Maritime 2022 Review

and

Future Predictions

Navis Academy

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Preface

Crises, conflicts and pandemics in the world threaten global life and trade; this has necessitated more stringent monitoring of the control of seas and maritime transport routes, as well as global and environmental maritime trade within the scope of ship, cargo, and freight monitoring.

In this context, we aimed to gather what can be done under the roof of an informative platform as scope of the contribution we will provide to Turkish maritime in the works we have been carried out since June of this year.

NAVIS Academy was founded in accordance with the above-mentioned purpose; in its first six months of operation since its foundation, it has managed to become an important source of open information followed both domestically and internationally.

As a result, we aimed to produce the necessary solution strategies through continuous monitoring of developments and activities in the maritime field, as well as to create an academic database open to anyone who wants to use the results of these analyses.

With this initiative, we prepared our 2022 Maritime Report, which summarizes this year's maritime trade and geostrategic developments and provides perspectives for the year ahead. NAVIS Academy will continue to offer different approaches to the marine sector with new perspectives.

Dr. Özkan Poyraz

Author

Introduction

The world's political, economic, and military developments are constantly changing every minute, it makes it difficult to follow up and interpret the issues correctly. In order to follow the formation of the global matrices, it is necessary in this context to keep an eye on maritime industry developments. When we take into account the fact that a significant portion of the world's goods and services are transported via the seas, it becomes clear that shipping plays a key role in the flow of global events.

It is obvious that the inferences in every field can be revealed more easily and the background of the issues can be seen more clearly when the analysis of developments in the maritime field is done well.

However, the effects of global epidemics, wars and crises on the maritime sector have become much more important than before. These problems mainly affect dry cargo, container and tanker markets as well as port facilities; within the context of the sector's needs, it is questioned in terms of quantity and quality, which has caused volatility in freight trends. As a result, the intellectual projections to be made are expected to contribute to the solution of existing problems and the sector's needs.

For the time being, some of the solutions at sea, developed in collaboration with international institutions and national governments, appear to be of the type that mariners have produced in practice and ensure the continuation of the workflow. However, with today's global problems, particularly new fuel types, a zero-carbon target, changing marine technologies, and new shipbuilding processes, they have become issues that decision-makers, investors, and sector employees need to solve at various levels. These processes will also have significant effects on geopolitical changes in the seas.

Therefore, more sensitive analysis processes are required, particularly in international and national issues related to maritime.

As a result, NAVIS Academy, which is rapidly expanding and attempting to contribute intellectually to strategic issues through its expert authors, tries to address maritime phenomena that are occurring both domestically and internationally from all sides.

A general assessment of the year 2022 has been prepared for you by NAVIS Academy, which started to be followed in the sector in a short time. This assessment has been prepared by NAVIS Academy taking into account the Russia-Ukraine war, which is lived a hot and violent conflicts in particular and could have an impact on our country directly.

Alp Kırıkkanat

Author

Rantings and Musings on 2023

First and foremost, I wish all Navis Academy readers a happy 2023. I'd like to extend my best wishes in advance, review 2022 briefly, look for clues about 2023, and share my humble views to explore expectations.

In shipping conferences abroad, especially in well-known "shipping” nations, those who predicted some degree of hardship in the first six months but are optimistic about the second half, are most likely ship owners who know that bankers and insurers are listening to them, as well as analysts of the brokers who sell ships to these owners At these conferences, we don't often see very pessimistic presentations.

During financial market presentations on the other hand, even the most optimistic analysts are predicting a soft landing. Typically there is an expectation of a "recession". I highlight this in brackets as in economy lexicon, "recession" means "two consequtive quarters of contraction”. (The Federal Reserve Bank of the United States might disagree with this definition.) As a result, it is very difficult for such a thing to happen globally, but in the scale of developed countries we can say that there is an expectation.

Returning to our article, we may be "carrying coal to Newcastle" as the British put it, but I believe it can be an "addition" to market perspectives. For quick reading and comprehension, please see the following listed topic by topic:

1. In my predictions for 2022, I called attention to two issues. My overall prediction was that 2022 had potential, albeit not as much as 2021 and in the shadow of the Federal Reserve Bank of the United States (Fed). Naturally, we could not predict war. However, there is one issue I must bring up without hiding behind it: 2022 already opened up very slowly without the influence of war. The effect of interest rate increases by the Federal Reserve (Fed) on commodity movements was already foreseen. Fed interest rates have increased significantly since the beginning of the year, from about 0 to 4.5 percent as of last week.

What is the expectation?

This week, the Fed may have raised rates by a half-point for the last time. Alternately, after that, it can make small fine-tuning adjustments.

Again, the steps should be taken after the first quarter of 2023 should be watched closely. Although there are rumors/ expectations of monetary expansion from them once more, for the time being we should exercise caution and refrain from getting carried away by so called verbal interventions. In the meantime, the European Central Bank will keep tightening and follow in Fed's wake. In the meantime, the European Central Bank will keep tightening and follow in Fed's wake.

2. We stated that the Russian-Ukrainian war began in February. With this, everything spiraled out of control. Dry cargo indices failed to maintain their previous year's levels. While the Russian-Ukrainian conflict reduced European demand, other factors, such as the energy crisis, generally reduced manufacturing. Short sea shipping has also been suppressed by sanctions.

Whilst currently dry indices are correcting as a seasonal recovery, container freight rates are still declining as a result of weaker purchasing power. For instance, in a period of three months, the daily charter rate for 1000 TEU (Twenty-foot Equivalent Unit) ships, which are also heavily traded in this region, regressed from 38–40 thousand dollars/day to 18–19,000 dollars/day.

