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## **The impact of COVID-19 on the bulk market in the Mediterranean**

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### **Abstract:**

COVID-19 pandemic had a severe impact on the bulk market industry around the world. The reduction in demand for commodities, disruptions in the global supply chain, and increased operating costs led to a decline in trade volume and revenue. The impact of the pandemic varied across regions, with Asia being the most affected. The pandemic has highlighted the need for the industry to develop strategies to mitigate the impact of future disruptions and ensure the continuity of the global supply chain.

This research aims to provide insights and recommendations for policymakers, business leaders, and other stakeholders to better prepare for and respond to future pandemics or other global crises; using a comprehensive literature review. This research follows an inductive approach by reviewing previous studies on the impact of COVID-19 on the bulk market.

**Key word: COVID-19, Bulk Market, Mediterranean.**

## تأثير جائحه كورونا على سوق البضائع الجافة في البحر الأبيض المتوسط

كان لوباء كورونا اثر شديد على سوق البضائع الجافة في جميع أنحاء العالم حيث أدى الوباء الى انخفاض الطلب على السلع الأساسية و الى اضطرابات في سلاسل الامداد العالمية وكذلك زيادة تكاليف التشغيل أدت الى انخفاض حجم التجارة والإيرادات.

لقد تفاوت تأثير الوباء عبر المناطق حيث كانت آسيا هي الأكثر تضررا و هنا ظهرت الحاجة إلى تطوير استراتيجيات للتخفيف من تأثير الاضطرابات المستقبلية لحالات مشابهه لجائحه كورونا وضمان استمرارية سلاسل الامداد العالمي. يهدف البحث إلى تقديم رؤى وتوصيات لصانعي القرار وقادة الأعمال وأصحاب المصلحة الآخرين للاستعداد والاستجابة بشكل أفضل للأوبئة المستقبلية أو الأزمات العالمية الأخرى باستخدام مراجعة شاملة للأدبيات خلال عام 2023.

**الكلمات الدالة: كوفيد 19، البضائع الجافة، البحر الأبيض المتوسط.**

### 1. INTRODUCTION:

Maritime transport plays a critical role in global trade and economic development, serving as a key link between producers and consumers across different regions of the world. Shipping is responsible for transporting approximately 90% of the world's goods, including bulk commodities such as oil, coal, grain, and minerals. The efficient and reliable operation of the maritime transport sector is essential to ensuring the stability of global supply chains and the smooth flow of goods and services (UNCTAD, 2020).

The global bulk market is a key component of the world's economy, providing essential commodities such as minerals, grains, coal, oil, and gas. The term "bulk" refers to the

transportation of large quantities of raw materials, which are typically unpackaged or loosely packed. These materials are often shipped in large vessels known as bulk carriers, which are specifically designed to transport dry bulk goods. The bulk market is crucial to the global economy, as it plays a significant role in the production of goods and the provision of essential resources. This introduction will provide an overview of the bulk market, its importance, and the key factors that influence it.

The bulk market is highly diverse, with a wide range of commodities being traded globally. These include metals such as iron ore and copper, agricultural products such as wheat and corn, and energy products such as crude oil and natural gas. The importance of the bulk market cannot be overstated, as these commodities are the building blocks of many of the world's industries, including construction, agriculture, and energy. The demand for bulk goods is closely tied to global economic growth, with emerging markets playing an increasingly significant role in driving demand.

The transportation of bulk goods is typically done using specialized vessels designed to carry large quantities of unpackaged or loosely packed goods. Bulk carriers are generally divided into two categories: dry bulk carriers and liquid bulk carriers. Dry bulk carriers are the most common type of bulk carrier and are used to transport commodities such as coal, iron ore, and grains. Liquid bulk carriers, on the other hand, are used

to transport liquids such as crude oil and chemicals. The bulk market is highly competitive, with many players vying for a share of the market. The market is characterized by significant fluctuations in demand and supply, which can have a significant impact on prices and the overall profitability of the industry (Dinwoodie, et al., 2014).

