

ECONOMICAL AND ENVIRONMENTAL CHALLENGES FOR THE SHIPPING SECTOR

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Annotation

In this article there are discussed main challenges for nowadays shipping industry: The year 2018 was difficult year for shipping though several segments noted signs of improvement, no many indicators that market fundamentals will improve significantly within the next year or two, shipbuilders' slim order books, statutory requirements, outcomes of IMO Marine Environment Protection Committee (MEPC) 72nd and 73rd sessions.

Keywords: Shipping, Marine environment.

Introduction

The **tasks** of the research are the following:

1. To describe the current economic state in the shipping market under relevant indicators.
2. To determine the challenges in the maritime shipping sector under statutory requirements of environmental protection.

Global Economic Outlook

The global economy strengthened in 2017 driven by the US, China, the Euro-zone and Japan. 2018 was expected to proceed along similar lines with more growth in the Euro-zone and China managing its economic slowdown carefully. Global GDP is forecast to hold at its 2017 level of 3.7% during 2018-19 (Fig. 1).

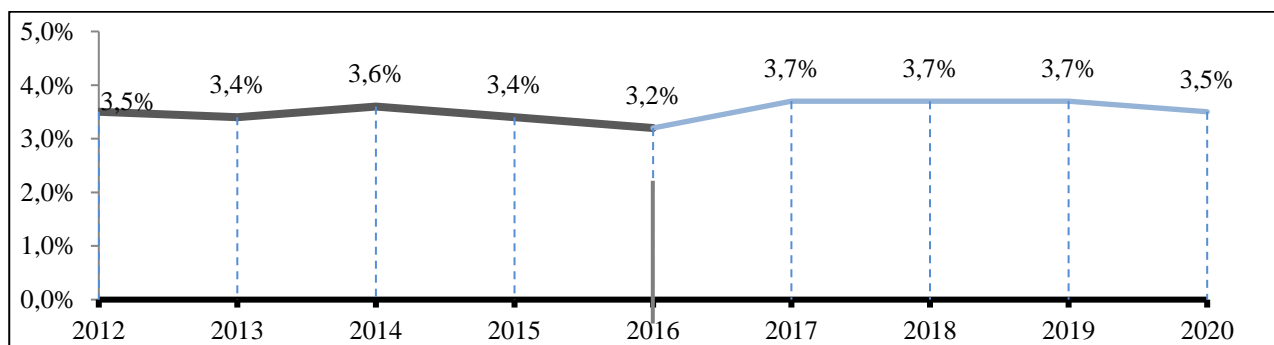


Figure 1. World GDP Annual Growth, %
Source: Economist Intelligence Unit (EIU)

A shallow dip at 3.5% is expected in 2020 before recovering to 3.8% in 2021-22. In the developed world, US GDP is expected to grow by 2.5% in 2018. A mild recession is forecasted early 2020 followed by a brisk recovery in 2021-22. The Euro-zone economic recovery gathered momentum in 2017 with 2.5% GDP growth and 2018-19 is expected at a similar level. Japan GDP growth for 2018-19 is forecasted at 1.5%. In emerging markets, conditions are expected to become more challenging as US interest rates rises. India will be Asia's fastest-growing large economy in 2018-22, expanding 7.9% average per annum. China is on track to meet its target to double real GDP between 2010 and 2020. China is expected to slow down slightly in 2018, to 6.4%, from 6.9%

in 2017. It is expected to move away from GDP targeting in the next decade and growth will slow down gradually to 5.2% in 2022. Latin America ongoing economic recovery is forecasted to gather momentum in 2018-19. This improved economic outlook is shadowed by political stability risks, threatened Free-Trade agreements, Middle East region stability and US-North Korea tensions (1).

Driven by improving global economic conditions, global trade growth accelerated to 4.6% in 2017 driven by strong export growth of 4.8% in emerging markets compared with 3.8% export growth in advanced economies (Fig. 2). Global trade growth is expected to slow modestly to 4.3% in 2018 in line with a deceleration in China's economy, given its outsized role in global supply chains. On the assumption that the US will make only modest adjustments to trade policy, global trade growth is expected to continue to average 3.6% per annum in 2019-22.