Due to sanctions Russian oil needs to go longer distances and the fact that oil is imported from longer distances rather than from Russia, tanker freight rates are continuing to increase.

What can happen?

We cannot make any firm statements about energy or the general policy to be employed in dealing with Russia without taking into account how Europe as a whole will spend the winter. Everything is changing by minutes. If this continues, trade and industry in Europe may suffer long-term damage.

This can inevitably result in softening, in my opinion. Some protests started to emerge from some nations.

There won't be any more traditional shipments from the Black Sea to Europe, war or no war. The demand for Russian goods in Europe won't be as strong as it was previously. Also Europe will not be able to import as before from Ukraine despite their strong desire. Dry cargo/general cargo freight rates in the Black Sea and Mediterranean will be reduced for this reason alone. The coaster trade is an exception for this, which has increased in response to the rising grain demand in nations like Turkey. However, this trade can also periodically strengthen and experience sharp declines.

The Black Sea has this famous “grain corridor” that currently maintains balance and keeps the ships busy as you know. Prior to that, there were cargo hauls from the region near the border between Ukraine and Romania (Reni, etc.), and the wait times there were somehow balanced with high freight rates. In my opinion, there will be some way to keep this balance.

Sanctions may be imposed on the regions that Russia has annexed, and only those with "the courage" or financial means to acquire and manage temporary ships for this purpose will likely be able to conduct business in the Sea of Azov. The freight rates in this situation will develop accordingly. Quotations of cargo shippings to Russia and Ukraine could significantly increase (based on the prevalent conditions in river market).

This war has triggered a very large fault line, we can only guess what will happen next by looking at the trade in the cold war years. Because there is no longer any real understanding or trust between the parties.

3. Turkish shipowners earned good money in 2021–2022, and opted to quickly increase tonnage by tapping into the opportunities in the right time. With high freight rates, they could greatly amortize their investments. At the moment, dry cargo indexes have recovered a little, so the financial strength of ship owners will last for a while. Having paid of their debts to a large extend, ship owners might be more willing to take the tonnage risk. This could mean that such investments will continue.

4. Let's take a more general look: The IMF predicts that between this year and next, about a third of the global economy will contract for at least two consecutive quarters, with a 4 trillion USD loss in production by 2026. As maritime professionals, we can clearly feel the contractions and pauses that are occurring ahead of us. Additionally, it might be possible for ship owners with savings to consider longer term and purchase a ship. In contrast to the market, this can sustain ship prices.

Forecasts indicate that the energy crisis will, at best, have a negative impact on European Union growth of 0.4 percent and, at worst, 2.7 percent. Here, the spread between the best/worst cases for the big countries (such as Germany, France, the Netherlands) is narrower. The energy crisis might have "interesting" consequences because these nations are also in charge of a significant amount of trade, separating those who are suffering greatly from those who are suffering less within the European Union.

5. Aside from these, the biggest agenda will be EEXI (Energy Efficiency Existing Ship Index), which will be enforced in 2023 for large tonnage. We'll see if the ships will slow down or whethers there will be no change. The analysis is that the supply will change very little. My guess is that the speed cuts will gradually be put into practice and the impact, if any, will be felt gradually. Supramaxes and larger tonnage will most likely be affected more than handysize and below.

Wishing you a happy 2023 again…

Engin Koçak

Author

Russia-Ukraine War and Possible Expectations for 2023

In 2022, we had a busy year. We can say that this intensity is felt due to the remainders of the previous year. The Russian-Ukrainian war, which began in 2021 caused that many geopolitical calculations have been remade and cards have been reshuffled. The world was caught unprepared for this war. Just when the impact of the Covid-19 pandemic was passing, and it was thought that breath was going to be taken but the war began. In their own game theories, the desires of main actors who tried to bring destruction to Ukraine's political demands and the longtime concentration of Russians in the pre-war period have become a fact. Of course, the situation we have arrived at is not very pleasant. Russia's hasty attitude after the military build-up and Ukraine's inability to form a balance among the main actors has brought the issue to the present day.

This game, which begins with the dominant strategies of the main actors, has already reached a point where the parties are being dragged to seek a new balance. This balance, however, will vary depending on the political and military objectives that the parties are able to achieve. It is not yet clear how much of the yield will be able to satisfy the actors on the ground. When you look at political statements, you might think they display a zero-sum game in which one party's gain can mean the other party's loss. However, considering that these actors have nuclear weapons power; there is a need to interrupt this scuffle on the ground, at least with a temporary ceasefire.

So, is such a ceasefire possible?

Eventually, Ukraine's endless demand for money and arms from the West will lead to a new and essential debate in USA and EU public opinion. Ukraine's political rhetoric is such that it will make the war even longer-term. For the time being, Russia's energy constraints appear to be inversely proportional to the EU's resistance.

As of spring 2023, it is possible that the EU will conduct a damage assessment and a new situation assessment in light of the energy needs and experiences during the winter months.

In a possible assessment, it is a matter of curiosity how the political pressure of the United States and the vital demands of its own production circles and public opinion will be balanced. Considering these conditions, it is clear that the EU will be unable to survive a second winter in this way due to economic and social reasons. This situation in some EU countries, it could start a process that could lead to political power changes in political elections or cabinet resignations as a result of circumstances.

Russia, on the other hand, has presented a profile that contradicts military assessments made before the war began. Considering the places, it abandoned or withdrew from on the ground, its political and military goals and as well as military power were become controversial. However, issues such as armored vehicles left on the ground, weapons, the shooting of the Kerch bridge, the loss of the Moscow frigate and the attack on air bases in Crimea were discussed for a long time. In fact, the damage that Russia is doing throughout Ukraine is enormous. Major damage has been done to Ukraine's vital infrastructure.

