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## Global Maritime Container Carriers' Mid-term Strategies as a Tool for Change Management in the Post-Covid Era

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**Abstract:**

**Purpose:** The basic aim of the research is to: 1/ identify the main market and regulatory challenges currently faced by global maritime container operators and try to assess them and 2/ indicate the current forms of operational activities and mid-term development strategies of the container shipping carriers in terms of efficient managing such a significant change.

**Design/Methodology/Approach:** At conducting this research, the following methods were applied: factor analysis (FA), market analysis (MA), critical narrative review of few current papers, as well as in-depth analysis of many reports, experts' opinions and statistical data. In addition, a structured interview was conducted with representatives of five leading container shipowners having their branch offices in Poland.

**Findings:** The research results indicate that: 1/ appreciable decline in demand for container transport by sea followed by significant reduction in freight and contract rates, resulted in a sharp decrease in the revenues of sea carriers, and seriously deepened the uncertainty regarding the possibility of continuing adopted by them in the Covid era strategies, 2/ in addition to significant market challenges, the implementation of existing strategies is also at risk as a result of new regulatory solutions regarding the shipping decarbonization and energy transformation as well as the expiry of the CBER from 2024, 3/ in the face of new regulatory and market challenges, the container shipping carriers are forced to take strategic actions in the field of change management in line with the goals set by regulatory authorities.

**Practical Implications:** The results of the study indicate that currently existed design of the global container shipping market in its advanced oligopolistic form may change significantly, evolving gradually towards a more competitive and friendly for shippers and forwarders structure.

**Originality/Value:** The obtained research results may constitute the basis for filling the currently existing theoretical, methodological and application gap in the field of change management of an unprecedented scope and nature in the container transport segment, contributing to the theory of management sciences. This kind of research can contribute to enriching the knowledge on functioning the maritime container transport markets in a period of ongoing radical changes in its regulatory system as well.

**Keywords:** Container shipping market, international regulatory challenges, smart and sustainable shipping strategy, container shipping decarbonization.

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**Paper Type:** Research article.

## **1. Introduction**

The main research problem focuses on the identification and analysis of key challenges that have emerged in the post-COVID period in the global maritime container shipping sector, as well as assessing their impact on leading container carriers. The main goal of the study is to identify the basic forms of reactions of maritime container operators to the numerous ongoing challenges occurring in their business environment and to attempt their initial assessment in terms of the effectiveness of managing such an extensive change they are currently facing.

As for now, maritime container carriers are struggling with many financial and economic problems caused by disruptions in the freight market, trying to survive in the radically changed business environment. It has emerged since April 2022, i.e., directly after the unprecedented boom they experienced earlier during the crisis caused by the Covid-19 pandemic.

The unexpected growth in this segment of the maritime freight market observed since September 2020, was mainly due to the significant increase in demand for container transport and, as a result, sharp surge in both spot and contract freight rates. The scale of the dynamic growth of the freight rates, fuelled by pro-fiscal aggressive pricing strategies of the leading global container carriers, operating in form of consortia on highly integrated type of the oligopolistic market, led at that time to serious deformations in the global supply chains operations (Grzelakowski, 2023a).

The detailed data from container shipping markets reflecting charter and freight indices shows that since October 2020 the container shipping industry has been booming under the strain of high demand. The carriage of 40-foot container from Asia to Europe costs 17.500 USD, more than ten times the price of the previous year (Logan, 2021 and S&P Global Platts, 2021).

Additionally, some shipping companies are charging premium rates to guarantee delivery within a few weeks among the congested ports. Many importers are also attempting to outbid one another, offering extra cash to snap up containers over their rivals (Source Today, 2021b).

Consequently, global container operators were the short and medium-term financial beneficiaries of the ongoing shipping boom at that time by obtaining unprecedented revenues.

The drastic increase in spot freight rates and then of contract ones as well as in the amount of freight surcharges imposed from September 2020 to March 2022 has generated unprecedentedly high profits for container shipping companies, calculated on the base of EBIDTA or EBIDT (direct benefits). In the first quarter of 2020, operating profits of container shipping companies measured as EBIDT already amounted to \$ 1.6 bl but in the end of that year the container shipping companies made a total operating profit of \$ 25.4 bl.