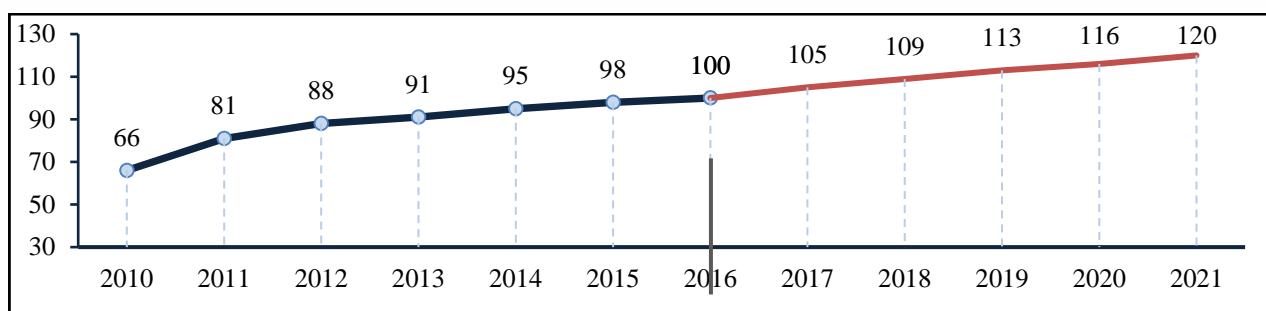


Figure 2. World Trade Growth (Growth Index Relative to 2016=100)

Source: Economist Intelligence Unit (EIU)

Global Economic and trade fundamentals rebounded in 2017 which translated into so signs of improvement for the shipping and shipbuilding market. While trade demand is increasing for each market sector, strong ships deliveries continue to dampen freight rate recovery. Scrapping continues to be high, although the activity level has levelled off as some segments have already scrapped most old vessels. Some accelerated scrapping may take place driven by the incoming environmental regulations, industry consolidations and low ship price opportunities.

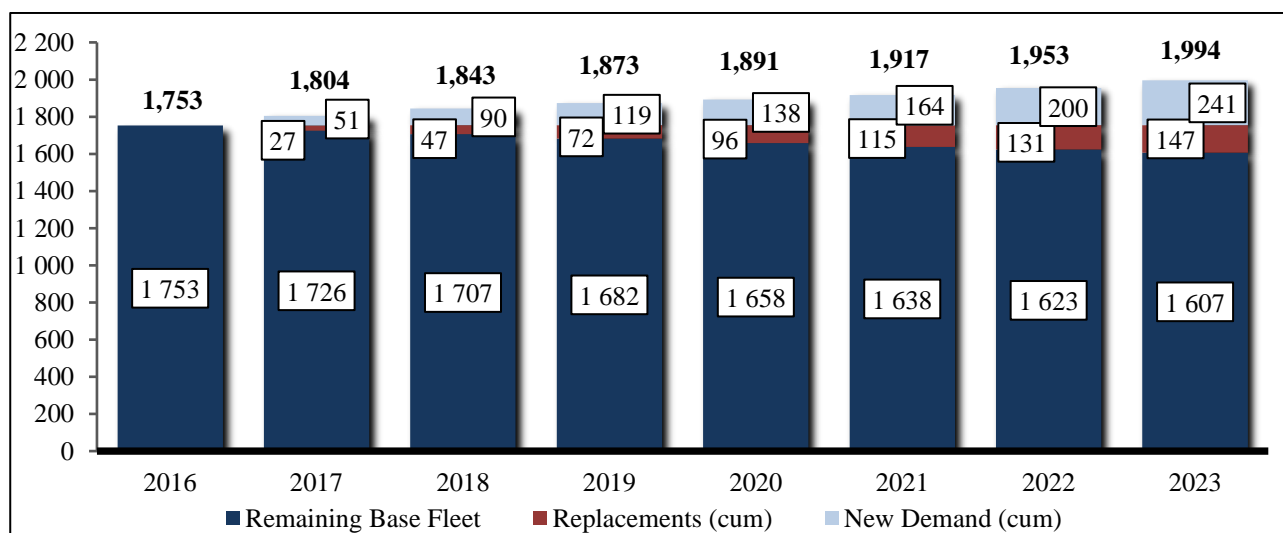


Figure 3. World Fleet, MGT: Replacements & Demand Cumulative to Base Year

Source: ABS World shipping & shipbuilding outlook, 2018

Stronger fundamentals in terms of GDP and World Trade growth provides a background for improvement subject to geopolitical risk and trade policies. Crude tanker dwt demand is projected to expand by 4.7% in 2018, similar to 2017, while the crude tanker fleet is expected to expand by 3.5% (Fig. 3). Product tanker dwt demand is expected to grow by 3.4% in 2018, while the product tanker fleet is projected to expand by 1.6%. Global seaborne dry bulk dwt demand is projected at 2.7% in 2018 compared with 4.0% in 2017. The dry bulk dwt fleet is projected to expand by 1.7%

