects, as this minimizes the risk of delays and ensures that new ships meet the required standards.

8. Willingness to accept operational risks under the charter: A company's willingness to accept operational risks under the charter, such as permitting termination for force majeure events, is an important consideration. Charterers value flexibility and a company's ability to adapt to unforeseen circumstances. Being open to accepting certain risks can make a company more attractive to potential charterers.

9. Competitiveness of the offer at the level of Total Price: The overall competitiveness of the price offer is often the decisive factor in awarding charters. While other factors like experience and reputation are crucial, the total cost must be competitive in the market. Charterers are looking for the best value for their investment, balancing quality and cost-effectiveness. (Danaos Corporation, 2023, pp 27).

As Danaos states, they may face difficulties in concluding multi-year fixed-price time charters if an active future or direct container shipping market develops. One of the company's key strategies, therefore, is to enter into multi-year fixed price container time charters in areas with dynamic charter rates, even though in areas with lower charter costs one would expect the company to focus on shorter charter terms, especially smaller ships. While there are more ships available for the spot or short-term market, the company may face difficulties in concluding additional multi-year fixed-term charters for container ships because the supply of container ships is increased and prices in the spot market may be lower; so that cash flows suffer future volatility. A more active or profitable spot market may make it a basic requirement to charter according to changing market rates, as opposed to contracts based on a fixed rate, which would encourage a reduction in cash flows and net income at a time when shipping of containers is limited or funds are not

sufficient to cover the cost of financing for container ships (Danaos Corporation, 2023, pp 28).

3.1.2. DIANA Company



Diana Shipping Inc is a shipping company that operates Dry Bulk vessels. It is a global shipping company, specializing in the ownership and chartering of bareboat dry bulk vessels. This company, therefore, has 36 vessels. It works with 23 different charterers. Its ships are built from 2005 to 2022, with the majority of them (n=7) being built in 2013 (year of built). The capacity of the company's ships is from 75,403 – 208,021, with the majority of ships (n=11) having a capacity of approximately 175,000-180,000 (Diana Shipping Inc., 2023).

According to the shipping company Diana, the factors that have a significant impact on the capacity of the dry bulk ship market are the following:

1. Number of orders and newbuild deliveries, as well as slippage in deliveries:

The number of new orders and the delivery rate of newbuild vessels significantly impact the dry bulk ship market's capacity. When many new ships enter the market, it increases overall capacity, potentially leading to lower

freight rates. However, slippage in deliveries—delays in the construction and delivery of new ships—can restrict supply, which may help maintain or increase freight rates. The balance between orders and deliveries is crucial for market stability.

2. The number of shipyards and their ability to deliver vessels: The number of active shipyards and their ability to deliver vessels on time affects the market's supply side. A greater number of shipyards with high productivity can quickly increase the market's capacity by delivering more vessels. Conversely, if shipyards face issues such as financial problems, labor shortages, or material supply disruptions, the pace of deliveries may slow down, restricting market capacity and potentially leading to higher freight rates.

3. Harbor and canal congestion: Congestion at harbors and canals can significantly reduce the effective capacity of the dry bulk market. When vessels are delayed due to congestion, it takes longer for ships to complete voyages, effectively reducing the number of available ships. This reduction in operational efficiency can lead to higher freight rates as fewer ships are available to meet demand. Chronic congestion issues can also deter new investments in shipping, impacting long-term market dynamics.

4. Whether older vessels have been dismantled: The dismantling of older vessels plays a crucial role in managing market capacity. When older, less efficient ships are taken out of service and dismantled, it helps balance the market by reducing excess capacity. This can support higher freight rates by preventing an oversupply of vessels. However, if dismantling rates are low, the market may become saturated with too many operational ships, leading to lower rates and increased competition among shipowners.

5. The vessel's operating speed: The operating speed of vessels influences the market's capacity by affecting how quickly ships can complete voyages and

return to the market. Faster vessels can transport goods more quickly, effectively increasing market capacity. Conversely, if ships reduce speed to save on fuel costs or for environmental reasons, it decreases the overall capacity as each ship completes fewer voyages over a given period. This can tighten supply and potentially raise freight rates.

6. Casualties of vessels due to accidents or other factors: Vessel casualties, such as those caused by accidents, weather events, or other unforeseen incidents, can temporarily or permanently reduce market capacity. When ships are damaged or lost, they are removed from the active fleet, reducing the number of available vessels. This reduction in supply can lead to higher freight rates, especially if the casualties involve larger or more modern ships that are harder to replace quickly.

7. Number of inoperable vessels and those laid-up, dry-docked, awaiting repair, or unavailable for charter: The number of inoperable vessels—those laid-up, dry-docked, awaiting repair, or otherwise unavailable—affects the market's effective capacity. When many ships are out of operation, it reduces the supply of vessels available for charter, potentially leading to tighter market conditions and higher rates. The availability of these vessels can fluctuate based on maintenance schedules, repair needs, and broader economic conditions, making it a key factor in market capacity.

8. Sanctions based on Iran, Venezuela, and the sanctions regime due to the Ukraine-Russia War: Sanctions imposed on countries like Iran, Venezuela, and those related to the Ukraine-Russia conflict have a significant impact on the dry bulk ship market. These sanctions can limit the trade routes available to ships, reduce the number of cargoes that can be legally transported, and create uncertainty in the market. As a result, ships that might otherwise be employed in certain trades may find themselves idle or forced to seek alternative, possibly less profitable, routes. This can reduce overall market capacity and

disrupt normal trading patterns, influencing freight rates and market dynamics.
(Diana Shipping Inc., 2023, pp. 9.)

Again according to DIANA's statements, there is an improvement in the dry bulk charter market, although it is on the other hand below the rates recorded in 2008, and this has a significant impact on revenue, profitability and whether can the company comply with the loan agreements. The downturn experienced in the dry bulk charter market through early 2021 was sudden and dramatic. This market was the company's source of revenue and had a significant impact on the dry bulk industry and the company's business (Diana Shipping Inc., 2023, pp. 9.)