There are several key factors that influence the bulk market, including global economic growth, changes in supply and demand, geopolitical events, and technological advances. For example, changes in economic growth rates can have a significant impact on the demand for bulk goods. When economies are growing rapidly, the demand for raw materials such as iron ore, copper, and oil tends to increase. Conversely, when economies slow down, demand for these commodities tends to decrease. Another key factor that influences the bulk market is technological innovation. Advances in technology have led to the development of larger and more efficient vessels, which can transport more goods at a lower cost. This has led to increased competition among shipping companies, which has driven down shipping costs and increased the efficiency of the bulk market. The next section will review the bulk market in the Mediterranean and also review previous studies that concern the impact of COVID-19 on the bulk market around the world (COMTOI and Lacoste, 2021).

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## 2. LITERATURE REVIEW:

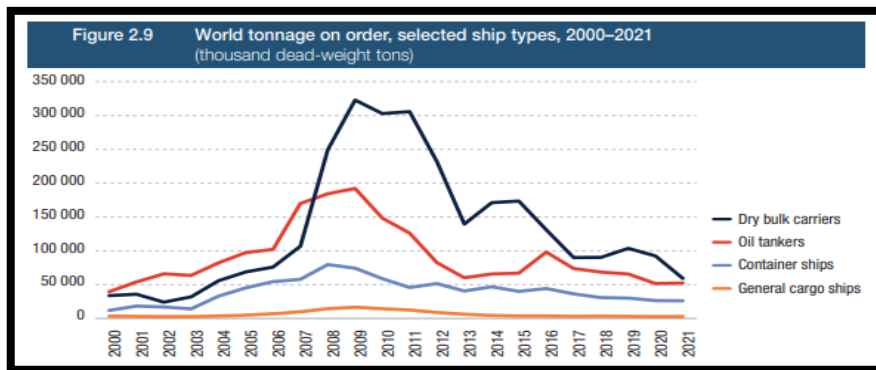
This section will be reviewing Previous studies on COVID-19 on bulk market:

Several studies have examined the impact of COVID-19 on specific commodities within the bulk market. For example, a study by the International Grains Council (IGC) analyzed the impact of the pandemic on the global grain market and found that disruptions to transportation and logistical challenges had significant effects on the trade of grains. Another study by the International Coal Markets (ICM) analyzed the impact of COVID-19 on the coal market and found that the pandemic had caused significant disruptions in the supply and demand for coal, leading to a decline in prices.

Ali, and Khan, (2020) analyzes the impact of COVID-19 on agricultural wholesale prices in India. The pandemic has disrupted supply chains and caused changes in consumer behavior, affecting prices of agricultural products. The study finds that fruit and vegetable prices decreased, while staple food grains prices increased due to panic buying and supply chain disruptions. The government's intervention has stabilized prices and ensured food security. The paper recommends continued monitoring and stabilization of prices, improving supply chain infrastructure, promoting digitalization, encouraging crop diversification and contract farming, and a coordinated approach among stakeholders to ensure food security and stable prices.

COVID-19 pandemic disrupted Australia's agriculture, forestry, and fisheries trade, with both negative and positive impacts. Negative impacts included supply chain disruptions, logistical challenges, and reduced demand from some trading partners, while positive impacts included increased demand for food and the potential for diversifying trade partners. The forestry sector was hardest hit due to the decline in housing construction, while the fisheries sector was relatively unaffected. The paper recommends that the Australian government strengthen the resilience of these sectors to future shocks by promoting digitalization and innovation, investing in infrastructure, and diversifying trade partners (Greenville et al., 2020).

Next figure illustrates world tonnage on order selected by ships types from 2000 to 2021



**Figure (1): World tonnage on order selected by ships types from 2000 to 2021.**

**Source: UNCTAD, 2021.**

Michail, and Melas, (2020) suggests that the industry should focus on building resilience and flexibility to prepare for future shocks and invest in digitalization and innovation to improve supply chain management. Governments and international organizations should provide support, including financial assistance and risk management tools, to help the industry navigate through the pandemic. The safety and well-being of workers should also be a priority.

COVID-19 epidemic has had a significant impact on the global shipping and port industry, with China being one of the most affected countries. The outbreak led to disruptions in the global supply chain, reduced demand for shipping services, and a decline in trade volumes, which affected the operations of the shipping and port industry in China. The paper finds that the COVID-19 epidemic has had a significant impact on the shipping and port industry in China (Yong-feng, et al., 2020).