in 2018 compared with 2.9% in 2017. Global container trade grew by 5.2% in 2017 and is expected at 5.0% for 2018 while fleet capacity is expected to expand by 4.1%. In 2019, trade growth is expected to moderate slightly to 4.7%. Container ship fleet capacity in 2018 is expected to grow by 4.1% (3).

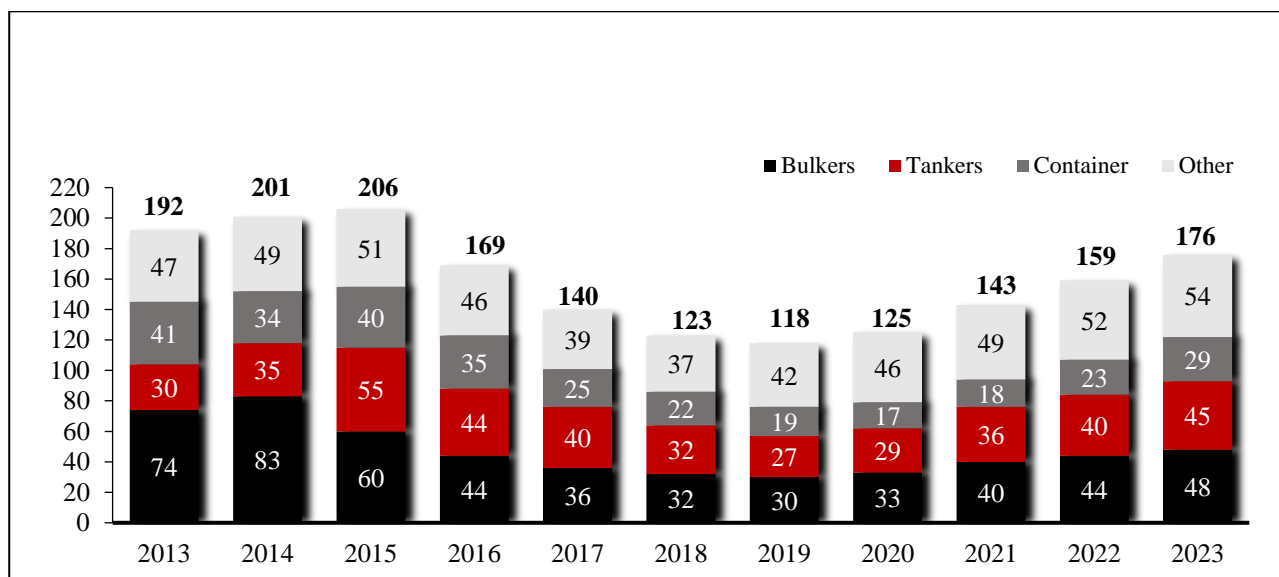


Figure 4. World orderbook, Outlook - MGT
Source: ABS World shipping & shipbuilding outlook, 2018

Challenging Marine Environmental Issues

The next big challenge to shipping is environmental issues. Now shipping currently accounts for 2 per cent of global carbon dioxide emissions, and if the sector is not cleaned up some experts predicts this figure could rise to a fifth of emissions by 2050. Following the United Nations Framework Convention on Climate Change (UNFCCC), dealing with greenhouse-gas-emissions mitigation, adaptation, and finance (Paris Agreement), starting in the year 2020 shipping sector is under pressure to lower its emissions as well as other industries. These issues are dealt with not only at the International Maritime Organization (IMO), but also at the regional (for example European Union) level. In 2018 Marine Environment Protection Committee (MEPC) 72nd and 73rd sessions took on the table hard issues - reduction of greenhouse gas emissions from ships, further work on energy efficiency of ships, implementation of sulphur 2020 limit, marine plastic litter, ballast water management treaty implementation, use and carriage of heavy fuel oil as fuel by ships in Arctic waters. The shipping has to achieve enormous obligations - by 2050, to reduce emissions by 50 per cent compared to the 2008 emissions level.