The Baltic Dry Index or BDI which is a daily charter average on main dry bulk routes and is published by the Baltic Exchange Limited is a key point to monitor the movements of the dry bulk vessel charter market and the efficiency of the shipping market bulk. The BDI decline reached 94% in 2008 with a high of 11,793 in May 2008 and a low of 663 in December 2008 and since then there has been volatility, with a record low of 290 in February 2016. In 2021, the BDI had a low of 1.333 in February and a high of 5.526 in October, before falling again in January 2022 to 1.381. The BDI has since rebounded from January 2022 levels and on April 19, 2022 reached 2,115 (Diana Shipping Inc., 2023, pp. 9.).

There can be no assurance that the dry bulk charter market will not experience further decline. The decline and volatility in freight rates is a result of a variety of factors, such as the lack of trade finance to buy seaborne freight which has resulted in reduced cargo shipments and an oversupply of iron ore in China. This encouraged iron ore prices to fall and inventories at Chinese ports to rise. The decline and volatility of charter rates in the dry bulk market had a significant impact on the value of the company's dry bulk vessels as well, as a continuation of the trends prevailing in the company's dry bulk rates and charter profits, whereupon the company's charter profits were also affected accordingly cash flows, liquidity and whether the company could now comply with the loan agreement (Diana Shipping Inc., 2023, pp. 9.)

Diana Shipping Inc.'s chartering strategy revolves around balancing risk management with strategic opportunities in the volatile dry bulk shipping market. The company primarily utilizes time charters, securing vessels on long-term contracts to ensure stable and predictable revenue streams. This approach shields them from market fluctuations while still allowing some exposure to the spot market, where they can capitalize on favorable freight rates. By maintaining a diverse fleet of vessels, including Capesize, Panamax, and Kamsarmax types, Diana Shipping can meet various market demands and optimize its operational flexibility. The company is also strategic in its timing of charter agreements, locking in long-term contracts during periods of high freight rates and opting for shorter terms or spot market exposure when rates are lower. This balanced contract mix helps Diana Shipping maximize profitability while minimizing risks.

In addition to its chartering strategy, Diana Shipping emphasizes operational efficiency and cost management, investing in modern, fuel-efficient vessels and adhering to stringent environmental regulations. The company carefully selects its chartering counterparts to minimize counterparty risk and maintains moderate leverage to balance growth with financial stability. This prudent financial strategy, along with a focus on operational excellence, positions Diana Shipping to navigate the cyclical nature of the shipping industry effectively while delivering value to shareholders through thoughtful capital allocation and dividend policies. (Diana Shipping Inc., 2023, pp. 19).

3.1.3. GLOBUS Company



Globus Maritime Limited is a dry bulk shipping company offering worldwide sea transportation services. It was established on July 26, 2006, in New Jersey, with the aim of uniting the ship-owners and navigational interests of the company's founders. Its offices are located in Glyfada, Attica. It currently has six modern dry bulk vessels with a weighted average age of almost 11 years and a total carrying capacity of 453,745 DWT. From 2007 to 2018 when its ships were built, it had 9 vessels. Finally, the capacity of its ships is from 53,627-82,027, with the majority of its ships (n=4) having a capacity of almost 80-82,000 (Globus Maritime Limited, 2023).

The shipping company GLOBUS relies on short-term or spot charters during periods of volatility in the shipping markets. It currently charters nine out of a total of nine vessels it has on the short-term charter market. The market for short-term or spot charters is considered very competitive, with their prices fluctuating widely, according to existing charters and the supply and demand for marine shipping capacity. Although the focus of the company's interest in the short-term or spot market can give excellent benefit, if there is an improvement in the conditions of the sector, short-term or spot charters should be procured with absolute consistency. On the other hand, such a dependency can reduce the market rates for short-term charters or direct charters and in periods when vessels are not chartered (Globus Maritime Limited, 2023, pp. 14).

The prices of the short-term or spot charter market are volatile in terms of fluctuation and the longer time charters give income at certain prices determined in advance for longer periods of time. Also, no one can guarantee that it will be possible for the

company to maintain full employment of the vessels in the specific short-term markets or that in the future the short-term or spot prices will have the characteristic of adequacy to the extent that profitability from the operation of ships (Globus Maritime Limited, 2023, pp. 14).

Given the situation of short-term or spot charter prices during the period of 2021 to 2023, there was no possibility of a profitable operation. The reduction in charter rates had a significant impact on the value of ships, and thus on profitability, cash flows and the ability to pay dividends. No one could, at that time, guarantee that the in future available short-term or spot charters will enable the vessels to be operated profitably. At the same time, the company could make even more economical decisions to place one or more ships. Therefore, if the ships remained idle, the costs of staying had to be paid, while there would be no rental profit from the ships (Globus Maritime Limited, 2023, pp. 14).

The fact that there were seasonal fluctuations in the demand of the sector also had a significant effect. The company's vessels were managed in markets that have historically experienced seasonal fluctuations in demand and charter prices. This seasonality brings volatility from quarter to quarter in the efficiency of operations and could potentially affect the amount of dividends paid to the company's shareholders. The dry bulk marine services market is usually even stronger in the autumn and winter months in anticipation of increased consumption of coal and other raw materials. Also, the weather conditions that were not foreseen in these months encourage the disruption of the planning of the ships and the supplies of some goods. This seasonality, therefore, brings negative consequences operationally, at the financial level and the effectiveness of the company's operations (Globus Maritime Limited, 2023, pp. 18).