But there is two problems Russia can’t handle; first, Western support for Ukraine and second, its armed forces which appears to be unprepared. It is difficult to find solutions to these two problems in a short time. It is trying to respond by imposing energy restrictions on the EU and conducting airstrikes against Ukrainian cities' infrastructure. It can determine a new strategy depending on how much EU policy will change during the first two quarters of 2023. However, a discrepancy is clearly seemed between his high political goals and the use of conventional military force. If Russia fails to see normalization signs of EU as a result of US pressure, it will try to use its existing military power, perhaps more economically, within the scope of its new modified political and military objectives.

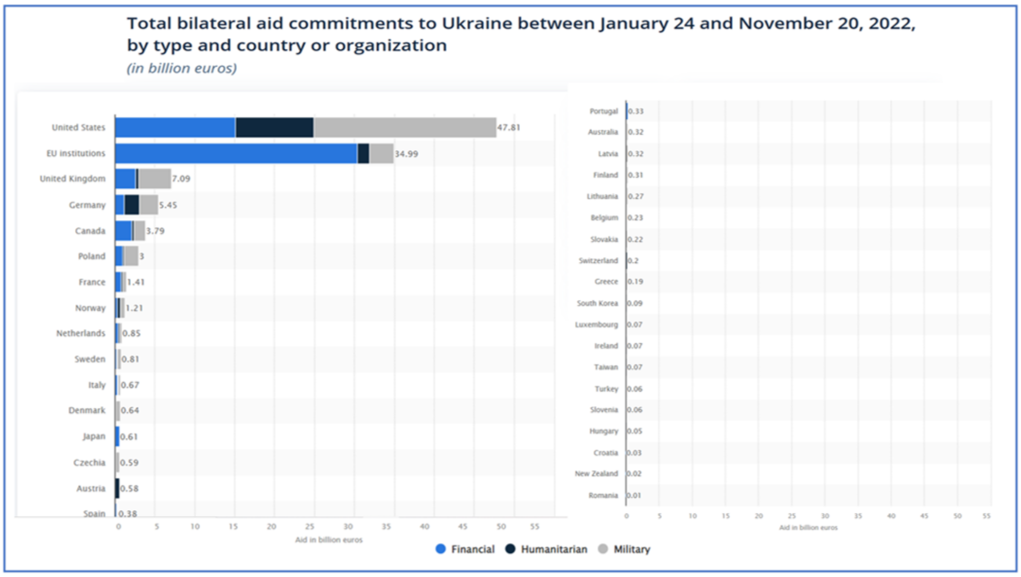

Diagram-1: Total Bilateral Aid Commitments to Ukraine Between Jan. 24-Nov. 20, 2022
Source: Statista

As a result, with an optimistic forecast, it can be thought that there will be able to go to a ceasefire from mid-2023 onwards, even if there is no peace. Whatever the main actors think, it is a fact that the world requires it. Without it, Ukrainian and Russian policymakers' options and their room for maneuver may be limited. On warring parties, it can be expected that there will be a squeeze in the scope of international expectations, prestige, and possible domestic public opinion reactions.

This may cause the parties to take unforeseen risks. One side was pledged 1.5 billion US Dollar in military aid by sending a high-level delegation to the United States, while the other says it will increase troop numbers to 1.5 million. In this context, the possibility of the main actors turning the issue into a zero-sum game; it will be directly proportional to the risks posed by the political and military squeezes of the conflicting parties. The end of this would be a complete disaster.

For this reason, the main actors are conducting the issue in a controlled but sometimes within an equation of conflict whose level of violence increases from time to time. Ukraine received an intemperate reaction from the United States when they attempted an attack on interior of Russia.It was reminded that the aid provided was for defensive purposes only. In that case, it can be said that there is a red line in the heads. Even the Ukrainian government's recent visit to the United States; it may also be the last credit of management. Because resources are not unlimited, and it is clear that the aid is provoking a backlash from opposition Republicans who will take US House of Representatives' majority in early 2023.

Of course, it is possible that Russians can increase the number of soldiers quantitatively, but whether it will work in terms of quality is debatable. Russian army performance since the start of the war has not been satisfying them. We have witnessed that senior commanders have been dismissed very often. It is unclear whether reinforcements will be provided in the short term, after recruit training, or from elite troops in other regions.

As a result, even if there is no peace by the end of the winter and at the moment, it is clear that the conditions for a possible ceasefire are not yet fully ripe. However, the months of March and April 2023 are critical in this context...Economic and social fractures in some EU countries, public questioning of aid in the United States, and Russia's tendency to use more disproportionate force may bring conflicts to the table..

Reflections of the War on Countries:

The effects of war did not only extend to the warring parties. All of these uncertainties create problems not only for the warring parties, but also for the surrounding countries including our country, the EU, and the rest of the world.

The possibility of starvation and famine has emerged in many parts of the world. The possibility of the prolongation of the war will have an impact on disagreements and conflicts all over the world, at the same time arising of new problems and crises. As a matter of fact, the issues that we can classify as the butterfly effect which has created a broad sphere of influence that extends to the households of some developing countries. So, at this point, let us continue our analysis by prioritizing these countries according to interaction levels with this issue.