Only in the fourth quarter of 2020, 11 of the leading carriers generated the total net profit amounting to 5.8 bl. USD. Assuming that those who failed to disclose their data (EBITDA), such as e.g., MSC, generated similar profit, it can be estimated that their accumulated net profit for that period totalled as much as 9 billion USD. It means that they generated 2 billion USD higher profits than the profit generated within the last five years, which amounted to 7 billion USD (Alphaliner, 2022).

However, due to the constantly progressing dynamic increase in freight rates, only in the first quarter of 2021 the gross operating profit of that sector accounted for \$ 27.1 bl and at the end of the year 2021, an astronomical level of \$ 150 bl was achieved (Drewry, 2023a).

The data by Statista show that the operating profit achieved by the global maritime container sector in the year 2021 was almost three (2.93) times bigger than that generated by the sector over the past 11 years (Statista 2022, Source Today 2021a). Only the largest in this period container operator Maersk Line estimated them at 16.2 bl. USD in 2021. What is more, the biggest container shipping carriers achieved on average, during that 19-month period of unprecedented prosperity, operating profit in the amount of 861 USD/TEU (Placek, 2022 b).

Global leading container operators as the short and medium term financial beneficiaries of the ongoing container shipping prosperity, started transferring their extraordinary direct and indirect financial benefits into capital markets to: 1. pay off old debts, 2. increase the tonnage capacity; at the end of 2022, the portfolio of orders for container vessels in world shipyards was 1.7 times higher than at the end of 2018, 3. undertake long term capital investments oriented towards their further capital integration within other supply chains' links by way of mergers and takeovers.

The last form of allocating extraordinary financial resources caused that their place in the maritime sector of a very active global M&A market, whose operations in the year 2021 were estimated at the level of US\$ 4 tr., significantly increased (ISN 2022). This form of vertical capital integration, manifesting their long term strategy adopted at that time, clearly indicates that global maritime container shipping operators, firmly rooted in strong shipping consortia, are moving in the direction of global providers of comprehensive container shipping services in supply chains, ensuring end-to-end logistics solutions for their customers.

Such strategy, adopted by majority of global container shipping operators, means a start of the change in the current business model of the global supply chain which can lead to a number of consequences for providers of logistics services as well as shippers and final consumers of goods transported in containers (Grzelakowski, 2022; Zampeta and Chondrokoukis, 2022).

However, the over 18-month period of prosperity in the container shipping segment ended quite unexpectedly at the end of the first quarter of 2022. Since mid-2002, the business environment in which they operate has changed significantly, what was the result not only of the profound reduction in disruptions to global supply chains, but also, if not primarily, of the strong economic slowdown on a global scale.

A significant decline in the dynamics of economic growth and the accompanying recession in the leading world economies, intensified by the effects of the war in Ukraine, resulted in a decline in the volume of global trade and, consequently, in freight market transport by sea. The change that took place then had and still has a huge impact on both the operational and investment (development) sphere of container carriers activities.

Diagnosis of ongoing changes and assessment of their effects for carriers themselves and other entities operating within global supply chains is of significant practical and theoretical importance. This is a very important issue on which the author's attention is focused.

The implementation of the research objective set in this way, required the collection of many dispersed sources and data and their appropriate development in accordance with the adopted research methodology. To meet the main research purpose, the following methods were applied: factor analysis (FA), market analysis (MA), in-depth analysis of many reports, experts' opinions and statistical data as well as a structured interview with representatives of five leading container shipowners having their branch offices in Poland.

## **2. Literature Review**

To perform the research problem, an in-depth analysis of selective sources was applied. Mainly reliable sources were used, i.e., reports of international organizations, such as UNCTAD, OECD and many others that tried to present the perceived challenges and evaluate the effects of the ongoing change in the maritime container sector in the years 2022- 2023, as well as the expertise of specialized institutes and agencies.

In addition, there were used statistical data published by Statista on maritime freight markets development and shipping companies' accounts and expert opinions concerning the global container shipping sector, i.e., reports as well as many other sources indicated in the references (Arvanitis *et al.*, 2012; Zampeta, 2015).

The source literature related to this study is in fact, quite extensive. However, its specific feature involves the fact that there are only few compact books regarding this topic, and also current ones concerning at least indirectly the research subject.

Therefore, attention should be paid, first of all, to the interesting study by E. Karakitsos and L Varnavides, where the authors presented the functioning of freight markets and the principles of assessing their effectiveness in the micro and macroeconomic aspect, taking into account business cycles affecting shipping operators and freight markets (Karakitsos and Varnavides, 2014).