The EU MRV Regulation (EU) 2015/757 was published in May 2015 (4). It establishes an EU-wide system for the monitoring, reporting and verification (MRV) of carbon dioxide (CO₂) emissions from large ships starting in 2018. Next to data on CO₂ emissions and distance sailed, the Regulation requires ships to report cargo-related information, in order to measure their energy efficiency. Globally amendments to Chapter 4 of International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI have recently come into force, requiring that all ships of 5000 GT and above on international voyages collect and report specific data related to fuel consumption beginning on January 1, 2019.

It is important to ensure that international shipping contributes its fair share to the efforts needed to achieve the objective of well below 2 C agreed under the Paris Agreement. The European Commission should keep IMO's work under regular review, and report at least once a year to the European Parliament and to the Council on the progress achieved in the IMO. MEPC 72 adopted the initial strategy for the reduction of GHG emissions from ships. The Intersessional working group continued its work in October 2018, making it possible for MEPC 73 to adopt an Action Plan

for the development of short term measures that will deliver additional CO₂ reductions before 2023 plus longer term measures that will achieve full decarbonisation of international shipping. The way is now clear to make detailed proposals for specific CO₂ reduction measures at the next MEPC in May 2019. But so far there are following proposals under table - slow steaming, new ship design, less polluting propulsion, less resistance paints seems workable to achieve short term goals. The shipping industry is currently putting forward more detailed ideas, including innovative measures for long term CO₂ reduction.

Furthermore the Baltic Sea and the North Sea currently Emission Control Areas (ECAs) for sulphur oxides (SO_x), will be extended to also cover nitrogen oxides (NO_x). This implies that engines with a power output of more than 130 kW, to be installed on vessels constructed on or after 1 January 2021, must be Tier III certified if they are operated inside the Baltic Sea and the North Sea ECAs.

To ensure a consistent implementation and enforcement of the global 0.5 per cent sulphur cap, IMO adopted regulations banning the carriage of non-compliant fuel in fuel tanks, unless the ship is equipped with a scrubber. The ban will enter into force in March 2020. There is no change to the 1 January 2020 deadline on the 0.5 per cent global sulphur limit. There is already a requirement to keep 0.1% sulphur content in marine fuel (entered into force on 1 January 2015) in the sulphur emission control areas (SECAs – Baltic, North Seas, 200 miles from North America coast). Enable to meet requirements shipowners use or will be forced to use a cleaner fuel (but unfortunately more expensive) shifting from heavy fuel to marine gasoil either to install abatement systems. According to the Rotterdam exchange data difference between IFO180 (max 1,0 % sulphur) and LSMGO (max 0,1 % sulphur) fluctuates around 130 USD/per ton. Taking in an account a ferry's consumption 50 tons per day this represents a significant amount of expenses.

Another sensitive issue that will touch the shipping business is a ship recycling. The International Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships (HKC) was adopted in 2009. To date 7 countries have ratified the HKC, the most recent one being Turkey. In 2013, the European Union adopted the EU Ship Recycling Regulation (EU SRR), which broadly reflects the main provisions of the HKC. The EU SRR became fully applicable from 31st December 2018 (5). Unlike the HKC (when into force), the EU SRR is not directly applicable to 3rd country ships recycling facilities. Recycling facilities located in 3rd countries and wanting to recycle EU flagged ships need to apply for inclusion them in the EU list. Unfortunately only 9 shipyards out of 26 on the EU list of approved recycling facilities are really open for ship recycling. EU yards are apparently allowed on the list without fulfilling uniform criteria, whereas non-EU yards have to be inspected by European Commission appointed auditors according to clear criteria before inclusion on the list. So far, only two Turkish and one US yard have been included.

These forthcoming or already existing statutory obligations put the shipowners under financial instability. We can clearly see (for example yellow jackets movement in France) that the society is not prepared yet to pay more for the ecology, so no doubt most of the expenditure should be accommodated by shipowners. Some Western European countries announced a plan to ban all petrol and diesel vehicles by 2040-2050 as part of the Paris Climate Agreement and introduce higher taxes on fuel. We can anticipate that public strikes and protests can make governments retreat from their original goals. But the shipping industry seems does not have option to step out from main stream.

