

OECD Council Working Party on Shipbuilding (WP6) *Developments of ship prices and costs*

First semester 2023

Foreword

1. This report was prepared under the Council Working Party on Shipbuilding (WP6) project on demand, supply, price and cost developments. The opinions expressed and the arguments employed herein do not necessarily reflect the official views of OECD member countries. This report is available on the WP6 website: <http://www.oecd.org/sti/ind/shipbuilding.htm>.
2. This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Background

3. As stipulated in its mandate, the overall objective of the Council Working Party on Shipbuilding (WP6) is to work towards the reduction of factors that distort normal competitive conditions in the shipbuilding industry and to assist governments in designing and implementing policies that foster normal competitive conditions. One of the intermediate objectives of the WP6 is to increase transparency and improve the understanding of the shipbuilding market.
4. The report deals with ship prices, based on quantitative analysis by regularly keeping track of how factors affecting ship prices develop. Factors influencing the demand for ships include freight rates, second-hand prices, market expectations and sentiment, etc., and factors influencing the supply of ships include building capacity (which is related to orderbook), construction costs (labour and materials), exchange rates and production subsidies.
5. The report presents the latest developments of factors affecting ship prices and an overview of the price developments for the various sizes of major cargo ships (bulkers, containerships, crude tankers, product tankers and chemical tankers), which were contracted between January 2018 and July 2022, following the documents [[Shipbuilding market developments, first semester 2022](#) ; [Shipbuilding market developments, second semester 2022](#)].

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1. Executive summary

The key development in ship prices and costs is that the second-hand price index plummeted by about 31% between August 2022 and February 2023, undercutting the newbuilding index. The reason for this appears to be a decline from exceptionally strong short-term demand for vessels during 2021-22 when freight rates for bulkers and containerships were at their highest reflecting supply-chain turmoil. At the same time, the price index of newbuilding has been relatively stable since late 2021. This may reflect increasing contracts of high value-added vessels using alternative fuels. In fact, the breakdown of vessels contracted in 2022 by ship type and fuel type shows that alternative fuel vessels are available for 28% of the total.

This report includes five studied ship types (bulkers, containerships, crude tankers, product tankers, chemical tankers) for vessels of comparable size. The new-build prices have generally increased to their highest level in a decade, driven by solid mid-term demand for ships and demand for ships with access to alternative fuels. Selected ship price trends by ship type and size class are shown in Table 1.1.

Table 1.1. Selected ship price trends by ship type and size class

| Ship type and size class | Ship price trend |
|---------------------------------|------------------------------|
| Bulkers (208-210 k dwt) | Significant upward trend ↗ ↗ |
| Containerships (13+ - 15 k TEU) | Significant upward trend ↗ ↗ |
| Crude tankers (298-300 k dwt) | Upward trend ↗ |
| Product tankers (49-50 k dwt) | Upward trend ↗ |
| Chemical tankers (49-50 k dwt) | No trend |

In detail, ship price trends are different depending on ship type and size classes:

- Prices for bulkers in the 208-210 kilo deadweight tonnage (k dwt) size range indicate a significant upward trend in price levels, reaching an average of 67 million USD (USD M) in 2022 from 47 USD M in 2018;
- Prices for containerships of all sizes follow a positive trend for the period 2019 to 2022 with the exception of 3-4 kilo twenty-foot equivalent unit (k TEU) containerships. 11-13 k TEU Neo-Panamax ships experienced a drop in prices in 2021, followed by a gradual increase to an average of 125 USD M by 2022. For Post-Panamax ships of 23-25 k TEU an upward trend in prices can be seen, reaching an average of approx. 240 USD M by 2022;
- Price fluctuations of crude oil tankers appear less uniform than those of bulk carriers and containerships and are likely to show variations in the studied time period. While average prices of Aframax crude tankers fluctuate in a price range from approx. 48 USD M to 58 USD M, Suezmax tankers experience a downward trend in average prices from a high of

68 USD M in 2019 to 58 USD M in 2020 but increase again in 2021-2022. Average prices for ultra large crude carriers/very large crude carriers (UL/VLCC crude tankers) show very little change between 2018 and 2020, with a marked increase in 2021;

- For both 1) 49-50 k dwt (MR) and 2) 110-120 k dwt (LR2) product tankers, average prices follow a gradual positive trend between 2018 and 2022, with MR product tankers reaching an average of 42 USD M and LR2 tankers 64 USD M in 2022;
- For chemical tankers, no clear upward or downward trend can be seen, with average prices fluctuating between a high of 41 USD M in 2020 to just below 38 USD M in 2019 and 2021.

This report also finds ships with prices that significantly deviate from the calculated average prices. The report shows that some of the outliers include LNG- and Methanol-fuelled vessels, which seems to support the conclusion on high value-added vessels using alternative fuels above.

2. Introduction

This report is part of the regular WP6 monitoring exercise of the shipbuilding market and aims to facilitate the discussion on the developments in newbuilding prices for major ship types and ship size classes at the 10-11 May 2023 WP6 meeting. Draft findings of the report have been shared for comments with delegates on 7 March 2023.

The purpose of the monitoring of price developments is to provide information on the recent price developments in order to better understand the current shipbuilding market. The information in this document provides an overview of the price developments for the different sizes of major cargo ships (bulkers, containerships, crude tankers, product tankers and chemical tankers).

Price differentials can result from the different characteristics of seemingly equivalent ships; for example, the period from order to delivery which can take two years or more; customer's required specifications and equipment to be built on board; production in series which can significantly impact ship costs and prices; yards' know-how and experience; and the volatility of the ship demand which can lead shipbuilding companies to accept orders to absorb fixed cost by building ships rather than idling their docks during economic downturns.

At the 133rd session of WP6 on 24-25 November 2021, the Secretariat proposed the next steps for future work on newbuilding price developments for major ship types and ship size classes. Under this proposed process, the Secretariat would invite WP6 members to provide details of domestic shipyard contracts before the next WP6 meeting, as previously.

The first section presents the developments of several factors affecting ship prices (i.e., second-hand price, freight rate, seaborne trade, orderbook, ship construction cost and exchange rate). The second section presents the description and analysis of newbuilding prices of major ship types (i.e., bulkers, containerships, crude tankers, product tankers and chemical tankers) and ship size categories. The last section of this part deals with the proposed future work on ship price & cost.

3. Monitoring of ship price and cost developments

3.1 Developments in several factors affecting ship prices

Background

The literature review on factors influencing newbuilding ship prices, which was developed in the document [[Shipbuilding market developments, first semester 2022](#)], has identified the key factors on the demand and supply side that influence the price of a ship.

It shows that factors influencing the demand for ships include freight rates, second-hand prices, market expectations and sentiment, etc.; factors influencing the supply of ships include building capacity (which is related to orderbooks), construction costs (labour and materials), exchange rates and production subsidies.

Keeping track of how these factors develop, based on time series, will contribute to achieving the objectives of the demand, supply, price and cost project by providing a sound basis for discussion in the WP6. For this reason, the Secretariat has regularly collected data on such factors and compiled them.