The methods of analysing freight markets and freight rate quoting mechanism presented there, provide grounds for assessments on shipowners' decisions made during the crisis and other phases of market development. The functioning of maritime freight markets and the strength of their impact on container shipowners' medium and long-term behaviour is also presented by M. Stopford in the new edition of his earlier publication on the shipping economics (Stopford, 2022).

However, interesting approach, concerning mainly business grounds for making decisions by global container operators in the field of cooperation within the shipping alliances and implementing pricing strategies under the turbulent market, is also presented by I. Breskin in a paper published by CMP (Breskin, 2018).

Besides, there are mainly online sources, valuable for their topicality, synthetic way of presenting the research problem and the ability to assess the impact of perceived challenges on maritime container sector and draw conclusions, close to the current reality. This category also includes reports of international organizations and expert opinions of specialized research institutes and consulting offices analysing this segment of the container market (Drewry, GlobalInsight, Alphaliner and many more).

In this group of available studies and presented professional opinions, there are, first of all, the characteristics and assessment of current actions taken by container shipping operators during the period covered by the study within the various phases of the ongoing crisis. Similar characteristics of these processes are presented on specialized portals such as, the Cogoport (Cogoport, 2022), ShippingWatch (ShippingWatch, 2023) and Global Trade (Global Trade, 2023).

Current information presented there highlight most distinguishable stages of the decision making processes of container shipping carriers operating on the highly advanced oligopolistic type of maritime freight market that has plummeted into recession since May/June 2022. They make it possible to better understand and assess the processes being under the examination, and to determine the future trends as regards the research issue.

### **3. Research Methodology**

In order to identify and analyse main challenges that have emerged in the post-COVID period in the global maritime container sector, as well as correctly assess their impact on the group of leading container shipping carriers, appropriate qualitative research methods were used. First, the mechanisms of regulation of the maritime container transport sector are presented within the framework of a descriptive model of regulation of this sphere of transport activity (Grzelakowski, 2023b).

By characterizing the main regulatory subsystems of this sector using factor analysis (FA) as an appropriate research tool for this purpose, it was possible to determine the type of challenges that occur in both spheres of the regulatory mechanism. The method of factor analysis was applied because in this case it is regarded as the best efficient tool when used to simplify complexity, that is typical for the conducted research subject (Shrestha, 2021).

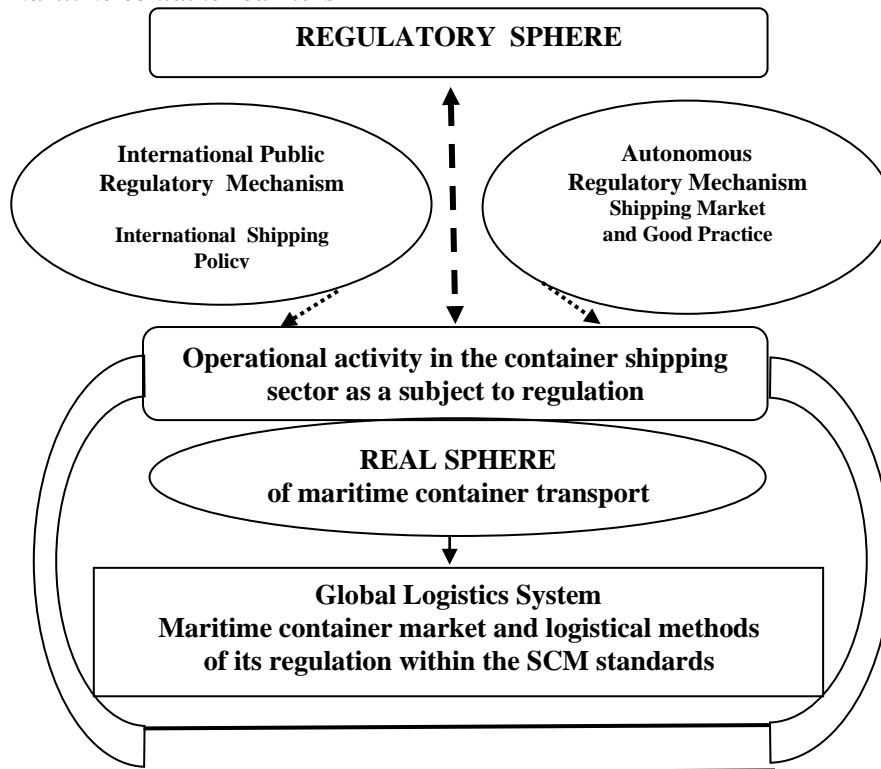
As far as the main goal of the study is concerned, i.e., identification of the basic forms of maritime container operators' reactions to the numerous ongoing challenges occurring in their business environment along with their initial assessment in terms of the effectiveness of managing such an extensive change they are currently facing, it was necessary to apply market analysis method (MA) at first.