Regarding the employment of ships, the following applies. In the long term, the main objective of the company is to maximize the value of the fleet by using vessels combined with any type of charter contract, within the existing short-term or spot market, bareboat and time charters. It is therefore considered that this is a strategy that gives stability to cash flows, will reduce the company's exposure to market downturns and will give high

rates using the charter market, but also many benefits from increasing short-term or spot market rates. However, the short-term strategy at any given time is owned and influenced by some factors, such as chartering possibilities. Thus, for example, an attempt can be made to use a larger part of the fleet in the short-term or outright purchase or longer time charter, as long as there is faith in the company's interest. In general, the company in question prefers spot or short-term contracts to ensure flexibility, speed of movement to conquer the rise in the market and the possibility of eligibility in the expected stability of cash flows, even though there are costs from the non-rising prices of the transferred cargo (Globus Maritime Limited, 2023, pp. 48).

Furthermore, by combining short-term or spot charters with long-term ones, changes arise. As vessels are not in the short-term or immediate market, generally the aim is to stagger the charter expiry dates to reduce potential volatility in the shipping cycle as vessels move towards chartering. At the same time, there is continuous observation of the condition of the dry bulk shipping industry and based on the demand of the market, an adjustment is made to the number of ships in charters and the charter period for the ships based on market conditions (Globus Maritime Limited, 2023, pp. 48).

Continuing the question of the employment of the ships of this company, based on form 20-F, the use of the ships until 2023 was as follows:

- M/V River Globe – on a time charter that started in April 2022 and was expected to expire at the end of April 2022, at a gross rate of \$24,000 per day.

- M/V Sky Globe – on a time charter that started in April 2022 and was due to expire in May 2022, at a gross rate of \$30,000 per day.

- M/V Star Globe – on a time charter that started in March 2022 and was expected to end in April 2022, at a gross rate of \$34,000 per day.

- M/V Moon Globe – on a time charter that commenced in April 2022 and was expected to expire in June 2022, at a gross rate of \$22,250 per day, and with a bonus payment of \$1,225,000 at the start of the charter.

- M/V Sun Globe – on a time charter that started in January 2022 and was expected to end in June 2022, at a gross rate of \$23,500 per day.

- M/V Galaxy Globe – on a time charter that started in January 2022 and was expected to expire in October 2022, with a gross rate of \$104.5 of the average BPI- 82 5TC INDEX as reported by the Baltic Exchange per day.

- M/V Diamond Globe – on a time charter that started in February 2022 and was expected to end in May 2022, at a gross rate of \$23,500 per day.

- M/V Power Globe – on a time charter that started in March 2022 and was expected to end in May 2022, at a gross rate of \$24,000 per day.

- M/V Orion Globe – on a time charter that started in March 2022 and was expected to end in November 2022, with a gross rate of \$100% of P5TC/BPI82 TC INDEX per day average (Globus Maritime Limited, 2023, pp. 76).

3.1.4. NAVIOS Company



Navios Maritime Holdings Inc is a multinational, vertically integrated maritime transport and logistics company. It undertakes the transportation and transshipment of dry bulk cargo such as iron ore, coal and grain. It was founded in 1954, by US Steel, with the aim of transporting iron ore to the US and Europe. Since then, it has diversified geographically and expanded operationally, by which time it had come to control a total of 49 ships, which have a total weight of almost 5,000,000 tons. Today it has 41 vessels, which were built from 2005-2020, with the majority having been built in 2009 (n=6) and 2015 (n=5). Finally, the capacity of the ships is from 34,718 – 181,415, with the majority (n=14) having a capacity of 80-90,000, but also a large number of ships (n= 12) having a capacity of 170-180,000 (Navios Inc Maritime, 2023).

According to the shipping company NAVIOS, they have been using ships owned by the company and thus there will be a case of exposure to the risk of damage based on the short-term reductions in shipping rates. The company occasionally uses its ships for shorter, regional voyages within specific areas rather than on long-haul international routes. The spot charter market is considered very competitive and the rates in this market are subject to volatility, while time charter contracts provide income at certain pre-determined prices for long periods. No assurance can be given that vessels fully employed in these short-term markets will continue to be maintained or that future spot prices will distinguish the adequacy and profitability of operating the vessels. The possibility that the interest rates from the spot market will be reduced or that it will not be possible to use the ships in the context of the direct purchase, this may mean that the additional income from the direct charter will decrease and there will be a negative trend in the efficiency of the company's operations, naturally affecting its profitability and cash flows. Also, with this eventuality, there will be a reduction in the ability to offset debt service and dividends (Navios Maritime Holdings Inc., 2023, pp. 23).

At the same time, if spot market prices or short-term time charter prices fall below the equivalent time charter prices that some charterers are obliged to pay under current charters, then charterers may move towards defaulting on that charter or attempt its renegotiation. Also, if the obligations are not repaid by the charterers, an attempt should be made to charter the company's ships from the beginning at lower prices and this will be negative for compliance with the loan agreements and profitability from the operation of the ships. In fact, in the event of non-compliance with the loan agreements and the choice by the lenders to accelerate the debt and foreclose their burdens, the request to sell the ships of the fleet may arise and the possibility of carrying out the activities of the company's ships may be limited (Navios Maritime Holdings Inc., 2023, pp. 23).

According to the company, Navios Logistics tends to employ its fleet in the spot charter market and thus put itself in a position of risk of causing losses according to short-term reductions in freight rates. Navios Logistics employs some of its fleet on the spot market. The spot charter market may be competitive and is characterized by freight rates in the market with high volatility and difficulty in determining timing and fluctuations in spot prices. Long-term contracts provide a steady percentage of profits over extended periods, whereas the spot market's cyclical nature is less predictable. Navios Logistics anticipates increased volatility due to the evolving dynamics of South American markets. Navios Logistics also does not guarantee success in maintaining its fully employed fleet in the relevant short-term markets or at spot rates in the future with sufficient and profitable operation of the fleet, because spot charter rates may decline below the operating costs of the vessels. A fundamental halving of spot market rates or an inability to fully employ the fleet by exploiting the spot market would mean that the additional revenue it receives from spot charters would be reduced, correspondingly adversely affecting the company's operations and operating cash flows (Navios Maritime Holdings Inc., 2023, pp. 56).