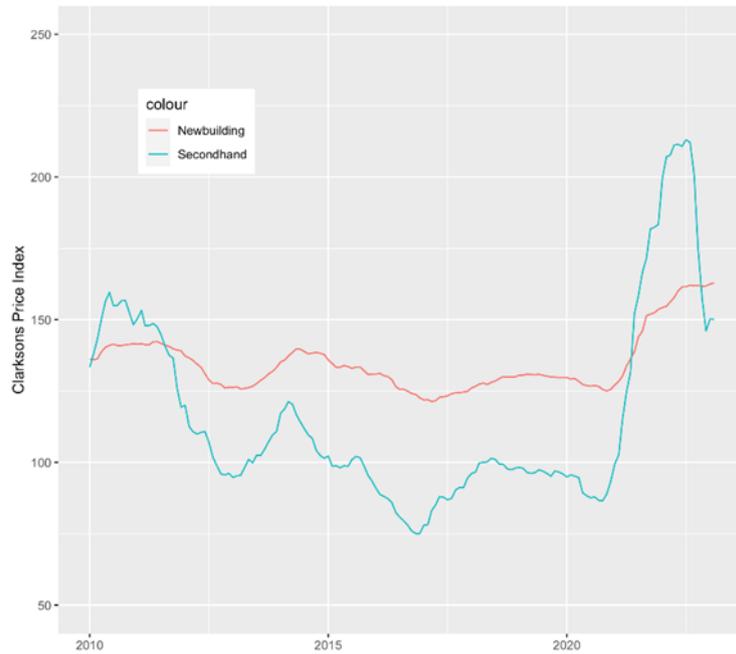
Second-hand price

Figure 3.1 shows the Clarksons price index. The red line shows the price of new-built ships, and the green line shows the price of second-hand vessels. The price of second-hand ships has been stagnant since mid-2011, but since 2020 the price of second-hand ships has risen sharply. Following this increase, new-build prices have increased to their highest level in a decade, driven by solid demand for ships.

However, the second-hand price index plummeted by about 31% between August 2022 and February 2023, undercutting the newbuilding index. This is thought to be due to a lull in strong short-term demand for vessels, using second-hand ship procurement.

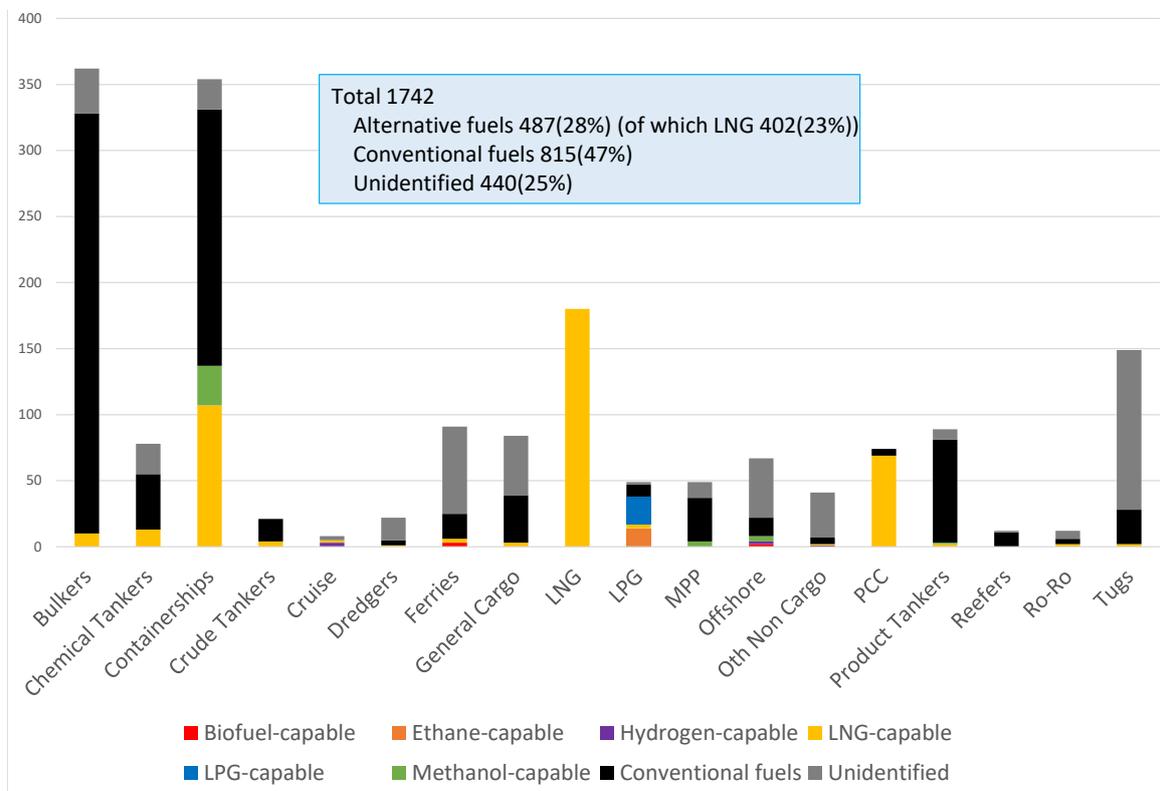
On the other hand, the price index of newbuilding has been relatively stable. As discussed in further detail below, this may reflect increasing contracts in high value-added vessels with access to alternative fuels. In fact, the breakdown of vessels contracted in 2022 by ship type and fuel type shows that alternative fuel vessels are available for 28% of the total (Figure 3.2).

Figure 3.1 Clarksons Price Index



Source: Clarksons Shipping Intelligence Network

Figure 3.2. Breakdown of vessels contracted in 2022 by ship type and fuel type



Source: OECD calculations based on the Clarksons World Fleet Register.

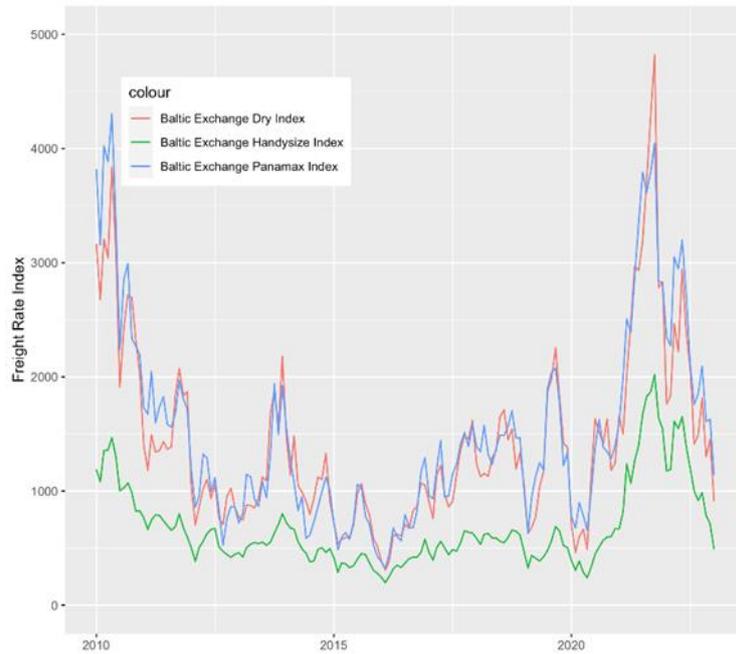
Freight rate

Figure 3.3., Figure 3.4 and Figure 3.5 show the respective freight rates for bulk carriers, container ships and crude oil tankers.