It covers not only the spot and contract freight indices' analysis, but also takes into account other market analytical techniques. The basic one used in this research, included PEST analysis, which refers in this case to the assessment of the impact of other types of markets, mainly commodity ones and partially capital markets, on both supply and demand side of the maritime container transport markets (Kotler, 2000; Baker, 2003).

The real, i.e., operational sphere of the maritime container transport sector is regulated by two, parallelly functioning regulatory subsystems, i.e., the public and autonomous ones. They are not fully consistent with each other under current conditions. The last one, and above all, the market regulatory subsystem, which reflects the autonomous regulatory functions of this segment of the ocean freight market that, in fact, is an integral part of the real sphere, operates on the basis of a typical for itself regulatory mechanism, i.e., dynamically changing relationships between the demand and supply sides.

Moreover, it is subject to the strong influence of the public regulation mechanism, determined by international organizations such as IMO, EC, FMA and others, which try to shape the basis of international shipping policy, laying the foundations for building international order in this sphere of activity.

**Figure 1.** Outline of regulation model of the sphere of transport activity of the maritime container carriers



*Source:* Grzelakowski, 2023b

However, the market regulatory mechanism, which has been operating in an essentially unchanged formula for almost 14 years, does not sufficiently take into account the steadily growing strength and market position of global leading container operators.

As far as market regulation is concerned in terms of stimulating competition which is the main task of the international public regulatory subsystem, thus in fact, since 2017 the market regulatory mechanism has gained an upper hand over the public one. That is why, its role in this area, i.e. in promoting and not limiting competition will be significantly reinforced as a result of the decision taken by the EC in October 2023.

The analysis of the global container shipping sector's regulatory system, based on dual, mutually co-determining mechanisms, allows to identify and examine the basic challenges currently generated by both regulatory subsystems, i.e. the market and international public one which constructs the principles of international shipping policy. Only then, using other already indicated research tools, can we properly determine the forms of response of global maritime container operators to these

challenges and assess the effectiveness of managing this change of an unprecedented nature and scope.

#### 4. Research Results

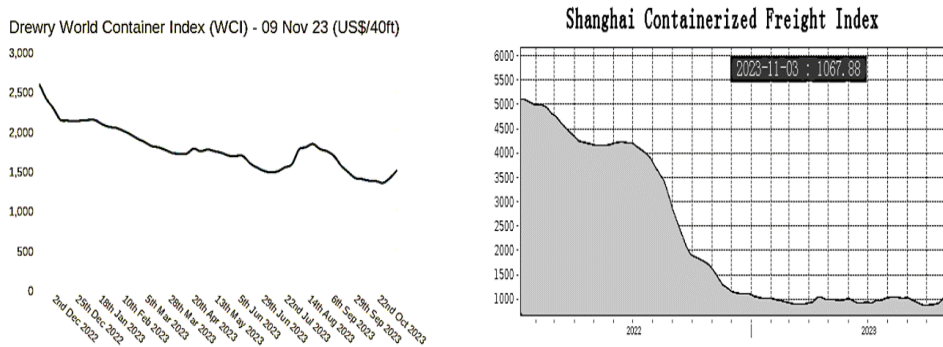
In order to identify and assess the character of challenges the global container shipping carriers currently face, it has been conducted the market analysis (MA) as the key regulator of their operational activity, impacting strongly the main decision making processes of shipping operators.

The research procedure was supported by PEST analysis, which enabled to determine the impact of the world commodity market or, in broader sense, global trade on global maritime container market. In this context, to be able to correctly assess the state of the market economic situation, the commonly used maritime container freight indices such as: SCFI, CCFI, Drewry World Container Index and Freightos have been thoroughly examined and compared (Thalassinos *et al.*, 2009; 2013).