Driouech, et al., (2021) mentioned that COVID-19 pandemic has disrupted the agri-food logistics system, leading to food losses and waste. The lockdowns and restrictions on the movement of people and goods have led to a decline in demand for certain products. In addition, they find that COVID-19 pandemic has had a significant impact on food losses and waste in agri-food logistics. The paper recommends that governments and industry stakeholders should work together to promote technology and innovation in the agri-food logistics system to reduce food losses and waste.

In contrast; Özen, et al., (2022) aims to examine the positive effects of the COVID-19 pandemic on food preparation and expenditure habits in three different countries, namely the United States, Italy, and India. However, while the negative impacts have been widely discussed, the positive effects of the pandemic on food preparation and expenditure habits have received less attention. The paper finds that the COVID-19 pandemic has had positive effects on food preparation and expenditure habits in the three countries studied. The pandemic has led to an increased focus on cooking at home, the adoption of healthier eating habits, and a reduction in food waste.

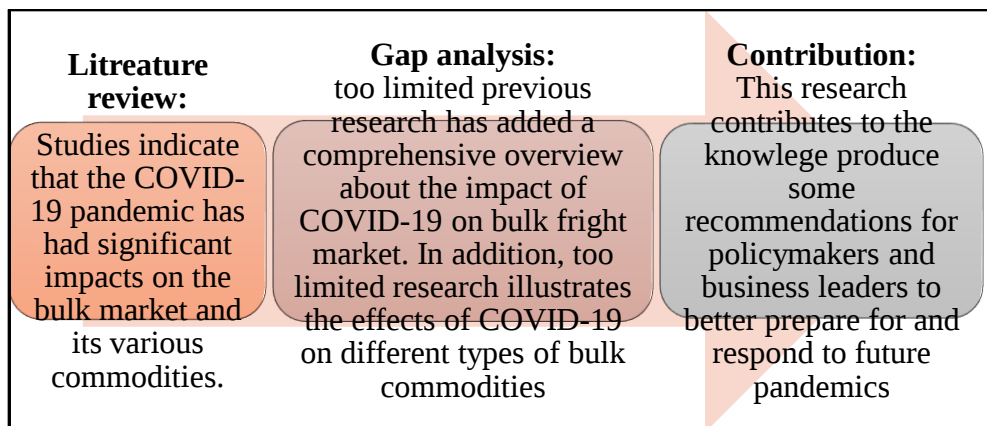


Figure (2) Gap analysis and contribution.

### 3. RESEARCH PROBLEM:

The bulk freight market has faced several obstacles recently. One major challenge has been the ongoing COVID-19 pandemic, which has caused disruptions to global trade and impacted

demand for commodities. Additionally, geopolitical tensions, trade disputes, and changing regulations have all affected the bulk market. For example, the recent Suez Canal blockage caused significant delays and disruptions to global shipping, including the bulk market.

The bulk market is heavily dependent on the prices of commodities such as coal, iron ore, and grain. These prices can be volatile and subject to fluctuations based on factors such as supply and demand, weather events, and geopolitical tensions. In addition, political instability and changes in government policies can affect the bulk market. For example, changes in trade policies, environmental regulations, and taxes can have an impact on the demand for commodities and the cost of transporting them.

#### **4. RESEARCH IMPORTANCE:**

Studying the impact of COVID-19 on the bulk market in the Mediterranean is crucial for several reasons. Firstly, the Mediterranean region is a crucial trade route connecting Europe, Asia, and Africa, and it is also home to several important ports, making it an essential hub for international trade. Secondly, the bulk market plays a critical role in the global economy as it involves the transportation of large quantities of commodities such as coal, grains, and minerals, among others.

The COVID-19 pandemic has had a significant impact on the global economy, and the bulk market has not been immune to its effects.

## **5. RESEARCH AIMS:**

This research aims to review bulk market in the Mediterranean from 2010 to 2021.

Research objectives are:

1. To define effects of COVID-19 on different types of bulk commodities.
2. To Identify opportunities and challenges that have arisen in the bulk market.
3. To provide insights and recommendations for policymakers, business leaders, and others to better prepare for and respond to future pandemics or other global crises.