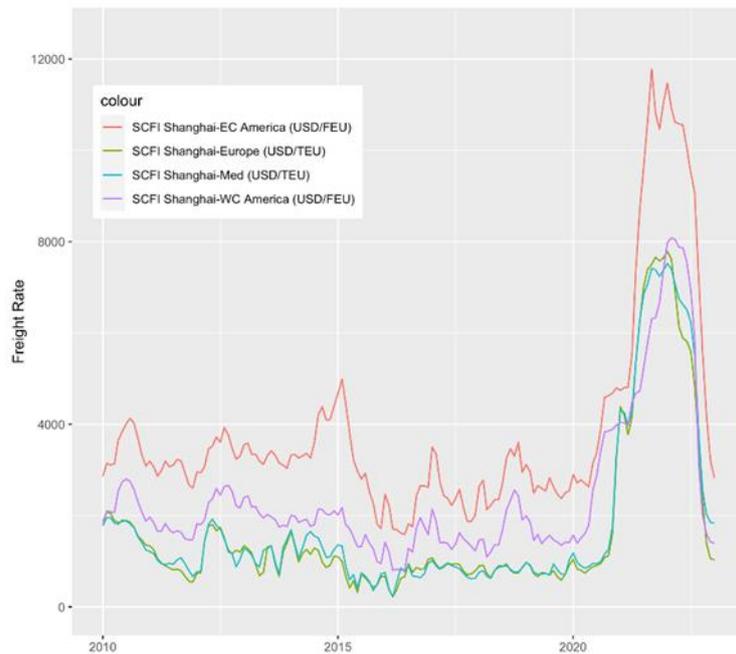
For bulk carriers, freight rates have risen since 2020, peaked in October 2021, and are on a declining trend, with some rebound after a sharp fall. Freight rate levels are now back to pre-Covid-19 levels. This is probably because the turmoil for bulkers due to the Covid-19 pandemic is almost over.

For containerships, freight rates had risen sharply since 2020, notably because of solid demand for manufactured goods by households due to the Covid-19 pandemic, which led to port congestion, and reached a peak in January 2022 (Shanghai Containerized Freight Index (SCFI) Shanghai-Europe Freight Rate). This was followed by a rapid downward trend, with the SCFI Shanghai-Europe Freight Rate in particular falling by 87% since its peak bringing it back to its pre-COVID-19 level. This can be attributed to a slowdown in demand and the impact of the COVID-19 lockdown in China, compounded by the impact of Russia's war of aggression against Ukraine. Other freight rates have followed a similar trend.

Freight rates for crude oil tankers have been cyclical, with temporary spikes and stability, and have already bottomed out in April 2022 (1 Year Time charter Rate for Very Large Crude Carrier (VLCC)) and are on an upward trend again. This uptrend might be different in nature from previous cyclical trends due to the global inflation and the EU embargo on Russian oil. Headline inflation in the G20 economies was 8.1% in 2022 and is expected to decline to 4.5% in 2024, according to the "OECD Economic Outlook, Interim Report March 2023: A Fragile Recovery". In addition, the EU has completely banned all Russian seaborne crude oil and petroleum products. Thus, global inflation and increased oil transport distances arising from sanctions on Russian crude oil could further increase crude oil tanker freight rates. In more detail, it can be seen that the level of 1 Year Time Charter Rate for VLCC have remained comparable to those for Aframax and Suezmax, compared to the past. This is probably due to the fact that the reduction in crude oil flows from Russia to Europe, which are being replaced by crude oil from the United States and the Middle East, is reducing the demand for the charter of VLCC and increasing the demand for the charter of smaller Aframax and Suezmax tankers.

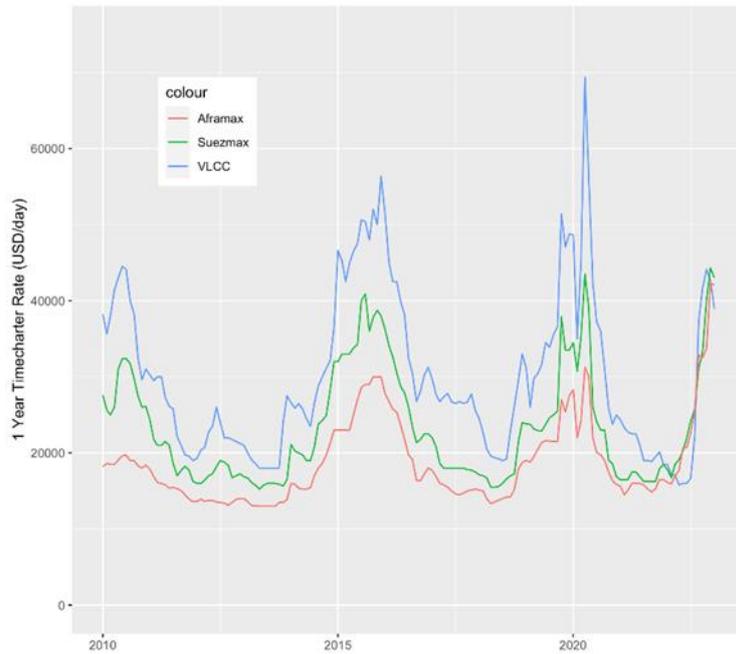
Figure 3.3. Freight rate (Bulkers)


Source: Clarksons Shipping Intelligence Network

Figure 3.4. Freight rate (Containerships)


Source: Clarksons Shipping Intelligence Network

Figure 3.5. Freight rate (Tankers)