Figure 2 presents dynamics of change in the level of freight rates on the global maritime container market in the period from December 2022 to November 2023. The figures which reflect the constantly plummeted registered spot freight rates in this period, being a result of very weak and falling demand for container shipments by sea, indicating clearly the state of crisis in this freight market segment.

The existing and relatively already long lasting recession in this sector is the biggest challenge facing global container operators, experiencing significant declines in revenues and operating profit, while increasing current operating costs.

**Figure. 2** Drewry's world container composite index (freight rate in US \$/40 ft containers from December 02, 2022 to November 09, 2023) and Shanghai Containerized Freight Index (from January 01, 2022 to November 03, 2023)



Source: Drewry, 2023 b and SCFI, 2023.

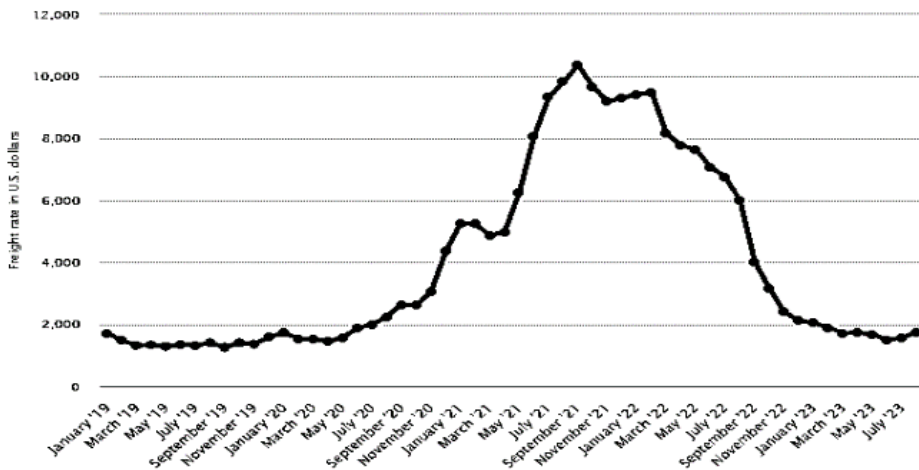


The detailed assessment for November 09, 2023 of the WCI indicates that the composite index increased by 7% to \$1,504 this week and has dropped by 46% when compared with the same week last year (Drewry, 2023a). It means, that Drewry’s WCI index of \$1,504 per 40-foot container is in fact only 6% more than average 2019 (pre-pandemic) rates of \$1,420 (Figure 3).

The average composite index for the year-to-date is \$1,700 per 40ft container, which is \$976 lower than the 10-year average rates of \$2,676 which was inflated by the exceptional 2020-22 Covid period (DWCI, 2023). The same tendency, however in a little longer period, expresses SCFI (Figure 2).

The dramatic drop in spot and later on contract freight rates on global container market as compared to their peak in 2021 and in the first Quartal of 2022 presents the Figure 3 which covers much longer period of freight rates analysis, i.e., since January 2019.

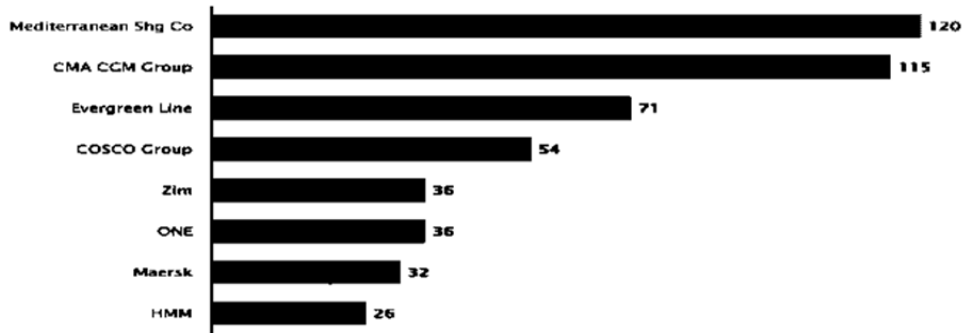
**Figure 3.** Global Container Freight Index (freight rate in US \$/40 ft containers from January 2019 to July 2023)



Source: Statista, 2023a

In addition to the sharp collapse in prices on the sea container transport market, the problem of a drastic increase in the transport capacity of the container fleet is becoming another huge challenge for global container operators. The number of container ships ordered by leading global container operators in world shipyards as of September 30, 2023 is shown in Figure 4.