For instance, as a result of the war, in some countries, the real incomes of households, especially those caused by wheat and corn inflation, have entered into downward trends. In this context, a grain corridor was established to ensure the safe transfer of Ukrainian grain accumulated in ports, with the goal of preventing hunger and famine. The effects of the war on households on a country-by-country basis have been the subject of a scientific study and the results of a study conducted by the UN are presented in Diagram-2.

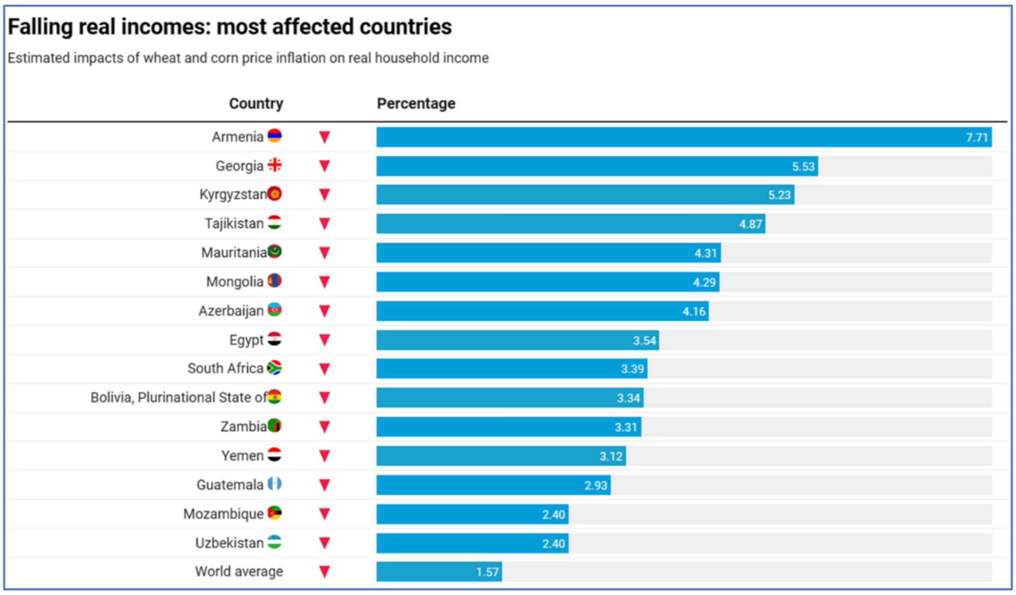

Diagram-2: Falling Real Incomes: Most Affected Countries

Source: UNCTAD

In this context, the grain corridor is becoming increasingly important for at least some of these countries. In terms of the corridor, it appears that some continuity and stability have been achieved, albeit through diplomatic efforts. However, Russia's stance on this issue began to shift after the Kerch bridge was shot by Ukraine and its political statements were made indicating that the corridor's future was uncertain.

In this context, the most important effects of the war are seen on food and energy prices. In developing countries, according to Diagram-1, more than half of poor household income is spent on food. It is stated that it is critical that these poor and middle-class groups, who have been hard hit by the crisis and mostly live in cities, should be covered by more social security. A 10 percent increase in food prices reduces households' purchasing power by more than 5 percent. This amount is estimated to be equal to the average health-care expenditure by poor families.

A large part of the previous analyses put focused on European countries. However, war and the crises it creates; naturally, it reveals that it affects some Central Asian and African countries more than others. Possible social instabilities in these countries may result in larger waves of migration to our country and Europe.

In this context, Armenia, Georgia and Kyrgyzstan, which are included in Diagram-2 and whose purchasing power is seen to have eroded by more than 5 percent, are primarily affected by these sharp fluctuations. In these regard because of their being of our neighbours, it should be needed to monitor the Armenia and Georgia closely.

How long can the world handle this trend? Even before the end of winter, data on Central Asian and African countries began to emerge through the UN. The situation of Europe which is seen as a recipe for salvation by the citizens of these countries will become clearer in April 2023 and beyond.

Some forecasts, however, predict that the situation will not change much over the next two years, and that growth forecasts will remain negative. The study in Diagram-3, which takes into account the GDP of OECD member countries in context of the Russian gas embargo, reveals the situation in this regard. The inability of these countries to recover, for example, may cause to become worse the situation of the countries listed in Diagram-2.

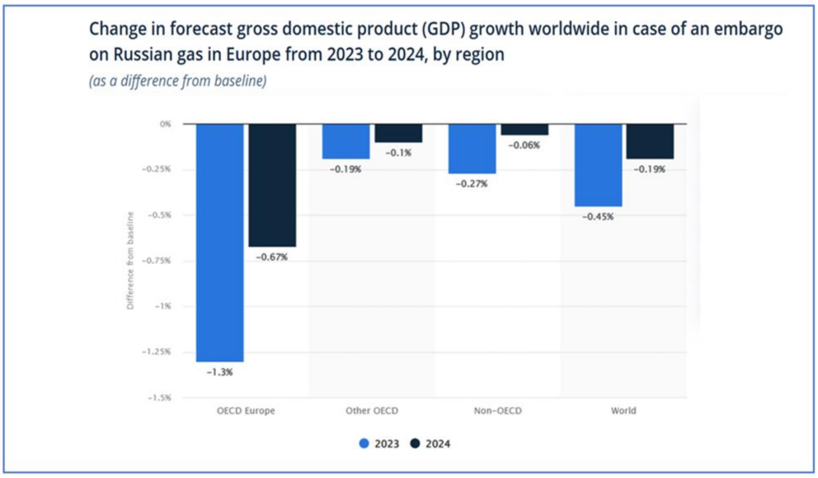

Diagram-3: Change in Forecast GDP Growth Worldwide in Case of An Embargo on Russian Gas in Europe from 2023 to 2024, by Region

Source: Statista

Of course, the odds in Diagram-3 are estimates. However, there are also possibilities that can be considered a step further of the issue. For instance, the possibility of Russia expanding the front through Belarus, a spark in the Pacific, or unilateral Russian attitudes on Northern Routes in the Arctic could completely reverse all calculations. However, the world requires a possible cease-fire or peace process.