The company's overall objective is to balance vessel ownership and a long-term charter fleet. Navios Holdings maintains control of a fleet with an average age of approximately 9.3 years, fully delivered fleet and 3.9 million dwt capacity, excluding

Navios Logistics. This control is carried out by combining the ownership of the ships and the long-term chartered ships. Navios Holdings' ability to charter vessels, stemming from its long-standing relationships with a variety of shipyards and trading houses, enables it to retain control of additional shipping capacity without the capital costs required to acquire vessels. Furthermore, there are options to purchase nine charter vessels and five vessel purchase options that are based on the bareboat contracts, which enables Navios to participate and determine the time it deems commercially appropriate to own or charter the vessels. Navios Holdings also aims to monitor developments in the sales market to maintain the balance between ownership and long-term chartered vessels (Navios Maritime Holdings Inc., 2023, pp. 69).

3.1.5. SAFE BULKERS Company



The shipping company Safe Bulkers Inc is an international shipping company providing dry bulk sea transport services. It undertakes the transportation of grain, coal and iron ore worldwide. It has 42 vessels with a total transport capacity of 4.2 million DWT. The average age of its fleet is 10.4 years, with 20% of these ships built since 2015 and over 50% (n = 25 ships) built since 2010-2018. Finally, the capacity of ships is from 75,000-181,400, with the majority of ships (n = 26) having a capacity of 8-10,000 (Safe Bulker Inc., 2023).

As far as the chartering of Safe Bulkers Inc.'s fleet is concerned, in the spot charter market some vessels are chartered for up to three months or longer periods of time. The spot market is considered competitive, with charter contracts of longer duration and income at specific prices for a longer period. Upon completion of a charter contract, the company is exposed to the spot market and its changes, in which case time charters cannot be secured profitably, due to insufficient charter prices or declining charter rates, thereby adversely affecting both cash flow and asset value plus the ability to pay dividends. Also, ships may not be fully occupied. The company also reports that it is difficult to enter into multi-year charters with a fixed price for the vessels, so cash flows are volatile in time charter as well. As opposed to fixed rates, it is required to occupy the company's vessels into a variable rate charter or a charter linked to the Baltic Panamax Index. Thus, reduced dry bulk freight rates in a period of charter replacement is negative for profitability, cash flow and the ability to comply with financial loan terms and credit facilities (Safe Bulker Inc., 2023, pp. 69).

The ships are managed in the context of regional fluctuations in demand. Seasonality refers to a variety of factors and can encourage quarter-to-quarter volatility in a company's operating results, affecting the amount of dividend paid to shareholders (Safe Bulker Inc., 2023, pp. 29). Also not discounting future cash flows, this can be predictive of future charter rates. Future charter rates estimated in the analysis of undiscounted future cash flows that cannot be controlled due to management complexity allow the effects on undiscounted cash flows to be estimated (Safe Bulker Inc., 2023, pp. 50).

3.1.6. SEANERGY MARITIME Company



The Seanergy Maritime Holdings Corp. is the only Capesize² shipping company listed on the US capital markets. Its operational fleet measures 17 vessels, 1 Newcastlemax³ and 16 Capesize vessels. The average age of the ships is almost 13 years and with a total cargo capacity of almost 3,054,820 DWT. Its ships are built from 2004-2013, with the majority (n=8) being built in 2010. Their capacity is from 170,018-181,709 DWT. Finally, it cooperates with 9 different charterers and mainly with HYUNDAI (n=4), with almost all (n=7) charters being TC FIXED LINKED type (Seanergy Maritime Holdings Corp., 2023).

In the given period, Seanergy depended on charters based on an index or fixed rate and a bit later part of the fleet was employed in the spot market additionally. Any reduction in rates or charter rates in the future could potentially have a negative impact on the company's profitability (Seanergy Maritime Holdings Corp., 2023, pp. 10).

Up until 2023, the company had 15 vessels employed on time charter, in addition to other vessels, with daily rates linked to the Baltic Capesize Index or BCI. The other two were employed on time charter with fixed prices. Although none of the company's vessels at that time operated in the spot market, the company was considering utilizing

2 Capesize ships are the largest dry bulk carriers of spherical dimensions, that is, their capacity reaches 170,000 DWT dead weight, it is 290 meters long, with a beam of 45 meters, a height that reaches 18 meters below the sea surface . They are so large that it is difficult to cross the Suez Canal or the Panama Canal (Clark, 2014).

3 These are durable vessels, extremely modern, preferred because of their optimized efficiency and fuel economy. They are unique dry bulk carriers, of a unique design, that allow the use of ammonia as fuel, without loss of cargo capacity. It also has a wide range of energy saving devices (<https://cmb.tech/business-units/marine/newcastlemax-bulk-carriers>).

additional vessels that may be acquired in the spot market or on indexed or fixed price time charters (Seanergy Maritime Holdings Corp., 2023, pp .10).

Although the number of vessels in the fleet that participate in the spot charter market or have index-linked or fixed-price charters varies from time to time, it is expected that part of the company's fleet will be affected by the spot / BCI market. A consequence of this is that financial performance is affected by conditions in the dry bulk spot / BCI market and only vessels under fixed price time charter operation give stable income (Seanergy Maritime Holdings Corp., 2023, pp. 10).

Continuing with the employment of Seanergy's fleet, the following applies. As of the date of the report given by the company, fifteen of the vessels were engaged on long-term charters, which were valued according to the index linked to the average T/C of 5 voyages of BCI. The other two ships were busy with fixed fare time charters. Under the time charter agreement, there was also the option to convert the indexed price to a fixed price, which reflects the prevailing price of corresponding Capesize FFAs (Fixed Freight Agreements). Finally, in the future, more of the company's ships are expected to be employed under fixed-rate time charter contracts, if prices allow (Seanergy Maritime Holdings Corp., 2023, pp. 36).