**Figure 4.** Number of ships in the world's leading container ship operators' order books as of September 30, 2023.



Source: Statista, 2023b

As of September 30, 2023, Mediterranean Shipping Co. had 120 ships in its order book, the highest in comparison to the other shipping operators. CMA CGM Group ranked second with 115 ships in its order book, followed by Evergreen Line with 71 ships in its order book (Figure 4). International shipowners' association BIMCO raised its containership fleet growth forecast to 7.9% this year and 7.8% in 2024, and the capacity of ship deliveries is expected to reach new record highs in 2023 and 2024 of 2.3 million and 2.7 million TEUs, respectively (BIMCO, 2023).

All this then appears when demand is not growing at the expected rate and freight and contract rates have been frozen at a relatively low level. This means a drastic increase in supply, and in the conditions of a strongly growing oversupply of container tonnage, also an increase in pressure on prices and operational fixed costs. This is another serious challenge that container operators must face in 2023 and 2024, when the increase in new tonnage will be the largest.

Moreover, in relation to the market challenges indicated above, a new significant challenge for leading global container carriers operating in shipping consortia appeared in October 2023 (EC, 2023a). In response to numerous complaints and protests addressed to the antitrust authorities (EC, FMC) by international shippers and forwarders, who were heavily affected by the effects of high spot and contract freight rates applied by container operators as well as through the use of unacceptable operational practices that reduced the quality of logistic customer service during the pandemic crisis, the EC decided in October 10, 2023 not to extend the EU legal framework which exempts liner shipping consortia from EU antitrust rules, i.e., sc. Consortia Block Exemption Regulation (CBER).

Justifying its decision, the EC stated that for years, the major shipping companies have benefited from an exemption from European competition rules that allows them to share information about customers and space on each other's container ships.

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Such favourable treatment of liner companies has sowed distrust in the shipping industry, following the explosive rise in rates during the corona crisis. The EC concluded as well that the CBER no longer promotes competition in the shipping sector and therefore it will let it expire on 25 April 2024. The evaluation of the CBER has shown that the Regulation does not bring as much legal certainty as it aimed to. Most of the consortia active in the EU fall outside the scope of the CBER.

This has not of cause, deterred carriers from cooperating. The expiry of the CBER does not mean that cooperation between carriers would be prohibited under Article 101(1) TFEU. In the absence of a specific regime, it only means that carriers will self-assess compliance with Article 101(1) TFEU by using the extensive guidance provided in the Horizontal Guidelines and the Specialisation Block Exemption Regulation, which apply to all economic sectors (EC, 2023b).

This, in turn, may result in changes to the current configuration of container alliances, partly consisting in the withdrawal of some shipowners from previously concluded agreements, as Maersk and MSC had already done before, giving up on continuing further cooperation within the 2M alliance since 2025 or the resignation of most of them from operating within the current entity structure on the global maritime container market.

In the latter case, however, it would mean a significant change in the current model of cooperation between leading container shipowners in the shipping alliance system. This solution is potentially possible, but difficult to implement in the next few years.

As opposed to the position of shippers and forwarders, the reaction of global container operators to the decisions taken by the EC is overwhelmingly negative. They warn about the consequences of the decision for other stakeholders with whom they cooperate within the global supply chain. They are aware that under new competition regime, i.e., after scrapping a long-standing exemption from competition rules that allows carriers to cooperate within consortia without prior approval, the costs and time of providing services in the global scale will significantly increase.

Consequently, instead of fostering competition, the EC decision can end up having the opposite effect. Container carriers will become less efficient if they cannot cooperate as smoothly as it is currently possible within the consortia formula (Shippingwatch, 2023).

As a result of this, complications and inefficiencies may seriously hit not only container shipping sector but also create friction and inefficiencies in the global supply chains (Ghorbani *et al.*, 2022). Eventually, customers could end up paying the price for newly created competitive container shipping landscape.

Another, but currently classified as the most important, challenge facing the container shipping sector is the need to meet the sector's decarbonization goals set by the leading international regulatory authorities, i.e., IMO EC and FMC. The IMO has revised in 2023 its GHG Strategy, strengthening the ambitions for international shipping.

The new targets include a 20% reduction in emissions by 2030, a 70% reduction by 2040 (compared with 2008 levels), and the ultimate goal of achieving net-zero emissions by 2050. New regulations are expected to enter into force around mid-2027 (DNV, 2023a). The EU goes further and has agreed to include shipping in its Emission Trading Scheme (EU ETS) from 2024 as well as on setting requirements on well-to-wake GHG emissions (FuelEU Maritime) from 2025.