## **6. METHODOLOGY:**

The methodology used in this study includes a comprehensive literature review of existing research and publications on the impact of COVID-19 on the bulk market. This review includes academic journals, industry reports, and news articles to provide a comprehensive overview of the topic. The purpose of this approach is to gather a broad range of information and data to analyze the impact of the pandemic on different types of bulk commodities. By synthesizing and analyzing the information collected through the literature review, this study aims to provide valuable insights into the impact of COVID-19 on the bulk market and its implications for the future.

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## **7. BULK MARKET IN THE MEDITERRANEAN FROM 2010 TO 2021:**

Mediterranean region has been an important hub for the bulk market for many years, providing a critical transportation link between Europe, Asia, and Africa. During the period from 2010 to 2014, the bulk market in the Mediterranean saw significant developments and changes, influenced by a number of factors, including economic conditions, geopolitical shifts, and technological advancements. One of the major trends during this period was the continued growth of China's economy, which drove demand for raw materials and increased shipping traffic between Asia and Europe. As a result, ports in the Mediterranean region, such as those in Italy and Spain, saw an increase in traffic and cargo volumes. In 2013, for example, the port of Genoa in Italy saw a 5% increase in traffic and a 9% increase in container volumes compared to the previous year (Pasquini, et al., 2018).

Another important development during this period was the opening of new ports and terminals in the Mediterranean region, which expanded capacity and improved efficiency. In 2012, the port of Tangier in Morocco opened a new container terminal with a capacity of 3 million TEUs (twenty-foot equivalent units), making it the largest port in Africa and a key hub for transshipment between Asia and Europe. The same year, the port of Piraeus in Greece also opened a new container terminal, which

helped to increase its capacity by 40% and strengthen its position as a major gateway to Southeast Europe.

In addition to these developments, the Mediterranean bulk market also faced challenges during this period. One of the main issues was overcapacity, with many shipping companies and ports expanding capacity in anticipation of continued growth in demand. However, the global financial crisis and economic slowdown in Europe and other regions led to a drop in demand, which resulted in lower utilization rates and increased competition.

The bulk market in the Mediterranean region has experienced both challenges and opportunities during the period of 2015 to 2021. The following is an overview of the major developments in the industry during this time. In 2015, the Mediterranean bulk market was still recovering from the global financial crisis of 2008. The region was experiencing low growth rates, high unemployment, and political instability, which negatively impacted the industry. However, there were some signs of recovery, and the market was expected to grow in the coming years.

In 2016, the Mediterranean bulk market started to pick up, with increasing demand for commodities such as coal, iron ore, and grains. This was due in part to the increase in construction and infrastructure projects across the region, as well as growing demand for food and agricultural products. The industry was also benefiting

from lower fuel costs, which helped to reduce operating expenses. The year 2017 saw continued growth in the Mediterranean bulk market, with strong demand for commodities and an increase in the number of new vessels entering the market. This led to increased competition and downward pressure on rates, which made it challenging for some operators to remain profitable.

In 2018, the Mediterranean bulk market faced several challenges, including political instability and increased regulation. The industry was also impacted by the ongoing trade tensions between the United States and China, which had a ripple effect across global markets. Despite these challenges, the market continued to grow, with an increase in the number of vessels and expanding trade routes. The year 2019 brought both opportunities and challenges for the Mediterranean bulk market. The industry benefited from a growing demand for commodities, particularly in the Middle East and North Africa. However, there were also challenges, such as environmental regulations and the ongoing trade tensions between the US and China. These factors contributed to a slight slowdown in growth, but the industry remained stable overall.

In 2020, the Mediterranean bulk market was impacted by the COVID-19 pandemic, which caused significant disruption to global trade and supply chains. The industry faced a decline in demand for commodities, and many vessels were forced to idle or reduce their operations. However, the market showed some

resilience, with some operators adapting to new market conditions and exploring alternative trade routes. In 2021, the Mediterranean bulk market is expected to continue its recovery from the pandemic, with a gradual increase in demand for commodities and an expansion of trade routes. The industry is also expected to face new challenges, such as increased environmental regulations and changes in global trade patterns.

COVID-19 pandemic has had a significant impact on the global economy, including the bulk market industry. The bulk market is a crucial component of the international trade system, and any disruption to its operations has far-reaching consequences for businesses and countries that rely on it. The pandemic has led to a reduction in global demand for commodities, resulting in a significant decline in trade volume and revenue for the bulk market. This paper provides an overview of the impact of the COVID-19 pandemic on the bulk market industry around the world (McCain, et al., 2022).