However, especially if we look at the issue only from the perspective of EU member states, it can be seen what the impact on EU production of Russia's energy restrictions is starting in the middle of 2022 is not yet fully clear right now. But, according to estimates, it is foreseen that these restrictions will have a significant impact on the Gross Domestic Product (GDP) of some EU countries within a year. This is also one of the apprehensions in the context of the global economy.

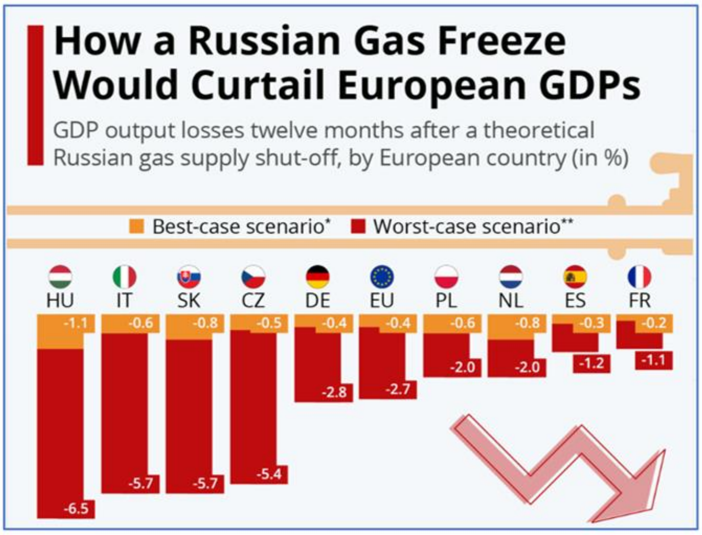

Diagram-4: How ARussian Gaz Freeze Would Curtail European GDPs

Source: Statista (IMF)

It is obvious that the expected production decline in the West will be the worst case scenario in the EU's countries such as Italy, Germany, the Netherlands, Spain and France, where strikes, unemployment and social tensions will be the response. In fact, strike waves are already occurring in some countries. The decline in production will make it impossible to deliver goods and services in a variety of ways.

Some pessimistic predictions for 2023 and even 2024 are, of course, based on the prolongation of the war. Recent developments, however, put forward the signs of extension. How will this affect maritime transport, an essential pillar of global trade?

Expected Problems on Maritime Transportation:

In terms of container transportation;

Considering the worst-case scenario, the fall of production in Europe; Of course, it will also affect maritime transport. Some EU member states, particularly Germany, are attempting to take action in this regard. Due to the Russian-Ukrainian war, supply chain issues have increased freight rates and commodity prices, causing difficulties in container transportation.

Forecasts indicate that the possible index will return to pre-pandemic period in 2023.This is described as an example of a "return to the average". Given what has occurred, unusual results, such as a "return to average," are expected to return to statistical norms over time.

The index is likely to settle between 1,500 US dollars and 2,000 US dollars in the event of such a reversal. Of course, carriers will also take precautions to pass this period of collapse with the least damage. However, it appears that the war's negative impact on commodity prices continues.

On the other hand, we are facing another surprise. Pandemic cases in China have begun to rise once more again. The news is not pleasant. Although the ceasefire or peace process will provide some hope, all of these predictions, as well as the increase in the new epidemic and transmission rates in China, where we currently live, may bring new restrictions on the agenda. While the number of deaths rose to 5242, it is stated that it is not possible to keep the case numbers accurate. The situation tends to get out of control again...

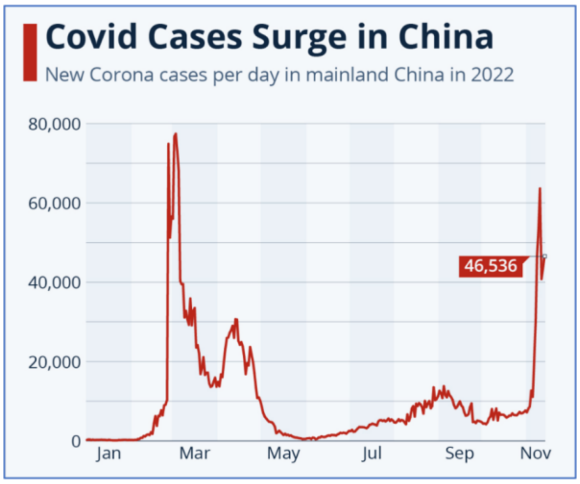

Diagram-5: Covid Cases Surge in China

Source: Statista

The prolongation of the war and the possibility of increasing its violence, as well as the fact that this latest situation in China is out of control and a new epidemic is emerging, may upset all calculations for 2023.