A similar direction in implementing the strategy of green transformation of the shipping sector is being pursued by the regulatory authorities of the USA and China (DNV, 2023b). As a result of the regulatory decisions made, the entire shipping sector, and to a large extent the container shipping segment, is facing very serious challenges. It stands at a pivotal moment, facing the daunting challenge of decarbonization while navigating at the same time unprecedented economic and geopolitical headwinds (UNCTAD, 2023).

Taking into account the very ambitious and rapidly approaching deadlines for implementing the requirements for decarbonization of shipping, container ship owners are determining paths and forms of transition to the green transformation path, being aware of the scale of expenditure needed to achieve the set goals. Preliminary estimates indicate that this faces multibillion-dollar investments amid uncertainty about the best transition methods.

These estimates show that decarbonizing the world's fleet by 2050 could require \$8 billion to \$28 billion annually. The infrastructure for 100% carbon-neutral fuels could need an even heftier \$28 billion to \$90 billion each year (DNV, 2023 a). If achieved, full decarbonization could double yearly fuel costs. The container shipping sector will undoubtedly have a high share in these costs. It is still an open question who will pay for this transformation and to what extent the costs of this complex process will be transferred to the final recipients and consumers of goods imported by sea in containers.

## **5. Discussion**

The presented research results clearly indicate that the global container shipping sector is facing nowadays huge market and regulatory challenges. Both types of challenges determine the change that is taking place in this link of the global supply chain. Its nature and degree of intensity in the current period poses specific tasks to maritime container carriers in terms of implementing effective methods of managing this change both within and outside the sector, i.e. in its immediate environment.

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This requires the need to develop and implement new medium-term development strategies and take effective operational measures necessary to overcome the current crisis that has been occurring on the freight market for over a year and at the same time could allow maritime container carriers to find the best solutions to adapt their activities to the requirements of the green transformation.

Otherwise, the lack of effective market strategies, i.e., best suited to current market challenges, can seriously hamper, i.e. limit and slow down the implementation of green energy transformation processes in this shipping segment as well as the adoption of other goals concerning further integration of container carriers within the structures of global supply chains.

The efficient market oriented strategy, must take into account that maritime container market has slowed down tremendously in recent months since seeing the record-high levels that have characterized the market since summer 2020. Admittedly rates on chartering a container ship have declined by all of 72 percent since April this year, and the market looks set to continue normalizing ahead of 2024, but spot prices on seaborne container freight have dropped even more drastically since the peak in early 2022 (DHL, 2023).

Comparing the rate level in the first week in October 2023 with the same week last year, spot prices have taken a 77.5 percent plunge (ShippingWatch, 2023). As a result, profits at the biggest liner companies nosedived by more than USD 45bn between 2022 and 2023 (Statista, 2022).

Though bottom lines have already plummeted in the first quarter of 2023, large liner companies earned USD 13bn in this quarter, optimistically assuming that they will continue to rake satisfied profits in the nearest future (Statista, 2023). However, it turned out that the downward trend in spot and contract rates persists and demand does not increase at the expected pace, as a result of which their financial results in the subsequent quarters of 2023 were increasingly worse.

CMA CGM, Maersk, Hapag Lloyd and many other leading container shipping companies in their quarterly financial reports confirmed downturn with massive drop in earnings. The net income of the French shipping group plummets in the third quarter 2023 by 94.5% compared to the same period of the previous year (ShippingWatch, 2023). CMA CGM expects even more painful time ahead, predicting a further decline in earnings measured in EBIDTA/EBIDT terms. Small, often occurring only periodically, increases in demand cause the profitability of transport on individual routes to be relatively low.

As a result of this, with the already visible oversupply of container carrying capacity, the leading container operators, e.g., such as still alliance partners Maersk and MSC have called off several sailings on the major trade route from China to

Europe, indicating that the carriers forecast lower demand for container freight in the coming time.

Considering further the fact that additionally 11% extra container ships in 2023 could significantly deepen market disequilibrium and add pressure on container carriers' freight rates and earnings in the years 2023-2024 and in 2025, capacity will be 30% higher than prior to the pandemic, the already existed significant market challenges can turn into a serious economic threat to the continuation of their further operations in their current form.