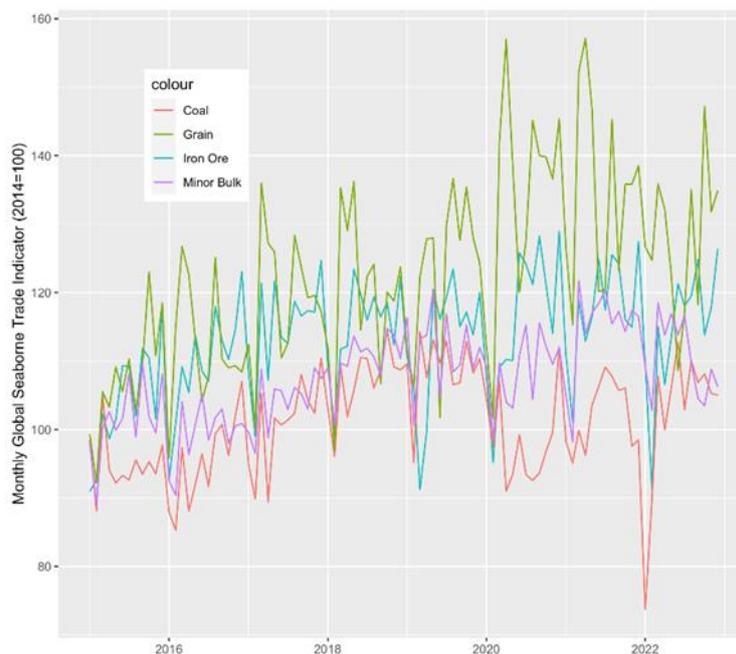


Source: Clarksons Shipping Intelligence Network

Seaborne trade

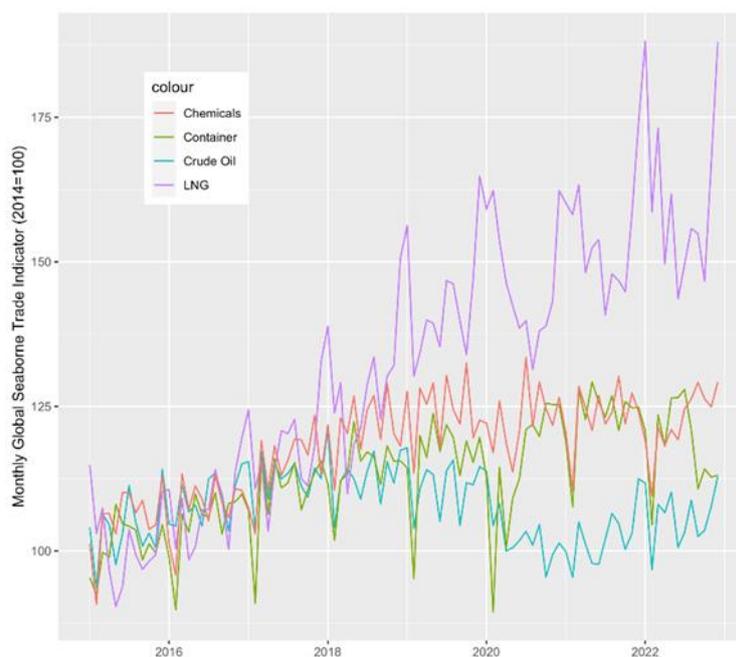
Figure 3.6 and Figure 3.7 show the evolution of seaborne trade by cargo. Compared to 2014, the trade volume of LNG has grown the most and notably peaked in the beginning of 2022 probably due to the interruption of supply via pipelines to Europe, which was caused by Russia's war against Ukraine. Seaborne trade of coal and crude oil has grown very little, which is partly because of shifts towards greener energy sources. Grain, chemicals, and containerised cargoes have shown an increasing trend.

Figure 3.6. Seaborne trade (Coal, Grain, Iron Ore, Minor Bulk)



Source: Clarksons Shipping Intelligence Network

Figure 3.7. Seaborne trade (Chemicals, Container, Crude Oil, LNG)

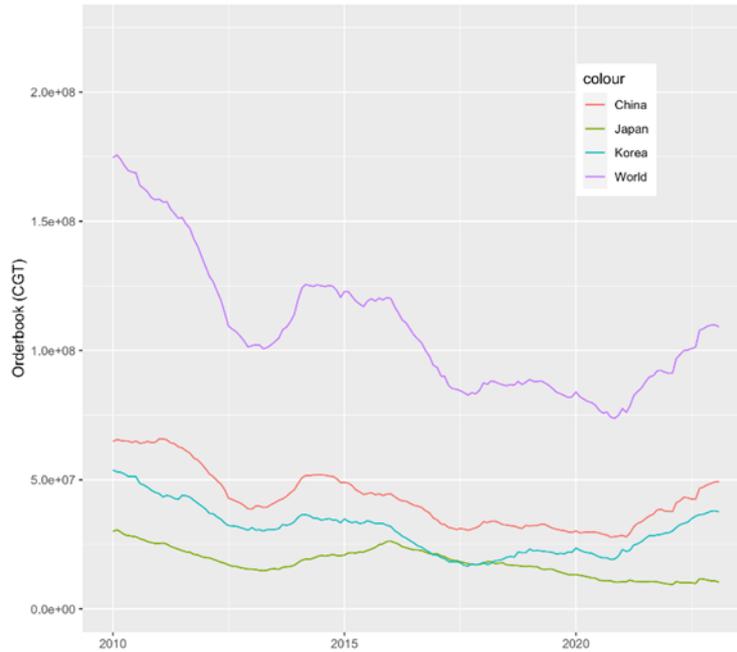


Source: Clarksons Shipping Intelligence Network

Orderbook

Figure 3.8 shows a CGT-based orderbook for the world, China, Japan, and Korea. The CGT-based world orderbook has bottomed out in November 2020 and gradually rose, driven by China and Korea. In contrast, Japan’s orderbook has remained stagnant.

Figure 3.8. Orderbook



Source: Clarksons Shipping Intelligence Network

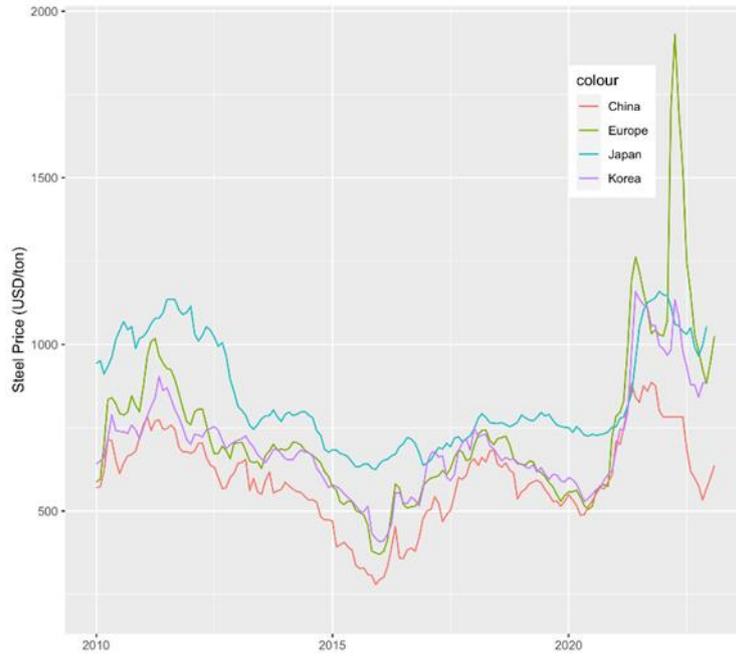
Ship construction cost

Figure 3.9 shows steel prices in each country. Steel prices began to rise in the spring of 2020 and soared in 2021-2022, peaking at the highest level in a decade. In particular, European steel prices were almost four times higher in April 2022 than in June 2020. This was likely the result of a temporary over-reaction to high inflation levels and growing geopolitical and energy security risks due to Russia’s war against Ukraine. Steel prices have thereafter decreased compared to their peak. These increases in steel prices might affect the price of ships that use a lot of steel. Still, given that, as described below, uniformly substantial price increases have not necessarily occurred across all ship types, shipbuilders may have been able to limit the rise in ship prices to a certain extent due to higher steel prices by devising procurement.

Figure 3.10 displays the changes in labour costs in the manufacturing sector in selected countries. The labour costs in France, Finland and Italy have changed significantly between 2020 and 2021.

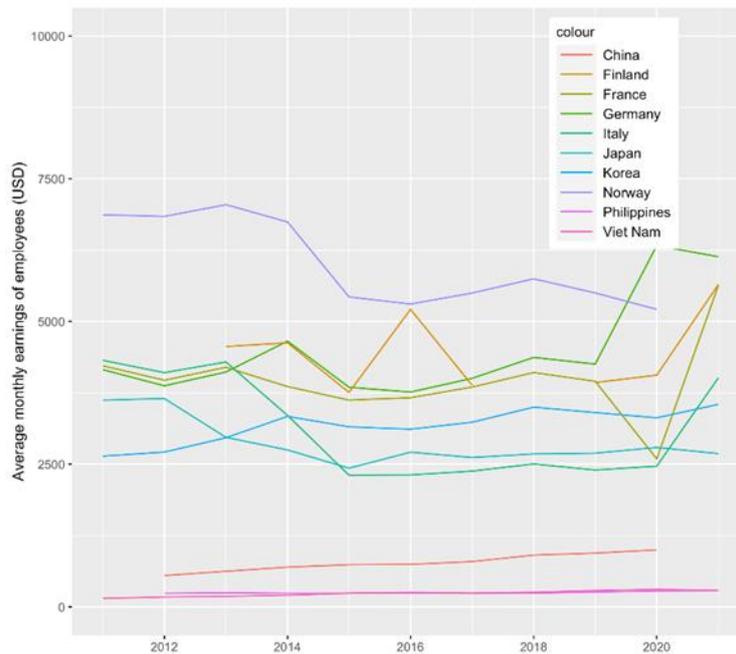
Figure 3.11 shows each country’s domestic producer price index for industrial activities. The Secretariat presents this index as a proxy for the price index for marine equipment because the cost information is unavailable. The producer price index has followed an upward trend since 2016 and has risen sharply since 2020, during the pandemic, and continued to rise substantially due to global inflation.