CONCLUSIONS

1. Macro-economic development has looked positive for the last years and projected further development will have supportive aspects for the shipping sector. Trade growth is expected to moderate slightly whereas ship fleet capacity in 2019 is expected to grow as well.
2. The challenges that it is facing from the escalating US-China trade war, the upcoming IMO 2020 sulphur regulation, other environment requirements and tonnage oversupply will negative effect shipping sector. No doubt, the dominant theme of 2019 will be the sharing of the higher costs,

as the starting line for the IMO 2020 sulphur cap approaches. These increased costs will come either as a result of purchase of fuels, which are more expensive than heavy sulphur fuel oil (HSFO), or because of investments in abatement technologies that will allow carriage and further consumption of HSFO.

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EKONOMINIAI IR APLINKOS UŽDAVINIAI KROVINIŲ SEKTORIUI

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Santrauka

2017 m. pasaulio ekonomika ir prekybos apimtys atsigavo, o tai persidavė ir laivybos sektoriui. Nors visose žaliavų ir prekių segmentuose prekybos apimtys augo, stiprus besitęsiantis naujų laivų tonažo įsiliejimas mažino jūrinio frachto (frachtas – užmokestis už jūra gabenamus krovinius) įkainių atsistatymą. Senų utilizuojamų laivų skaičius didėjo dėl griežtėjančių aplinkosauginių reikalavimų, tolesnės industrijos dalyvių konsolidacijos, laivų antrinėje rinkoje mažos kainos. Tačiau utilizuojamų laivų skaičius ir tonažas nekompensavo naujų laivų įsiliejimo į rinką.

Kitas didelis iššūkis laivybai yra aplinkosaugos klausimai. Skaičiuojama, kad šiuo metu laivyba generuoja apie 2 proc. viso pasaulyje išmetamo anglies dioksido kiekio. Tačiau kai kurie ekspertai vertina, kad nesiimant jokių priemonių taršai sumažinti, išmetamųjų teršalų kiekis iki 2050 metų gali padidėti iki penktadalio. Pagal Jungtinių Tautų bendrąją klimato kaitos konvenciją (UNFCCC), sprendžiant šiltnamio efektą sukeliančių dujų išmetimo mažinimo, prisitaikymo ir finansavimo klausimus (Paryžiaus susitarimas), pradėdant nuo 2020 metų laivybos sektorius turi prisiimti įsipareigojimus sumažinti išmetamųjų teršalų kiekį kaip ir kitos pramonės šakos. Šie klausimai nagrinėjami ne tik Tarptautinėje jūrų organizacijoje (TJO), bet ir regioniniame (pvz., Europos Sąjungos) lygmenyje. 2018 m. TJO Jūrų aplinkos apsaugos komiteto (MEPC) 72 ir 73 sesijų metu buvo aptarti sunkūs klausimai - laivų išmetamųjų šiltnamio efektą sukeliančių dujų kiekio mažinimas, tolesnis darbas laivų energijos vartojimo efektyvumo srityje, sieros jūriniame kure nuo 2020 m. ribojimo įgyvendinimas, taršos plastikumu mažinimas, balastinio vandens valdymo konvencijos įgyvendinimas, mazuto vežimas laivais Arkties vandenyse. Laivyba turi pasiekti didžiulius įsipareigojimus - iki 2050 m. sumažinti išmetamųjų teršalų kiekį 50 proc., lyginant 2008 metais.

Galime numatyti, kad kitame TJO MEPC 74 susitikime, kuris vyks 2019 m. gegužės mėnesį, bus pateikti išsamūs pasiūlymai dėl konkrečių išmetamo CO₂ kiekio mažinimo priemonių. Realistiškiausios priemonės taršai mažinti – lėtesnis laivų plaukimas, naujas laivų konstrukcinis dizainas, mažiau taršios laivų jėgainės, specialūs laivų korpuso dažai trinčiai sumažinti. Laivybos pramonė šiuo metu pateikia idėjas, įskaitant novatoriškas priemones, skirtas ilgalaikiam CO₂ mažinimui.