In these circumstances, some of the maritime container carriers, e.g., CMA CGM, the world's No. 3 container carrier, urged the industry to avoid a price war as the delivery of new vessels threatens to push global shipping to a protracted slump. Despite these mutual warnings, orders for new tonnage (COSCO, HMM), albeit with new energy parameters, in the use of alternative fuels and sources of ship propulsion (COSCO, HMM) are still increasing and no one is giving up on previous orders (Shippingwatch, 2023). The exclusion the container alliances from April 2024 from CBER may therefore raise additional concerns in this area of the global intermodal supply chains.

The gradually deteriorating financial and economic situation of the major sea container carriers is also viewed with concern by stock exchanges and banks where their shares are listed, as well as by private investors who express concerns about further cooperation with this segment of transport markets that has so far been very attractive to them.

And so, following 2021 year's advancement, return on shares at Maersk, Hapag-Lloyd, Evergreen, Yang Ming and HMM plummeted in the first nine months of 2022. Five container lines were punished severely on the stock exchange in 2022 on fear of an economic downturn. Return on their shares plummeted and the loss was USD 65bn in value.

Unlike the year 2021, when the carriers' shareholders saw golden days, their shares yielded negative returns of 30-42 percent in 2022 (ShippingWatch, 2023). It is expected that this trend will deepen significantly in 2023. Although Maersk and four other prominent container shipping companies stand to book relatively low but still satisfactory results in 2023 year, more and more shareholders are heading towards the exit.

This, in turn, leads to the conclusion that the deterioration in the financial and economic situation of the leading container carriers will result in them not being able to expand to the same extent into the structure of global supply chains by purchasing shares of logistics companies and container terminals as well as via mergers and acquisitions. Although these processes are still taking place (COSCO, Hapag Lloyd,

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MSC, CMA CGM), their scale and intensity have significantly weakened in 2023 (ShippingWatch, 2023).

However, in this area of their investment activity, not everyone is currently chasing the same strategy. Although Maersk has put a lot of capital aside for logistics acquisitions, its main competitors have chosen a different path nowadays.

To sum up, it can be said that each of the leading container carriers is going to choose its own strategy for survival in a such difficult market situation, i.e., a strategy of survival through development. Each of them is also looking for the best possible forms of cooperation with other container carriers (a strategy of deepening cooperation, not necessarily competition) and other participants of global supply chains in order to meet the requirements in the field of decarbonization of the container shipping sector.

In this area, they strive to build a supply chain in the field of manufacturing and distributing green fuels, looking at the same time for selection of optimal alternative green fuels to meet in time the already adopted regulatory criteria. Their mid-term strategies are also oriented towards creating green shipping corridors which could enable them significantly strengthen their competitive position on the global maritime container market.

These types of challenges also require progress in the digitalization of the global supply chain, with an emphasis on the special role of leading global container carriers in implementing the next stages in these processes, leading to the achievement of the expected goals in this area (Container xChange. 2022).

## **6. Conclusions**

The results of the research conducted on the identified current market oriented and regulatory challenges facing the container shipping operators indicate that significant change in this maritime transport sector, being a vital link of global maritime supply chains is going on. The already visible change was induced by cumulative effects of the so far existed and upcoming challenges revealed in the post Covid era. It has already strongly affected the operational and investment sphere of maritime container carriers.

However, the current decisions made by carriers in the face of searching for the best form of response to the change as well as their mid-term strategies do not fully respond to the requirements and challenges that this change generates both for them and entire sector.

On the one hand, the current forms of response of container shipowners to market and regulatory challenges they face are only a slightly modified form of continuation of activities undertaken during the prosperity period of 2020-2021, and

on the other hand, they are a form of searching for the best development paths in the context of meeting regulatory challenges, mainly related to the decarbonization of the shipping sector. This indicates that container carriers are at a crossroads, making a so far not entirely successful attempt to combine the old strategy with new challenges.

However, such a mix of the past, very desirable development scenario based on market prosperity and the new one corresponding to the realities of the current change is extremely difficult and requires proper risk assessment and effective risk management.

Therefore, currently not all sea container carriers are properly prepared and mature to implement new development strategies based on this formula, relying on individual, mostly short-term strategies that they consider safe in terms of survival through development in recession conditions.

Therefore, the current stage is the phase of individual searches for development paths and ways of linking newly established regulatory challenges with already existed market challenges that affect them painfully.

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