One of the primary impacts of the COVID-19 pandemic on the bulk market was a reduction in global demand for commodities. As countries implemented lockdowns and other containment measures, economic activity slowed down, leading to a decline in the consumption of commodities such as iron ore, coal, and grain. This reduction in demand had a severe impact on the bulk market, leading to a decline in trade volume and revenue.

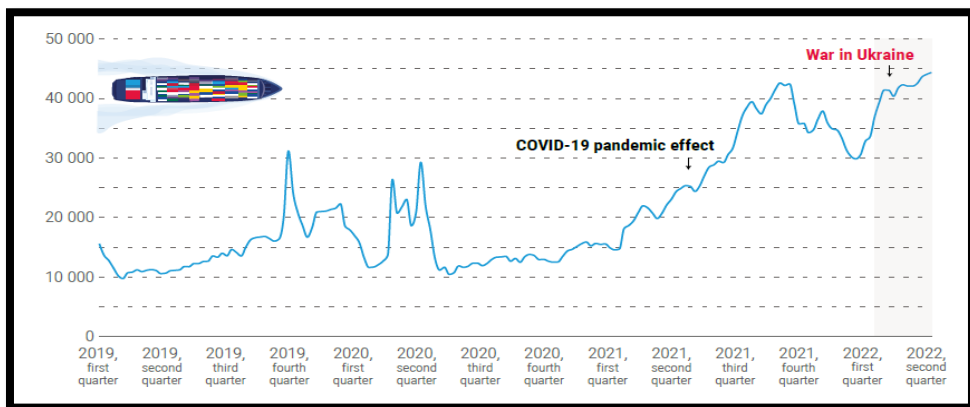
COVID-19 pandemic also disrupted the global supply chain, causing delays and disruptions in the movement of commodities. The closure of ports, quarantine measures for crew members, and other restrictions slowed down the movement of goods, causing delays and increasing shipping costs. These disruptions had a significant impact on the bulk market, leading to a decline in efficiency and an increase in operating costs.

The impact of COVID-19 pandemic on the bulk market industry varied across regions. In Asia, which is a significant producer and consumer of commodities, the pandemic had a severe impact on the industry. China, which is the world's largest importer of iron ore and coal, implemented lockdown measures that led to a decline in demand for these commodities. This decline in demand had a ripple effect on other countries that export commodities to China, leading to a decline in trade volume and revenue.

COVID-19 outbreak is a disaster in human history, which changed the world system and affected many life sectors such as the world economic sector, which was seriously damaged due to fluctuation and imbalance of demand and supply. Ocean freight is an important means of transporting goods and commodities globally, the year of COVID-19 and its aftermath revealed a wide range of challenges for this type of transportation, such as the high cost of sea freight, which led to an increase in the prices of goods for consumers.

By comparing, the performance of the freight rate in 2019 and 2020 before and after the outbreak of the COVID-19 pandemic, the index of Handysize, Panamax and capsize dry bulk carriers fell by 16.92%, 24.56% and 38.94%, respectively (Clarksons Research Studies, 2022).

In addition, the division of Russia's invasion of Ukraine started a new global economic crisis in Europe. And that this war greatly affected global growth, which was suffering from the repercussions of the Corona pandemic, which held back the world's economies through port closure measures, and also explained that the military operations carried out by Russia in Ukraine contributed to the disruption of the global supply chain, which is still even during the war, it did not recover from the negative effects of the pandemic



**Figure (4) Rising of shipping cost.**

**Reference: Clarksons Research Studies, 2022.**

### ***The effects of COVID-19 on different types of bulk commodities:***

The COVID-19 pandemic had a significant impact on the global economy, and the bulk commodity markets have not been immune to its effects. Different types of bulk commodities have been affected in different ways, depending on their respective markets and supply chains.

One of the most significant impacts has been on the oil market. The sharp decline in demand for oil due to reduced economic activity and travel restrictions led to a collapse in oil prices in early 2020. This had a ripple effect on other related markets such as liquefied natural gas (LNG) and liquefied petroleum gas (LPG), which also saw a decline in demand and prices.