On the other hand, in a survey conducted as of the beginning of 2022:

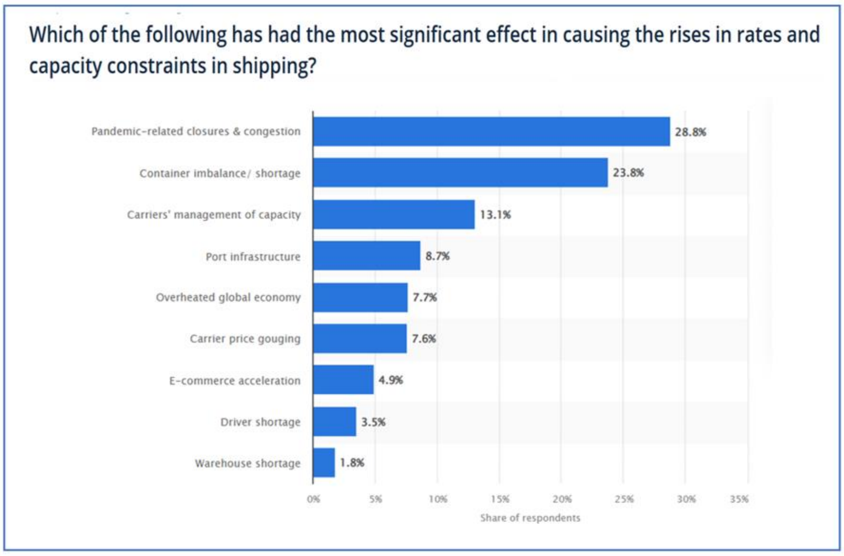

Diagram-6: Which of The Following Has Had The Most Significant Effect in Causing The Rates and Capacity Constraints in Shipping?

Source: Statista

It seems that 28.8 percent of the respondents were affected by the pandemic and 23.8 percent by the container shortage; these are put forward as the two most significant primary problems in shipping. With the growth of vital constraints in China, the ongoing shortage of containers, and the concerns caused by the global economy in Diagram-6, it is possible that world maritime trade will shrink even further in the context of new outbreaks.

For instance, estimates for the third quarter of 2022 showed that the Trans-Pacific had the highest inter-regional container cargoes' flow with 32.7 million TEUs. However, in another survey, 28.3 percent of the participants stated that there is a shortage of containers in a part of the Trans-Pacific due to the effect of freight rates.

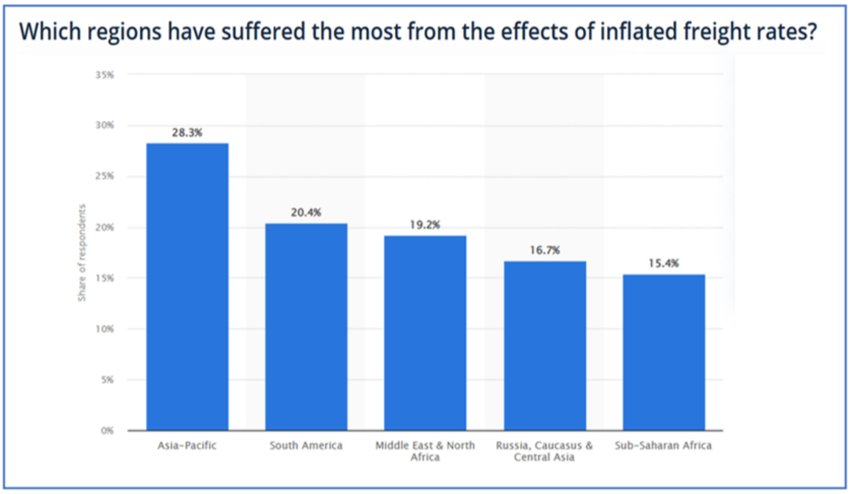

Diagram-7: Which Regions Have Suffered The Most From The Effects of Inflated Freight Rates?

Source: Statista

The reasons for this situation are also related to developments in the West. It is conceivable that forecasts in Diagram-4 and trends in Diagram-5 will increase the container shortage shown in the survey in Diagram-6 and will also affect the survey of freight rates indicated in Diagram-7.

In this context, we can say that hunger and famine will become vital in areas where goods and services cannot be delivered, particularly in Sub-Saharan Africa, as shown at the bottom of Diagram-7.

As a result of the factors causing price increases and capacity constraints in shipping shown in Diagram-6, it is clear that a chain reaction has emerged beginning with the pandemic, that with the Ukraine conflict and Pacific tensions, world trade and thus container shipping have faced and will face difficulties. However, with the global troubles that are becoming chronic; It can be also said that some innovations and practices put forward by international institutions as a necessity beginning in 2023 also carry risks that limit maritime transport.

For instance, fuel diversity, new applications to reduce flue gas emission rates, innovations in ship technologies and increasing metal sheet costs; It makes it difficult for investors in the sector to determine their supply-demand balances and turn to new investments in these global conditions.

Developments in these areas will determine by the end of 2023, whether it will be included as a new factor in the problem factors in Chart-5 or whether it will contribute to the resolution of existing factor issues.

In terms of tanker transportation;

The impact of the war, particularly on Russian tanker transport, became more visible. The EU sanctions on Russian crude oil and petroleum products, which went into effect on December 5, 2022, forced the Russians to seek other options. As an example, there were some allegations on agenda that the Russians, as a precaution, had set up a shadow fleet with companies, ships, and owners who wanted to do business with them. Indications have been put forward to help confirm these predictions.