Siekdama užtikrinti maksimalų 0,5 proc. sieros jūriniame kure įgyvendinimą ir vykdymą, TJO priėmė taisyklės, draudžiančias vežti neatitinkančius kokybinių reikalavimų degalus laivų kuro tankuose, nebent laive būtų įrengta taršą mažinanti įranga. Draudimas įsigalios nuo 2020 m. kovo mėn. Nuo 2015 metų galioja reikalavimas naudoti jūrinį kurą, kuriame sieros junginiai sudaro ne daugiau kaip 0,1% sieros teršalų kontrolės zonose (SECAs - Baltijos, Šiaurės jūros, 200 mylių nuo Šiaurės Amerikos pakrantės). Tikslu atitikti reikalavimus, laivų savininkai bus priversti naudoti švaresnį kurą arba įdiegti taršos mažinimo sistemas. Remiantis Roterdamo naftos biržos duomenimis, skirtumas tarp sunkiojo mazuto (IFO180 maks. 1,0% sieros) ir nesieringo jūrinio dyzelino (LSMGO ne daugiau kaip 0,1% sieros) šiai dienai svyruoja apie 130 JAV dolerių už toną. Vertinant, kad jūrų keltas gali sunaudoti per dieną 50 tonų, šis padidėjimas sudarytų ženkliai sanaudų dalį.

Kitas jautrus klausimas, kuris yra susijęs su laivybos verslu, yra laivų perdirbimas. Tarptautinė Honkongo konvencija dėl saugaus ir aplinkai nekenksmingo laivų perdirbimo (HKC) buvo priimta 2009 m. Iki šiol konvenciją ratifikavo tik 7 šalys. 2013 m. Europos Sąjunga priėmė ES laivų perdirbimo reglamentą, kuris iš esmės atspindi pagrindines HKC konvencijos nuostatas. ES priimtas reglamentas taikomas nuo 2018 m. gruodžio 31 dienos. Skirtingai nei HKC konvencija ES reglamentas nėra tiesiogiai taikomas trečiųjų šalių laivų perdirbimo įmonėms. Perdirbimo įrenginiai, esantys trečiosiose šalyse ir norintys perdirbti su ES vėliava plaukiojančius laivus, turi kreiptis dėl jų įtraukimo į ES sąrašą.

Šie būsimi ar jau egzistuojantys gamtosauginiai reikalavimai laivų savininkams kelia daug klausimų, iš kurių esminis finansinių resursų užsitikrinimas. Esant žemam jūriniam frachtui, laivų savininkai nebus pajėgūs sukaupti finansinių lėšų, o bankinis sektorius, vertindamas 2008 metų pasaulinės krizės pamokas, yra konservatyvus paskolų suteikimui laivybos sektoriui. Mes aiškiai galima matyti (pvz., Geltonųjų liemenių judėjimas Prancūzijoje), kad visuomenė dar nėra pasirengusi mokėti daugiau už ekologiją. Todėl, be abejo, didžiąją dalį išlaidų turės padengti laivų savininkai. Kai kurios Vakarų Europos šalys paskelbė planą uždrausti visas dyzelines transporto priemones iki 2040–2050 m. kaip Paryžiaus klimato susitarimo dalį ir įvesti didesnius mokesčius už taršų kurą. Galime tikėtis, kad streikai ir protestai gali paskatinti vyriausybes atsisakyti savo pradinių tikslų. Tačiau, atrodo, laivybos pramonė neturi galimybių išeiti iš taršos mažinimo kelio.

Išvados

1. Pastaraisiais metais makroekonominis vystymasis buvo teigiamas ir prognozuojama tolesnė ekonomikos plėtra sudarys palankias sąlygas laivybos sektoriui. Tikimasi, kad ekonomikos augimas šiek tiek lėtės, o laivyno bendras tonažas pajėgumas 2019 metais toliau augs.
2. Nestabilumas galintis kilti dėl JAV ir Kinijos, JAV ir Europos prekybinių karų, artėjantis Tarptautinės jūrų organizacijos priimtas sprendimas dėl sieros jūriniame kure ribojimo nuo 2020 metų, kitų aplinkosaugos reikalavimų įgyvendinimas, turės neigiamos įtakos laivybos sektoriaus finansiniams rezultatams. Be abejo, dominuojanti 2019 metų tema bus didesnių sąnaudų perskirtymas dėl sieros jūriniame kure ribojimo, kuomet laivų savininkai nuo 2020 metų turės naudoti švaresnį, tačiau ženkliai brangesnį kurą, arba investuoti į sieros išmetimus mažinančias technologijas.