Figure 3.9. Steel price



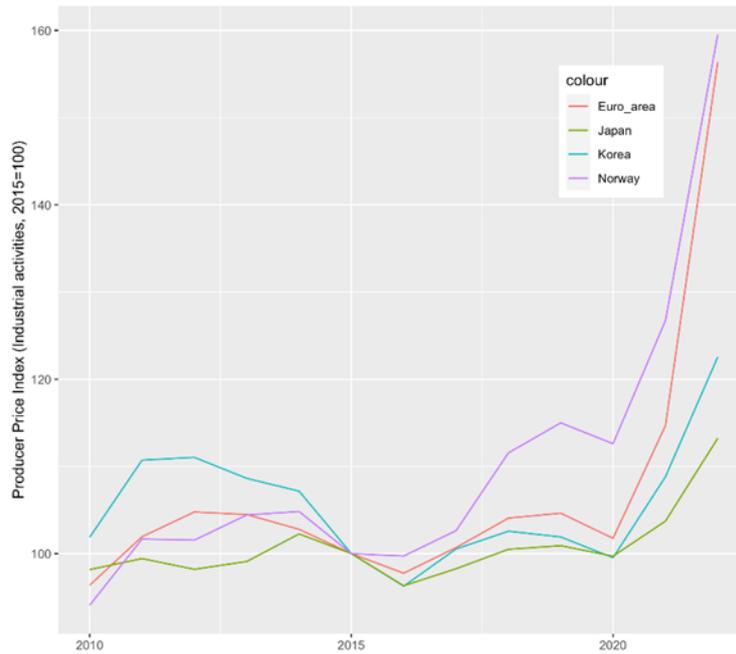
Source: OECD calculations based on SBB Steel Prices, Japan Metal Daily and Korean Steel Daily.

Figure 3.10. Labour costs



Note: This figure shows average monthly earnings of employees in the manufacturing industry as a proxy for labour costs in the shipbuilding industry which are not available.

Source: ILOSTAT

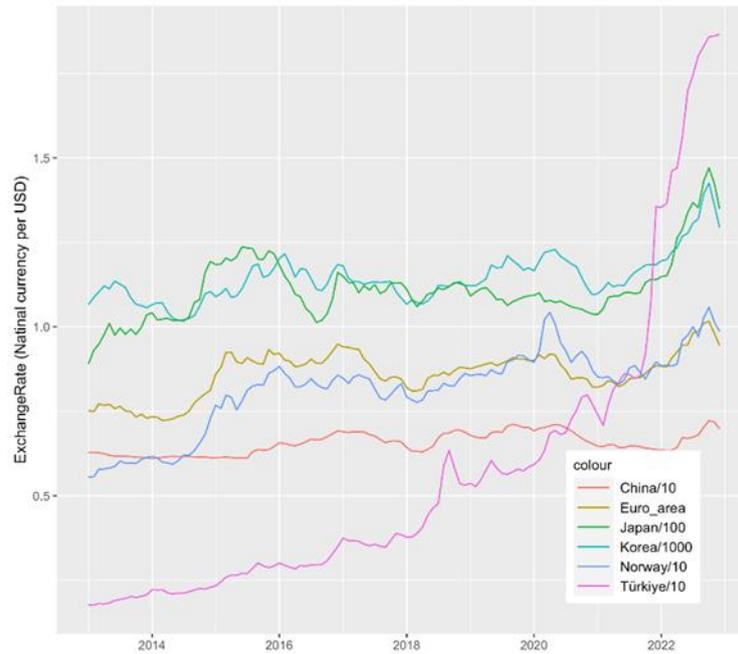
Figure 3.11. Producer Price Index (Industrial activities)


Source: OECD.Stat

Exchange rate

Figure 3.12 shows the exchange rate for selected countries. The exchange rate in the Republic of Türkiye (hereafter “Türkiye”) has changed markedly, but the exchange rate for other selected currencies remained relatively stable. However, since 2022, currencies other than the RMB have been affected by the appreciation of the US dollar.

Figure 3.12. Exchange rate



Note: The Secretariat has adjusted the currency units (as shown in the legend) to facilitate comparisons between currencies.
Source: OECD.Stat

3.2 Description and analysis of newbuilding prices of major ship types and ship size categories

Background

Monitoring price developments provides critical information to better understand the current shipbuilding market. The information in this document provides an overview of the price developments for the different sizes of major cargo ships (bulkers, containerships, crude tankers, product tankers and chemical tankers), following the document [[Shipbuilding market developments, first semester 2022](#)].

In order to facilitate discussions on the developments of newbuilding prices for major ship types and ship size categories, the Secretariat invited WP6 members to give details in writing on domestic shipyard contracts before the 136th WP6 meeting taking place in May 2023. This time no comments were submitted. This process will continue before each forthcoming WP6 meetings.

Important caveats on the ship price analysis

Price differentials can result from the different characteristics of seemingly equivalent ships; for example, the period from order to delivery which can take two years or more; customer's required specifications and equipment to be built on board; production in series which can significantly impact ship costs and prices; yards' know-how and experience; and the volatility of the ship demand which can lead shipbuilding companies during an economic downturn, to absorb fixed cost by building ships rather than idling the docks.

However, it should be noted that the note of caution in the previous paragraph does not negate the relevance of this price monitoring exercise itself.

Methodology

In preparing Figure 3.13 to Figure 3.27 and Table 3.1 to Table 3.15, the Secretariat has used the following analytical approach (similar to that used in paper [[Shipbuilding market developments, first semester 2022](#)]):

- The data cover prices for newbuildings (bulkers, containerships, crude tankers, product tankers and chemical tankers), which were contracted between January 2019 and January 2023.
- Price data is sourced from Clarksons World Fleet Register, supplemented where possible by article information (TradeWinds, Lloyd's List and other sources) and company press releases;
- Scatter plots are presented with prices on the vertical axis and contract dates on the horizontal axis;
- The mean (μ) and standard deviation (σ) values for each year are calculated, and the values of μ , $\mu \pm 1\sigma$ and $\mu \pm 2\sigma$ for each year are indicated to observe the developments in ship prices during the periods according to the market conditions. For a random sample x with a normal distribution $N(\mu, \sigma^2)$, the probability that an observation falls within $\pm 1\sigma$ of the mean μ is about 68% and that it falls within $\pm 2\sigma$ is about 95%. In other words, if the deviation from the mean μ is greater than $\pm 1\sigma$, the data point is out of line with the other values, and if the deviation from the mean μ is greater than $\pm 2\sigma$, the data point is more out of line;
- Plots represent a single plot for ships with multiple contracts. Orange shadings cover the range where the deviation from the mean μ is less than $\pm 1\sigma$. Orange lines indicate the mean value and the boundaries of $\mu \pm 1\sigma$ and $\mu \pm 2\sigma$.