The coal market has also been affected, with reduced demand from major coal-consuming countries such as China and India. The reduction in coal consumption has been due to reduced economic activity, as well as a shift towards renewable energy sources. The grain market has had a mixed response to the pandemic. The initial outbreak in China led to panic buying of grains, which temporarily increased prices. However, disruptions to supply chains and reduced demand due to economic slowdowns have led to a decline in prices in some markets. Mineral markets have been impacted by reduced demand from major consumers such as China, as well as disruptions to supply

chains due to lockdowns and travel restrictions. However, some minerals such as iron ore have seen increased demand due to government stimulus spending on infrastructure projects.

Overall, the COVID-19 pandemic has highlighted the interconnectedness of the global economy and the vulnerability of commodity markets to external shocks. The effects on different types of bulk commodities have varied depending on their respective markets and supply chains.

***Opportunities and challenges that have arisen in the bulk market as a result of the pandemic:***

The COVID-19 pandemic has brought about a range of opportunities and challenges in the bulk market around the world. On one hand, the pandemic has created new opportunities for the bulk market, while on the other hand, it has presented significant challenges that need to be addressed in order to ensure the sustainability of the industry. One of the opportunities that has arisen in the bulk market as a result of the pandemic is an increase in demand for certain bulk commodities. For example, the demand for grain has increased due to panic buying and stockpiling, as well as increased demand for animal feed as people turned to home cooking during lockdowns. This has created a significant opportunity for producers and traders of grain and animal feed.

Another opportunity that has emerged in the bulk market is the shift towards e-commerce and online purchasing. This has resulted in an increase in demand for bulk shipping of goods, as retailers and consumers opt for larger shipments to reduce shipping costs. This has created opportunities for bulk carriers and shippers to expand their services and cater to this new demand. However, there have also been significant challenges for the bulk market as a result of the pandemic. One of the main challenges has been disruptions in the supply chain due to port closures, crew shortages, and other logistical issues. This has resulted in delays in the delivery of bulk commodities and increased costs for producers and shippers.

Another challenge has been the impact of the pandemic on the global economy, which has resulted in a reduction in demand for certain bulk commodities. This has had a significant impact on the prices of these commodities and has resulted in a decrease in revenue for producers and shippers. Furthermore, the pandemic has highlighted the need for increased safety measures and protocols in the shipping industry. This has resulted in increased costs for shippers as they implement new measures to ensure the safety of crew members and prevent the spread of the virus.

## **8. CONCLUSION AND RECOMMENDATIONS:**

In conclusion, the global bulk market is a crucial component of the world's economy, providing essential commodities such as

minerals, grains, coal, oil, and gas. The market is highly competitive, with many players vying for a share of the market. The demand for bulk goods is closely tied to global economic growth, with emerging markets playing an increasingly significant role in driving demand. The market is influenced by a range of factors, including changes in supply and demand, geopolitical events, and technological advances. As such, it is a dynamic and ever-changing industry that is of vital importance to the global economy.

Here are some recommendations for policymakers and business leaders to better prepare for and respond to future pandemics in the context of the bulk market:

1. Develop contingency plans: Policymakers and business leaders should develop comprehensive contingency plans to manage the impact of pandemics on the bulk market.
2. Invest in technology and automation: Technology and automation can help reduce the reliance on human workers in the bulk market, which can be a vulnerability during a pandemic.
3. Improve health and safety measures: The bulk market relies on a large workforce, and ensuring the health and safety of workers is essential during a pandemic.
4. Diversify supply chains: The pandemic has highlighted the vulnerabilities of global supply chains, and policymakers and

business leaders should work together to diversify supply chains in the bulk market.

5. Increase transparency and communication: During a pandemic, it is essential to have clear and transparent communication between policymakers, business leaders, and the public. Policymakers and business leaders should work together to ensure that information is shared quickly and accurately to help mitigate the impact of the pandemic on the bulk market.

Further studies on the impact of COVID-19 on the bulk market can explore a variety of areas. For example, researchers can investigate the long-term effects of the pandemic on the demand for bulk commodities and the corresponding changes in global trade patterns. Additionally, studies can analyze the impacts of the pandemic on the supply chains of bulk commodities and the challenges faced by port operators and shipping companies in adapting to new regulations and safety protocols.

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