3.1.7. Star Bulk Company



STARBULK shipping company is a company that undertakes the transportation of high volume dry bulk cargo such as iron ore, coal and grain, as well as secondary bulk cargo such as bauxite, fertilizers and steel products. Its fleet consisted of 128 vessels, carrying a capacity of 209,537 DWT during 2023. Its fleet also includes Newcastlemax and Capesize vessels, as well as other vessels, which have a total capacity of over 14,000,000 DWT dead weight. The average age of the ships is 10 years. Finally, the transfer of flights takes place from America and Australia, to the countries of the East (Star Bulks Carriers Corp., 2023).

Because there is volatility in the freight market, Star Bulks believes that it should operate with more flexibility in the constantly changing market conditions and manage the vessels in an active way, to produce efficient transportation for its clientele, thus adjusting to the risks in order to maximize profits. During 2023, the company was oriented to voyage charters and short-term charters with the provision of a non-mandatory option for the company, given the market levels (Star Bulks Carriers Corp., 2023, pp. 36).

The company's goal is to continuously enhance fleet utilization by leveraging long-term charter agreements and facilitating free trade flows, which contribute to increased cargo proportions. This strategy aligns with the company's fleet, which features scrubbers and a number of newer, fuel-efficient vessels. Although managing these arrangements is more complex and time-consuming compared to securing long-term charters, it can be more profitable. Under voyage charter agreements, the ship owner incurs fuel costs, but benefits from savings due to the scrubbers (Star Bulk Carriers Corp., 2023, pp. 36).

As charter market rates rise, the company may transition more vessels into long-term charters, while scrubber-equipped vessels could also be positioned advantageously in the voyage or short-term charter markets. This approach capitalizes on fuel cost savings. The fleet's diversity and high quality attract major charterers involved in transporting iron ore, minerals, grain, bauxite, fertilizers, and steel products along global shipping routes. A crucial aspect of this strategy is forging direct agreements with major charterers and cargo owners, which allows for transporting large volumes of cargo on international trade routes (Star Bulk Carriers Corp., 2023, pp. 36).

3.2. The Chartering Strategy of WET BULK Companies

3.2.1. DORIAN LPG Company



Dorian LPG is a maritime LPG company and a leading owner and operator of modern and large gas carriers (VLGCs). It has been managing vessels in the LPG shipping market since 2002. It consists of 25 modern VLGC vessels, with a total carrying capacity of nearly 2,100,000 cbm, with an average age of 8 years. Its ships were built from 2006- 2020, with the majority (n= 15) being built in 2015. Finally, the tonnage of the ships is from 77,367- 84,000, with 20 of the total 25 vessels to have a maximum capacity of 84,000 (Dorian LPG, 2023).

Dorian LPG Company employs the following chartering strategy. The purpose of the company, therefore, is the continuous pursuit of a balanced chartering strategy, using the company's vessels in combination with multi-year charters, some of which may also have a profit sharing element, short-term time charters, voyages with spot charters and COA (Contract of Affreightment). Two of the company's available vessels are currently on fixed-term charter, apart from the Helios Pool, with an average duration of 0.6 years from 27 May 2022 and three of the VLGCs are in Pool-TCO, within the Helios Pool (Dorian LPG, 2023, pp. 9).

According to the above-mentioned shipping company, seasonal and other fluctuations in the level of charter prices of the direct market in the past and perhaps in the future had a negative effect on profitability, in which case this was also something negative in the results of the company's operations, but also the cash flows (Dorian LPG, 2023, pp. 9).

3.2.2. DYNAGAS LPG Company



Dynagas LPG is also a marine liquefied natural gas/LNG shipping company. It was established in 2004. It undertakes as a company the provision of internal ship management services, so that charterers and involved members can taste the efficiency and reliability of ships. These are ships that guarantee safety and efficiency success. They are certified with ISO 9001, ISO 14001, ISO 50001 and OHSAS 18001. The charterers cooperating with Dynagas LPG have just established time charters with first class companies. The company's available ships are 6 and most of them (n= 3) were built between 2007-2013 (Dynagas LPG, 2023).

The company's core strategy is to use vessels on multi-year charters with international energy companies, thus benefiting from stable cash flows and high utilization rates. The company's ships are chartered for a certain period with daily prices, fixed, which could have a variable component to adjust to inflation and compensate for the consequences of increases in operating costs (Dynagas LPG, 2023, pp. 31). In April 2021, a new time charter agreement was concluded with Equinor to employ the Arctic Aurora, with a basic contract of two years and an additional 45 days. As part of the time charter agreement, on September 15, 2021, Arctic Aurora was delivered to Equinor. This is a direct continuation of the ship's previous charter with Equinor, which indicates that the new charter started as a continuation of the previous charter (Dynagas LPG, 2023, pp. 31).

In 2021 and 2020, however, there was an 84% increase in revenues from Gazprom and Yamai, whose trade concerns Russian LNG ports. Due to the recent Russia-Ukraine conflicts, the USA, the EU and Canada, as well as other Western states and organizations have declared that they will impose sanctions against Russia from February 2022. Of course, to date these sanctions are not explicitly prohibited by LNG

shipping and had no negative impact on time charter contracts. However, the recent Russia-Ukraine conflict continues and this encourages the imposition of other economic sanctions in addition to those already imposed, as this war negatively affects the companies' charterers and their future profit from the time charter contracts with Gazprom and Yamai (Dynagas LPG, 2023, pp. 31).