To verify these claims, figures on tanker sales were provided, the shipowner identity of which was not disclosed. Attempts were tried to calculate how many additional tankers would need to be added to the existing tanker fleet in order to transport the Russian crude oil. Comparisons have been made with the sales of vessels whose shipowner identities have been concealed. Of course, it would not be misleading to say that some of these figures are estimates

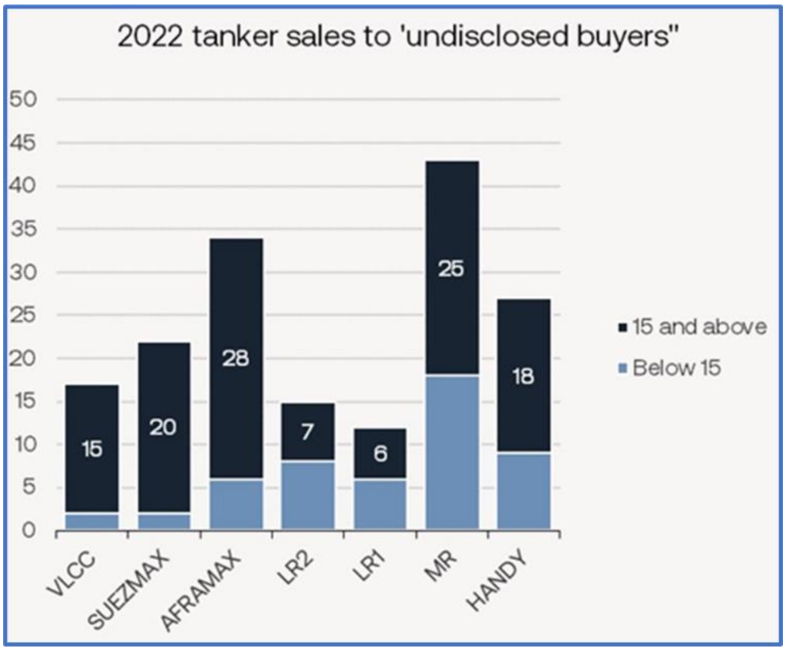

Diagram-8: 2022 Tanker Sales to ‘‘unclosed buyers’’

Source: Splash247 (Braemar)

In addition to the Russian-controlled fleet, the estimates show the number of VLCC, Suezmax, Aframax, LR1, LR2, MR and Handysize vessels aged 15 and over and under 15 years of age sold to unidentified buyers as of this year.

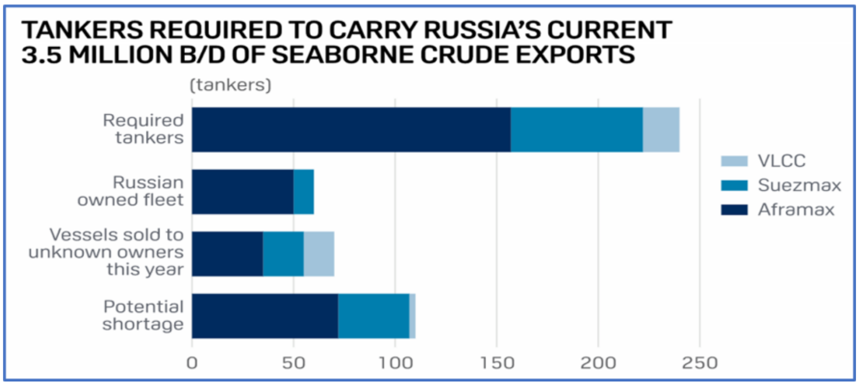

Diagram-9: Tankers Required to Carry Russia’s Current 3,5 Million B/D of Seaborne Crude Exports

Source: Spglobal (Braemar)

A comparative chart has been drawn up based on a calculated value that the Russians need about 240 tankers to carry 3.5 million barrels of crude oil per day. The 60 tankers in the Russian inventory and the 75 tankers sold to anonymous buyers are 135 in total, with potential deficits of 240 units determined as 105.So far, some of this gap has been tried to be closed with 63 Greek tankers.

Then, after December 5, according to EU sanctions:

-How will the 105-tanker deficit be closed?

- To which markets will the crude oil transported by these tankers be offered?

For now, the answer to these questions:

- Tanker shortages can most likely be alleviated by crude oil transfers to tankers owned by China and other Far Eastern countries.

- With the transfers to be made on the uncertain route's legs in the Atlantic and Mediterranean for the time being, new markets can be provided by the formation of an illegal market in Europe and the Russian tanker fleet generally turning its course to the East.

On the other hand, some British open sources saw this Russian project, called as Shadow Fleet, as a theory in June of this year. There was some debate about whether they could be insured by the Russian P&I. However, as we approached December 5th, the tankers were sold to secret buyers began to be revealed according to their type. The situation became serious. Sanctions, on the other hand, are considered to be able to stop most Russian crude oil exports.

In terms of natural gas transportation;

When we look at the overall course of natural gas imported by the EU from Russia via the Nord Stream Lines between 2021-2022; due to the Ukrainian war, we see fractures in June 2021, July 2022 and November 2022. When we examine these fracture dates in a little more detail:

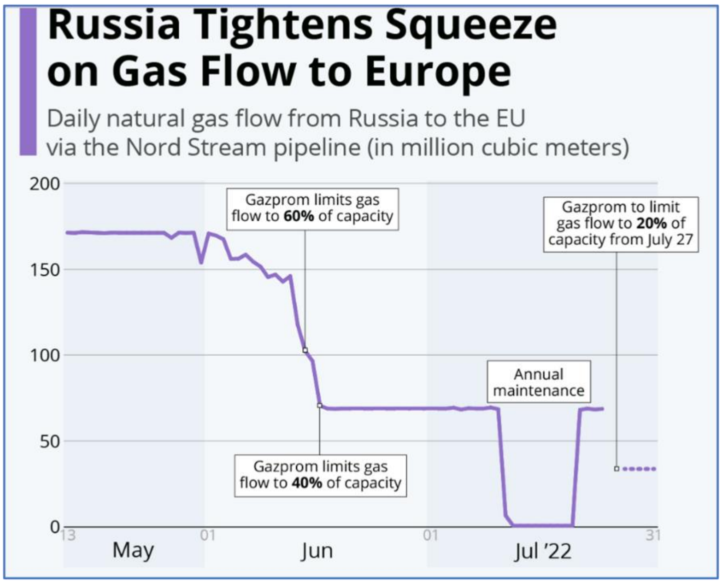

Diagram-10: Russia Tightens Squeeze on Gas Flow to Europe

Source: Statista (Bruegel, ENTSOG)