3.2.3. The GASLOG Company



Gaslog Ltd is considered a world-leading shipping company, which undertakes the provision of marine LNG transportation services. It essentially transports natural gas, so it contributes to the transition to a carbon-less world. The transports it undertakes are characterized as the safest, cleanest and most efficient, while the business activity is reliable and profitable. It has 37 LNG vessels, which have been built from 2006-2021, with the majority (n=25) having been built from 2013-2021. Also, their capacity is from 145,000-180,000, the majority (n=18) are between 170,000-180,000, while the charterers, with whom the company cooperates (n=14) (Gaslog Ltd, 2023).

LNG short-term or spot market vessels are constantly expanding and this is driving down opportunities to secure multi-year charters for the company's vessels, profitability and cash flows, which are at risk of volatility and perhaps decline after each charter expires or is prematurely dew to several reasons, such as charterer's non-compliance with the agreement. The major strategy of new LNG vessels is to secure that are chartered on multi-year basis, although there is a constantly increasing number of voyages and short-term charters of less than 12 months. While the vessels currently operating on multi-year charters are being re-delivered, the number of vessels available on the short-term or direct charter market may continue to expand further, which encourages a reduction in the ability to secure the company's multi-year vessel charters. As the short-term or spot market trades, after any existing fare expires or is prematurely terminated, profitability and cash flows may become less stable. Also, the active short-term or spot charter market may require charters to be entered into with variable rates in accordance with the market

rates of the given period, as opposed to fixed rates, and this may encourage idleness to extend between charters. These factors, therefore, could lead to a decrease in the company's revenue and cash flows, but also the cash for paying dividends to its shareholders (Gaslog Ltd, 2023, pp. 14).

In general, the existing time charters have basically a duration of up to 12 years and include options that allow the charterers to extend the terms for successive periods, in accordance with the fluctuations of the charter rates. The company states that it will continue to evaluate the attractiveness of charter opportunities long-term and short-term, while trying to keep up with the progressing levels of commercial elements of LNG transportation (Gaslog Ltd, 2023, pp. 41).

3.2.4. Performance Shipping Company



PERFORMANCE Shipping Inc.

Performance Shipping Inc. is an international company, providing naval transportation by owning high-efficiency oil carriers. Its basic strategy is to locate, to acquire, to fund and resell vessels. Through high stake shares, they provide their investors the opportunity of acquiring, selling, chartering or funding of new-build vessels. The company owns 5 vessels, built in 2007 and 2011. Their capacity (tonnage) ranges from 104.588 to 115.915 and are hired by only two charterers (Performance Shipping Inc., 2023).

The main strategy employed by this company is voyage charters and short-term charters of less than 12 months and sometimes on long-term charters of less than 36 months, in order to apprehend the exposure to cyclical changes in charter prices of the spot market. As there is availability, each case of entering a time charter with a fixed floor rate and a share in profits in the spot market is considered. The company is targeting the spot market, which should enable the company and its shareholders to understand the extent of their benefits from the increase in fares. However, the spot market lacks stability and the strategy essentially exposes the company and shareholders to times when spot rates are constrained by falling below the fleet's daily operating cost. Based on the company's strategy, also the modern fleet of tankers operates with voyage charters and with the use of a pooling agreement that supplies the company's exposure to the spot market and gives the opportunity to succeed financially, it is possible to increase the load, the optimal flow of information and maximizing vessel utilization (Performance Shipping Inc., 2023, pp. 36).

3.2.5. PYXIS TANKERS INC Company



Modern shipping company Pyxis Tankers Inc is an international shipping company, owner and operator of a fleet of 5 tankers that carry refined oil products and other liquid dry bulk cargoes. Its ships have been built from 2009-2017, with most (n=2) not built in 2013. Their tonnage is from 46,652-51,795 and the majority (n=3) are close to 50,000. Finally, the company cooperates with 3 different charterers (Pyxis Tankers Inc, 2023).

The company states that it may be a challenge to successfully combine time with spot charters. It can be difficult to properly balance time and spot charters mainly because of the difficulty in predicting market trends. Since the majority of vessels are available on the spot or short-term in the market, when trying to determine new long- and medium-term charters, there may be difficulty in entering into such charters at profitable rates in any period other than the short-term. In that case cash flows will become volatile, because it will ultimately not be possible to successfully utilize the vessels in a profitable combination of medium and long-term charters with a negative impact on the company's cash flows and thus the operational efficiency (Pyxis Tankers Inc, 2023, pp. 16) .

The company's core belief is that the existing fleet can make great profit when spot and time charter rates improve. As of March 31, 2022, the company had two tankers on time charter and three on spot voyages. As of March 31, 2022, 14% of available fleet days in 2022 were contracted, excluding charterers' options. In case of further tankers that

the company might acquire, there was the expectation of continuing to implement the mixed charter strategy (Pyxis Tankers Inc, 2023, pp. 37).

Finally, the company considers that the key factors that should be taken into account in order to analyze future results of operations and trends are the following:

- **Charter Rates and Periods:** The first point highlights the importance of charter rates and hire periods, which directly influence the company's revenue. Charter rates are what the company earns from leasing out its ships, and the duration of these charters determines the consistency and predictability of future income. Additionally, the passage mentions "potential future revenue from pools on ships," referring to the possibility of earning revenue through shared ventures or agreements, which can diversify and stabilize income sources.
- **Operating and Voyage Expenses:** The second point emphasizes the significance of vessel operating expenses and voyage-related costs. These include day-to-day expenses for running the ships, such as crew salaries, maintenance, and fuel, as well as costs associated with specific voyages, like port charges and commissions. Keeping these expenses under control is crucial for maintaining profitability, as they can significantly impact the bottom line.
- **Depreciation Expenses:** The third factor is depreciation, which accounts for the gradual loss of value of the ships over time. Depreciation expenses are influenced by several factors: the initial cost of the ships, ongoing maintenance or improvement expenses, the estimated useful life of the vessels, and their residual value after their service life. This element is vital for understanding long-term financial planning and asset management.
- **Debt-Related Financing Costs:** The passage also mentions debt-related costs, specifically those associated with interest rate hedging. This refers to the financial strategies employed to manage the cost of borrowing, which is critical in a

capital-intensive industry like shipping. Efficient debt management can help the company minimize interest expenses and reduce financial risk.

- **Public Reporting and Administrative Costs:** Another factor involves the costs associated with being a publicly traded company. These include not only general and administrative expenses but also specific costs related to compliance, accounting, legal matters, and regulatory requirements. Such expenses are necessary for maintaining transparency and adherence to legal obligations but can also be a significant financial burden.
- **Exchange Rate Fluctuations:** Finally, the passage addresses the impact of exchange rate fluctuations. Since the company's revenues are primarily in U.S. dollars, but some expenses are in other currencies, any changes in exchange rates can affect profitability. Managing currency risk is thus essential for maintaining financial stability. (Pyxis Tankers Inc, 2023, pp. 58).

3.3. Chartering Strategies of Mix Fleet Companies

3.3.1. NAVIOS Company



NAVIOS is considered a mix fleet shipping company. It has 125 vessels, consisting of Ultra Handymax (n=4), Panamax (n=24), Capesize (n=19), Containership (n=27), Chemical Tankers (n=2), MR2 Product Tankers (n=28), LR1 Product Tankers (n=10), VLCCs (n=11). The ships are built from 2004-2021, with the majority of them having been built in 2009 (n=19). Finally, their capacity is from 2,546-313,486, with the majority of ships (n=97) having a capacity of less than 10,000 (NAVIOS, 2023).

This company focuses on employing vessels on long-term charters and may thus find it difficult to develop a more active short-term or spot market plan. One of its key strategies is to enter into long-term charters, although it believes that it is impractical to determine the typical charter duration of vessels in industries because there are factors such as market strength, charter strategy and privacy in the agreements charter. Although the market for long-term time charters is not developed in the company's lines of business, this may encourage an increase in the difficulty of entering into long-term charters after vessels' time charters expire or are prematurely terminated. As a result, revenues and cash flows become less stable. Also, an active short-term or spot charter market may force the company to enter into charters in accordance with changing market prices. Something opposite happens with the contracts that are held at fixed prices, which

contributes to reducing revenues and cash flows, as well as cash available to shareholders, if charters are entered into at a time when the market price for the transportation of dry or liquid cargo or container ships is reduced or there is a recession in the market in cases of adjustable price charter (NAVIOS, 2023, pp. 16).

Although the company's position favors long-term charters for each tanker, dry bulk cargo and container that it owns or controls, the company may at any time be forced to rely on the chartering of vessels in the spot market or because the charter is at an end during the season of reduced demand or because it is necessary to reposition a ship from a geographically or seasonally disadvantaged position. Also, some long-term charters that the company has are under adjustment based on spot prices provide the company with more stable funding. These prices for tankers, dry bulk carriers and container ships have the element of volatility and may be limited in the future, which means that profitability will be adversely affected if vessels are chartered in the spot market (NAVIOS, 2023, pp. 16).

Finally, the company states that its strength derives from its differentiation. The diversified platform, therefore, which gives stable profitability in terms of its entity for the shareholders and not the inequality of profitability at the shipping level is what strengthens it (NAVIOS, 2023, pp. 57).

3.4. The Impact of COVID-19

The COVID-19 pandemic and the global response to it by every country has enhanced the development of uncertainty in various sectors of the shipping companies' business, such as at the operational, commercial and financial levels. The impact that the pandemic had globally mainly on an economic level has pushed into a recession the maritime business in general and negatively impacted globally the level of demand for sea container transport in the first half of 2020, before demand recovery in the second half of 2020. All things being equal of course once again there will be negative effects on sea transportation of containerized cargo (Danaos Corporation, 2023, pp. 25).

Such a situation could adversely affect whether a shipping company can secure chartering profitably and at remunerative rates, on time and without off-leasing or no-leasing periods, especially in the event that vessel charters expire in 2022, as demand for further charters. Danaos company, therefore, reported that out of its 71 vessels as of February 28, 2022, 7 vessels and out of these 5 vessels have a capacity of less than 6,500 TEU, were employed on time charters, that expired in 2022. Container rates have not been stable and container charter purchase prices saw a large decline in the first half of 2022 before improving significantly since then, but again may continue to decline if the negative impact continues or if demand for container shipments is affected.

More generally, container trade is linked to global GDP, with container trade seeing growth faster than global GDP over the past 10 years, while prolonged pandemic-related restrictions have fueled a decline in global GDP, which has also hit container trade, thus the charter and value of ships (Danaos Corporation, 2023, pp. 25).

In 2020, global seaborne container trade declined significantly, with an impact of around 1% in TEU terms. The scheduled airlines initially responded to these conditions and reduced their services and itineraries, thereby increasing fleet capacity. There was no

stability in container freight rates, while container charter purchase prices also declined in the first half of 2020 (Danaos Corporation, 2023, pp. 61).

In the second half of 2020 and 2021 there had been strong demand for seaborne container transport, with volume and freight rates seeing a sharp recovery. The growth of e-commerce and the landing of airplanes opened the way for travel destinations, so the volume of shipments shifted to sea containers. Demand for containerships has reduced vessel capacity in some segments from 31 December 2021, while charters for each segment have increased and enabled the re-chartering of many of the smaller vessels with charters expiring in 2023 at higher rates. Market conditions in the container shipping industry have actually improved and this has helped to improve the container shipping industry. Thus, Danaos company reported that operating income increased to \$689.5 million ending December 31, 2021, compared to \$461.6 million for the year ending December 31, 2020 (Danaos Corporation, 2023, pp. 61).