Due to Russia's attitude and policies towards Europe within the scope of the Ukraine war; As from June 2021, first we see a gas flow of 60 percent of the capacity and then 40 percent of the capacity. Russia cut off gas in July 2022 due to annual maintenance on the gas pipeline, as of July 27 gas flow was limited to 20percent of capacity. With the leakage at the gas lines in September, the flow has completely stopped.

In our initial assessment, we also stated that Russia would cut gas in proportion to the EU's support for Ukraine, depending on how the war is going.

It was also tried to take measures against these actions by the EU. First and foremost, a plan for the economical use of gas in spare tanks was devised. Of course, this is not enough. European countries are not desperate on this issue, but the solution is somewhat long-term.Because many countries have begun to see the Floating LNG Storage and Regasification Unit (FSRU) as a solution and have begun to invest in this context.The last example is Germany... She was brought the 283-meter-long ship "Neptune" to the Lubmin industrial port on December 01 for this purpose.

However, 1 terminal is not enough. When we examine the efforts of European countries in this context as of November:

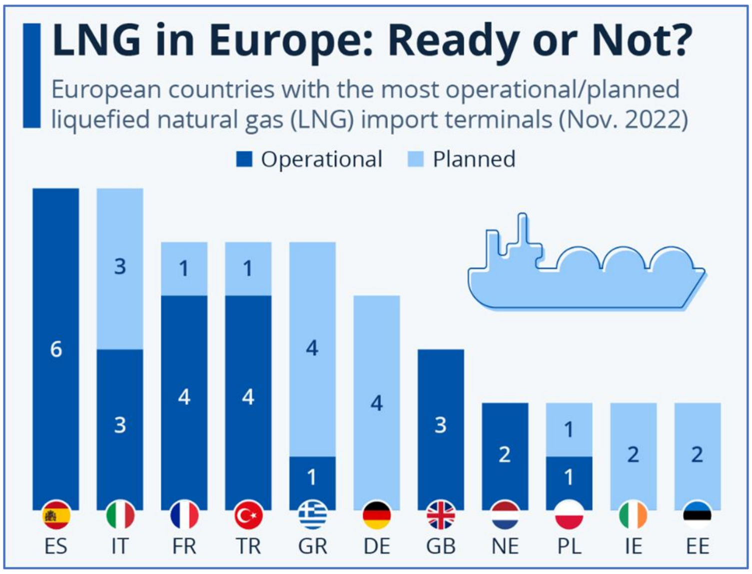

Diagram-11: Operational and Planned LNG Import Terminals of European Countries as of November 2022

Source: Statista (Gas Infrastructure Europe)

Except for Spain, the countries in Chart-11 are required to have planned FSRU and coastal equipment ready, excluding those available for their own needs. Concerning Germany, for example, it is stated that the first terminal's connections were made on December 1, while the other three terminals will be expanded by the end of 2023 for this country.

However, it is also necessary to take into account the FSRU type, coastal storage system and capacity, ease of distribution and adequacy of use. With all these plans, it is an important factor how much of the country's needs will be met.

Finally, as long as the Russian-Ukrainian war continues, it is considered that the problems in natural gas supply may continue.

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Conclusion

It is obvious that the Russian-Ukrainian war clearly has a major impact on the maritime sector. On the other hand, we cannot say that this sector has been impacted solely by the war. The pandemic and crises in other regions and sea areas with high probability of conflict become a potential threat to the maritime sector. For instance, the Bab-El-Mandeb, Hormuz, and Malacca Passages, as well as the Pacific region, are all high-risk areas in every way. On the other hand, the world is worrying about a new and possible outbreak in China that is likely to get out of control.

The emergence of any or all of the other risk possibilities, in addition to the Russian-Ukrainian war, would almost certainly open the door to Armegeddon.

Of course, first of all, we attempted to develop our analysis of 2022 and 2023 predictions on the hottest Russia-Ukraine war, which must be brought under control and extinguished as soon as possible. Furthermore, all the possible consequences of this war are concerned closely to our country.

On the other hand, the continuation of other regional crises and epidemics, as well as the Ukrainian war, is an impediment to the establishment of a new and permanent international system. As production declines, the systematic flow of goods and services between countries and regions becomes impossible. This causes obvious problems in maritime transportation and supply chains.

From this perspective, it can be stated that epidemics, wars, conflicts and even technological and financial difficulties in keeping up with the expected innovations in the sector have brought up many uncertainties in the maritime field.

In this context, with the chronic global troubles; it is also assessed that some innovations and practices put forward by international institutions as a necessity beginning in 2023 carry risks that restrict maritime transport.

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For instance, fuel alternatives, new applications to reduce flue gas emission rates, innovations in ship technologies and increasing metal sheet costs; It makes it difficult for investors in the sector to determine their supply-demand balances and turn to new investments in these global conditions.

In conclusion, developments related to these issues will become clearer towards the end of 2023, whether it will be included as a new item in the sectoral problem factors in our analysis or whether it will contribute to the resolution of existing problems.

Wishing that the year 2023 will bring peace, tranquility, and stability to our country, region and world in every sense...

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