According to Diana company, the measures taken against the pandemic in some countries have reduced the turnover of crews on the ship, which was predicted to become even more difficult. As a result of this, in 2021 the company faced the fact and made efforts to normalize the operation of the ships. Of course, the costs needed for this were additional and related to testing, personal protective equipment, quarantine and travel expenses, such as air tickets, to carry out crew changes in a new environment (Diana Shipping Inc, 2023, pp .13).

Also, physical inspections on ships have been severely affected, almost rendered impossible, due to the pandemic and the government measures plus other measures related to the pandemic and concerning the acquisition and disposal of the ships. The impact of the pandemic caused industrial activity to decline worldwide. A typical example is China, which temporarily closed its factories and other facilities, reduced the workforce and restricted travel (Diana Shipping Inc, 2023, pp. 13).

This particular pandemic, but also a possible future one, did affect the staff who operate the payment systems, through which the shipping company earns revenue from the charter of the ships or the payment of the expenses, in which case the shipping companies were delayed in turn their own payments. Efforts were made to maintain the welfare of the workers of shipping companies, of course, thus ensuring that operations would continue smoothly and adapted to the new mode of operation. Consequently, employees were encouraged and in some cases required to work remotely, which of course increased the risk of cyber-attacks (Diana Shipping Inc, 2023, pp. 13).

4th CHAPTER.

CONCLUSIONS/SUGGESTIONS

In this thesis, a review of current online literature was conducted to extract information regarding concepts related to the issue of financial survival and chartering and the activities and strategies applied by Greek publicly listed shipping companies. Naturally, the focus of attention fell on the question of the chartering strategies used by these companies and the impact the pandemic had on them. The data for the shipping companies were obtained through the annual reports of 2021 to 2023.

As seen in the previous chapter, the majority of the Hellenic shipping companies (Danaos Inc, Diana Shipping Inc, Globus Maritime Ltd, Navios Maritime Holdings Inc, Seanergy Maritime Inc) in the dry bulk market tend to rely on multi-year time charters with fixed rates, to secure stable cash flows for covering the operational cost of their fleet. A smaller part of this fleet is chartered in the spot or short term market, in order to achieve an income surplus. Specifically, some companies, as Danaos Inc, would prefer a more active of profitable spot market (referring to the regression that the shipping market has faced the most recent years), in case the multi-year chartering fails to cover the operating expenses of the fleet. As Globus Maritime Ltd states, during the referred period of the annual reports (2021-2023), the charter rates in the short-term and spot market are inadequate of providing profitable fleet operation. To achieve stability, the company employs a combination of time, spot, and bareboat chartering, utilizing various methods beyond just time and spot charters for its fleet.

Other companies, such as Navios Maritime Holdings inc, according to the statements made in their annual reports during the period of the pandemic (2020 - 2023), abide to a strategy used in the past by Hellenic shipowners. According to this strategy, the ship-owning company tends to balance vessel ownership with long-term charters. Simply put, selling, buying or hiring vessels in response to the ever changing needs of the

long-term charter market provides the company with a continuous advantage and secures its cash flows.

On the contrary, Safe Bulkers Inc and Star Bulk Inc tend to utilize their fleet in a more active way, adjusting to the risks in order maximize profits. To achieve that, both companies employ their vessels in spot or short-term charters, usually with a duration of three months or more. An important factor to consider in ship management are the regional or seasonal fluctuations of the prices of spot charters of dry bulk. Apart from that, both companies report that in their future plan lies the utilization of their fleet, or part of it, in the long-term time charter market, following the strategy of the larger companies.

As far as the wet bulk industry is concerned, a large number of companies tend to have a balanced strategy in chartering. Regarding the nature of this trade, there are distinct seasonal fluctuations in the wet bulk charter prices, based on the societal needs (for example, the price of LNG fuel increases during the winter). So the companies aim to employ their fleet in multi-year contracts, with a minimum of 36 months. At the same time, they tend to accept smaller contracts in the short-term or spot market, achieving that way stable cash flows in order to cover the operating costs and at the same time make a profit through favorable deals that may come up.

Dorian LPG has employed several of its vessels in pool chartering, splitting the expenses and the profit among them equally. Thus the risk is significantly reduced and simultaneously stable cash flows are ensured. According to Gaslog company, an increasing number of voyage and short-term charters of less than 12 months has been witnessed. This situation affects the profitability of the short-term market, because a large number of vessels has entered in such a small time. On a wider scale, there is a possibility that multi-year fixed rate charters to be affected by the aforementioned increase.

Due to the strategy employed by the wet bulk companies (multi-year fixed rates), their income is constantly being threatened by the steadily increasing worldwide inflation and the increasing operating costs of an ageing fleet. Therefore, as Dynagas Inc states, a variable component has been set in fixed rates, in order to counter the extra expenses.

On the other hand, smaller companies, such as Performance Shipping Inc, rely primarily on voyage or short-term charters (up to 12 months) and rarely on long-term charters of less than 36 months. Thus, they try to increase their income by utilizing vessels in charters with the most favorable rates, while taking in consideration the risks that come with spot chartering.

Lastly, mix-fleet companies (Navios Inc) utilize the same strategy as the majority of dry and wet bulk companies. Primarily, tankers, dry bulk carriers and containerships are employed in long-term charters. Spot chartering is considered in reduced demand market conditions or in case of repositioning a vessel which is in a disadvantaged position, seasonally or geographically. As mentioned above, the profitability of the company is mainly based on vessels in the spot market.

The pandemic has shown that maritime freight laws have adapted to the scenario of a disruptive pandemic from the year 2020. Consequences and travel restrictions are now a thing of the past, as incremental numbers of freight and vessel movement have been recorded at ports worldwide with the global economy strengthening significantly as early as 2021. In general, charterers and ship owners should account for the pandemic and rising conditions in future contracts, as this is a predictable condition that can create many problems for shipping companies and workers. The shipping industry has shown that it is possible, in similar conditions, to maintain its operation in the global supply chain, helping the economy to recover to pre-pandemic levels.

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