- Without any prejudice or conclusion, outliers, i.e., values widely separated from the mean μ (in other words, ships priced beyond the value of $\mu \pm 1\sigma$), are shown in tables to dispersion in prices for a better understanding of ship price developments;
- This analysis covers ship types and sizes for which the data collection rate for ship prices exceeds a certain level (50%).

This is a highly reproducible and non-arbitrary approach that allows anyone interested in reproducing the same methodology to obtain similar results by using publicly available data or data available via specific service data providers (Clarksons, IHS).

Description and analysis

Bulkers

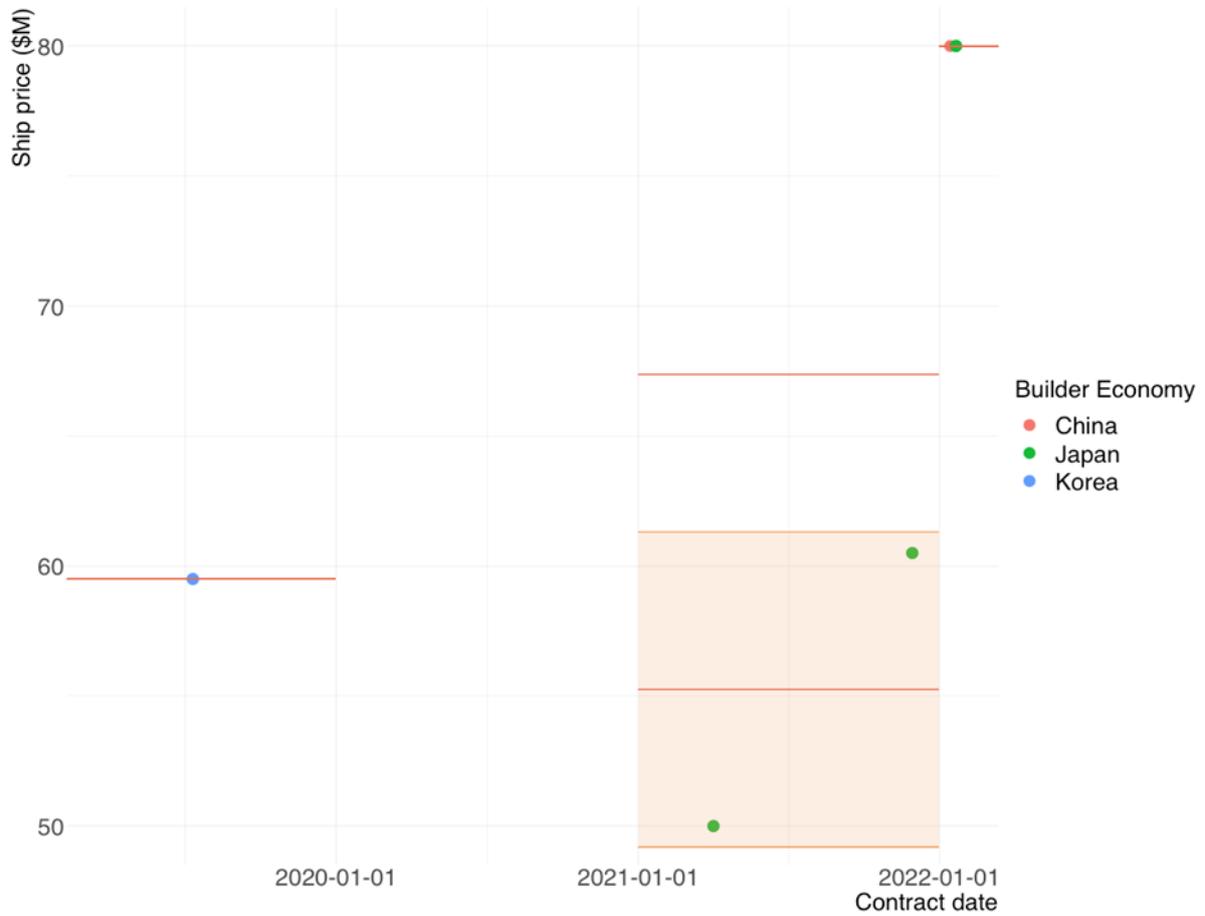
For bulkers, information on prices was relatively difficult to obtain. There are several reasons for this. Compared to containerships and crude tankers, which are ship types for which price data was more readily available, there is 1) a wide variety of shipowners of bulkers, which cannot always be identified, and 2) less information available from charterers at the time of contracting new-built ships due to fewer time charter contracts.

This analysis focuses on two size classes for which the Secretariat was able to collect information on ship prices: 1) 179-181 k dwt (Capesize) and 2) 208-210 k dwt (Very Large Bulk Carriers).

The results are shown in Figure 3.13 to Figure 3.14. There is no uniform trend present for the two sizes. As Figure 3.13 indicates, prices for Capesize Bulk Carriers oscillate in a price range of 55 million USD (USD M) and 60 USD M between 2019 and 2021, with a sharp increase to 80 USD M in 2022. However, as the increase for Capsize Bulk Carriers are based on a single data plot their generalisability for the market is limited. Most data was available for bulkers in the 208-210 k dwt size range, with plots indicating a significant upward trend in price levels, reaching an average of 67 USD M in 2022 from 47 USD M in 2018 (Figure 3.14).

There are price outliers (mean $\pm 1\sigma$ plot) for Capesize Bulk Carriers (Table 3.2). Given the small sample size, this could be due to several reasons including specifications of ships and particularities of individual contracts, but interestingly, the recent mean $+ 1\sigma$ plots are of ships with access to LNG fuel.

Price trends for bulkers might continue to rise due to contracts for high value-added vessels against a backdrop of decarbonisation.

Figure 3.13. Price developments for Bulklers (179-181 k dwt) during 2019-2023


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.1. Details of outliers for Bulklers (179-181 k dwt) during 2019-2023

| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|------|-----|----------|-------|-----------|---------|---------------|---------|-----------|
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Source: Clarksons World Fleet Register and other sources.

Figure 3.14. Price developments for Bulkers (208-210 k dwt) during 2019-2023



Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.2. Details of outliers for Bulkers (208-210 k dwt) during 2019-2023

| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|--|--------|-----------|-----------|-----------|---------------------|----------------------|---------|--------------|
| | N/B Qingdao Beihai SB | 210000 | 8-25-2022 | 1-1-2025 | 77.5 | Qingdao Beihai SB | CSSC | China | LNG, VLS IFO |
| | N/B Qingdao Beihai SB | 210000 | 8-25-2022 | 1-1-2025 | 77.5 | Qingdao Beihai SB | CSSC | China | LNG, VLS IFO |
| | N/B Qingdao Beihai SB | 210000 | 8-25-2022 | 1-1-2026 | 77.5 | Qingdao Beihai SB | CSSC | China | LNG, VLS IFO |
| | N/B Qingdao Beihai SB | 210000 | 8-25-2022 | 1-1-2026 | 77.5 | Qingdao Beihai SB | CSSC | China | LNG, VLS IFO |
| | N/B New Times SB | 208000 | 9-1-2021 | 8-1-2024 | 68.8 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| | N/B New Times SB | 208000 | 9-1-2021 | 9-1-2024 | 68.8 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| | N/B New Times SB | 208000 | 9-1-2021 | 4-1-2024 | 68.8 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| | N/B New Times SB | 208000 | 9-1-2021 | 7-1-2024 | 68.8 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| | N/B New Times SB | 210000 | 7-1-2021 | 1-1-2024 | 67 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| | N/B New Times SB | 210000 | 7-1-2021 | 1-1-2024 | 67 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| | N/B New Times SB | 210000 | 7-1-2021 | 1-1-2024 | 67 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| | N/B Beihai Shipyard Qingdao BC210K-15 | 210000 | 5-18-2021 | 8-1-2023 | 50.5 | Beihai Shipyard | CSSC | China | VLS IFO |
| | N/B Beihai Shipyard | 210000 | 5-18-2021 | 11-1-2023 | 50.5 | Beihai Shipyard | CSSC | China | VLS IFO |
| | N/B Shanghai Waigaoqiao Shanghai H1529 | 210000 | 3-9-2021 | 9-1-2022 | 52 | Shanghai Waigaoqiao | CSSC | China | VLS IFO |
| | N/B Shanghai Waigaoqiao Shanghai H1530 | 210000 | 3-9-2021 | 11-1-2022 | 52 | Shanghai Waigaoqiao | CSSC | China | VLS IFO |
| | N/B COSCO HI (Yangzhou) | 210000 | 3-1-2021 | 1-1-2023 | 54 | COSCO HI (Yangzhou) | COSCO Shipping HI | China | IFO 380 |
| | N/B COSCO HI (Yangzhou) | 210000 | 3-1-2021 | 1-1-2023 | 54 | COSCO HI (Yangzhou) | COSCO Shipping HI | China | IFO 380 |
| 9939357 | N/B COSCO HI (Yangzhou) Yangzhou N1051 | 210000 | 3-1-2021 | 1-1-2023 | 54 | COSCO HI (Yangzhou) | COSCO Shipping HI | China | IFO 380 |
| 9939369 | N/B COSCO HI (Yangzhou) Yangzhou N1052 | 210000 | 3-1-2021 | 1-1-2024 | 54 | COSCO HI (Yangzhou) | COSCO Shipping HI | China | IFO 380 |
| | N/B COSCO HI (Yangzhou) | 210000 | 3-1-2021 | 1-1-2024 | 54 | COSCO HI (Yangzhou) | COSCO Shipping HI | China | IFO 380 |
| | N/B COSCO HI (Yangzhou) | 210000 | 3-1-2021 | 1-1-2024 | 54 | COSCO HI (Yangzhou) | COSCO Shipping HI | China | IFO 380 |
| | N/B COSCO HI (Yangzhou) | 210000 | 3-1-2021 | 1-1-2024 | 54 | COSCO HI (Yangzhou) | COSCO Shipping HI | China | IFO 380 |
| | N/B Beihai Shipyard Qingdao BC210K-11 | 210000 | 1-29-2021 | 11-1-2022 | 50.5 | Beihai Shipyard | CSSC | China | VLS IFO |
| | N/B Beihai Shipyard Qingdao BC210K-12 | 210000 | 1-29-2021 | 2-1-2023 | 50.5 | Beihai Shipyard | CSSC | China | VLS IFO |
| 9927976 | N/B New Times SB Taizhou 0120826 | 208000 | 10-1-2020 | 1-1-2022 | 66 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| 9927988 | N/B New Times SB Taizhou 0102827 | 208000 | 10-1-2020 | 1-1-2022 | 66 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| 9927990 | N/B New Times SB Taizhou 0120828 | 208000 | 10-1-2020 | 1-1-2023 | 66 | New Times SB | New Century SB Group | China | LNG, VLS IFO |
| 9900772 | N/B Shanghai Waigaoqiao Shanghai H1531 | 209000 | 12-3-2019 | 11-1-2021 | 52.5 | Shanghai Waigaoqiao | CSSC | China | LNG, VLS IFO |
| | N/B Shanghai Waigaoqiao Shanghai H1532 | 209000 | 12-3-2019 | 2-1-2022 | 52.5 | Shanghai Waigaoqiao | CSSC | China | LNG, VLS IFO |
| 9906013 | Trust Qingdao | 210000 | 12-3-2019 | 2-1-2021 | 53 | Shanghai Waigaoqiao | CSSC | China | IFO 380 |
| 9906025 | Trust Shanghai | 210000 | 12-3-2019 | 4-1-2021 | 53 | Shanghai Waigaoqiao | CSSC | China | IFO 380 |

Source: Clarksons World Fleet Register and other sources.

Containerships

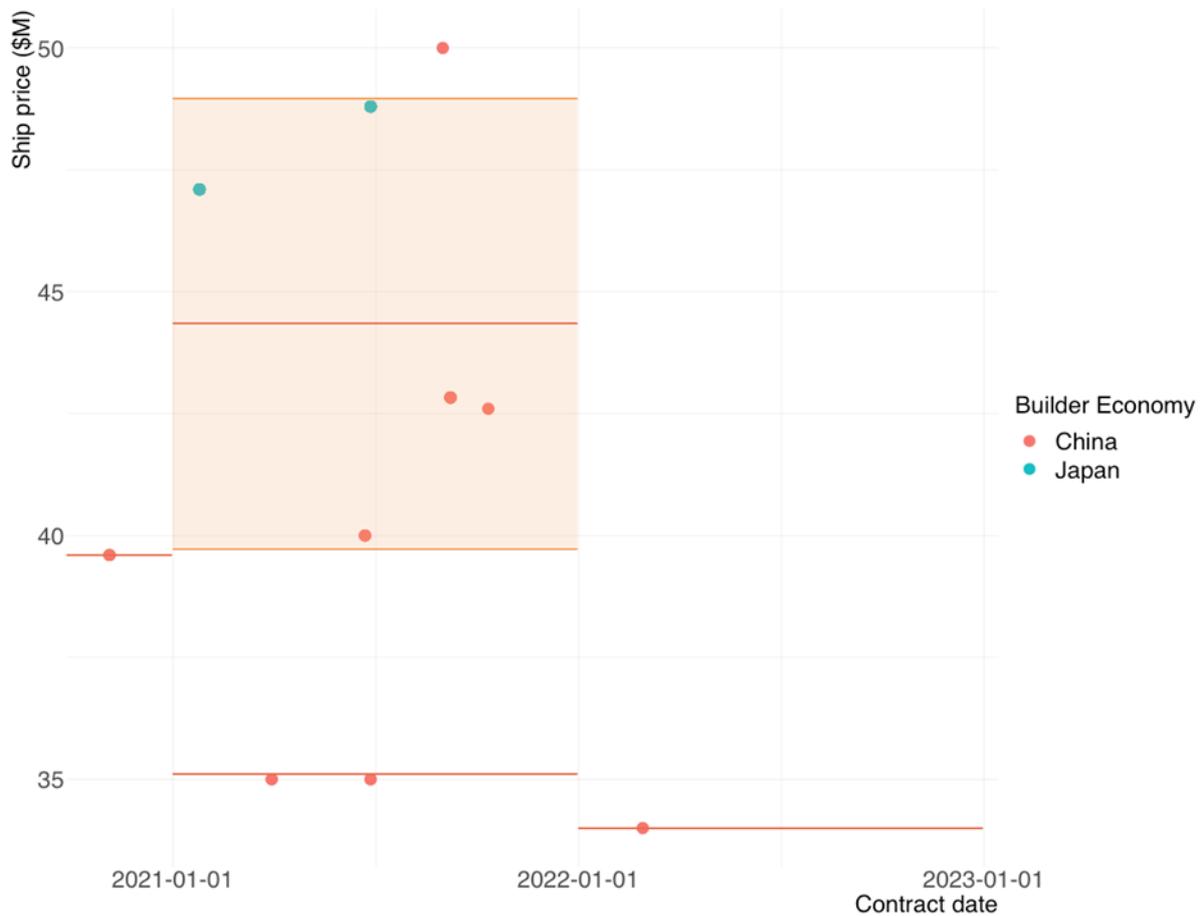
Containerships, in contrast to bulkers, are the ship type for which price information is the most complete (with prices collected for 80% of the total number of containership orders in the dataset). This is likely due to the relatively limited number and mostly identified shipowners and the strong links with charterers through regular chartering. Following comments from delegates to better reflect size heterogeneity among ships and provide more information of different sizes, the Secretariat subdivided containerships into seven size classes:

- 3-4 k TEU (Intermediate)
- 6-7 k TEU (Intermediate)
- 7+ -9 k TEU (Intermediate/ Neo-Panamax)
- 11-13 k TEU (Neo-Panamax)
- 13+ -15 k TEU (Neo-Panamax)
- 15+ -17k TEU (Post-Panamax)
- 23-25 k TEU (Post-Panamax)

The results are shown in Figure 3.15 to Figure 3.21. Prices for containerships of all sizes follow a positive trend for the period 2019 to 2022 with the exception of 3-4 k TEU containerships, where prices sharply decreased between 2021 and 2022 (Figure 3.15). This trend is again based on a single data plot for 2022, raising questions over the generalisability of the result. Data on prices for 6-7 k TEU and 15+ -17 k TEU containerships is limited to 2021 and 2022, both indicating an increase in prices (Figure 3.16 and Figure 3.20). As indicated by Figure 3.18, 11-13 k TEU Neo-Panamax ships experienced a drop in prices in 2021, followed by a gradual increase to an average of 125 USD M by 2022. For Post-Panamax ships of 23-25 k TEU an upward trend in prices can be seen, reaching an average of approx. 240 USD M by 2022 (Figure 3.21).

For intermediate containerships (6-7 k TEU), average containership prices show rates of standard deviation between 0 to approx. 20 USD M, with particularly high variability in yearly prices. There are no large changes in the size of price divergence between years. Significant price outliers (indicated by mean $\pm 2\sigma$ plots) are present for 3-4 k TEU, 7+ -9 k TEU, 13+ -15 k TEU and 23-25 k TEU ships, as shown in Figure 3.15, Figure 3.17, Figure 3.19 and Figure 3.21, respectively. Again, this dispersion of prices likely reflects particularities of ships and individual contracts.

Interestingly, price outliers indicated by mean + 1 (or 2) σ plots for 7-9 k TEU and 13+ -15k TEU are of LNG fuel capable ships (Table 3.5 and Table 3.7) and those for 15+ -17k TEU and 23-25 k TEU are of Methanol fuel capable ships (Table 3.8 and Table 3.9). Possibly, the high added value from decarbonisation has had an impact on recent containership prices.

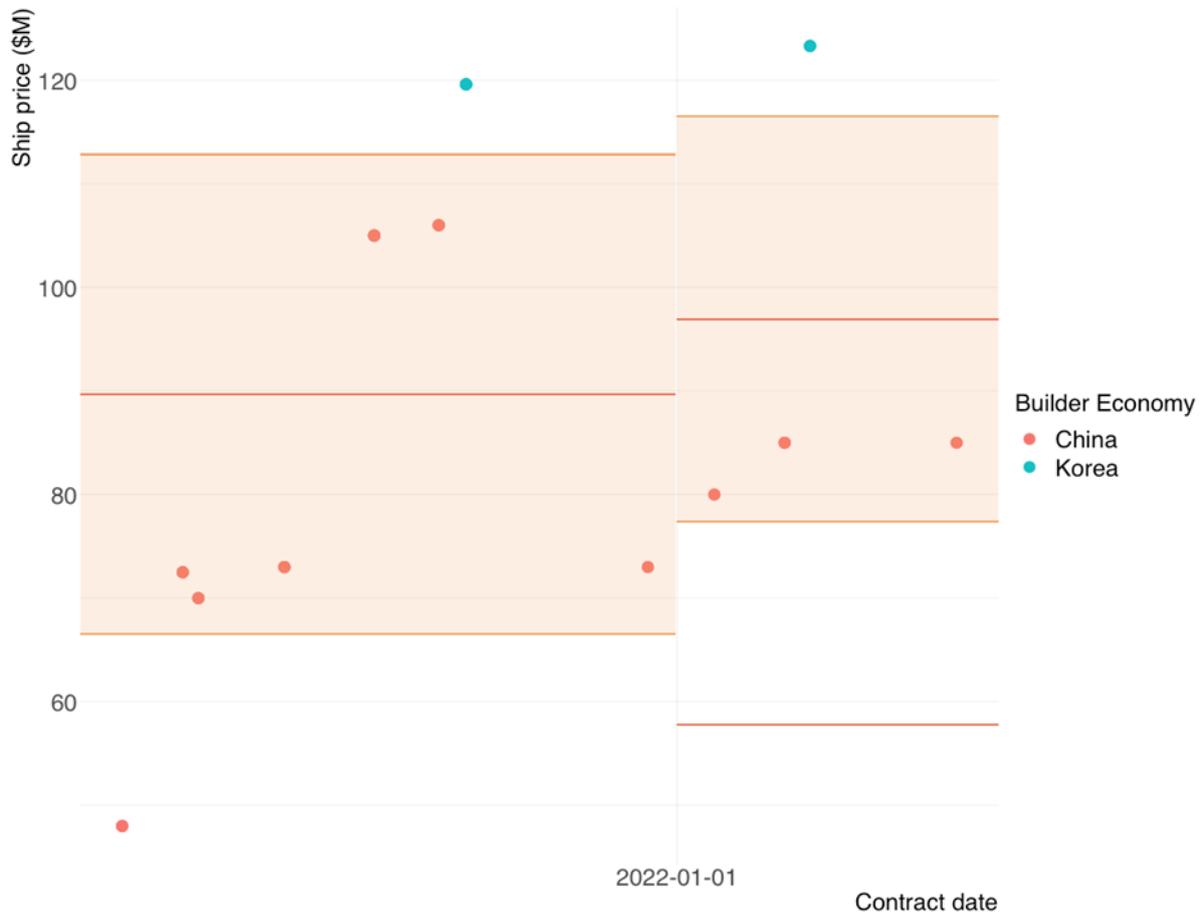
Figure 3.15. Price developments for Containerships (3-4 k TEU) during 2019-2023


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.3. Details of outliers for Containerships (3-4 k TEU) during 2019-2023

| IMO_No. | Name | TEU | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|--|------|-----------|-----------|-----------|--------------------|----------------------|---------|-----------|
| | N/B Mawei SB (Mawei) | 3700 | 9-1-2021 | 1-1-2024 | 50 | Mawei SB (Mawei) | Fujian Shipbuilding | China | VLS IFO |
| | N/B Mawei SB (Mawei) | 3700 | 9-1-2021 | 1-1-2024 | 50 | Mawei SB (Mawei) | Fujian Shipbuilding | China | VLS IFO |
| | N/B Jiangsu New YZJ | 3300 | 6-28-2021 | 11-1-2023 | 35 | Jiangsu New YZJ | Yangzijiang Holdings | China | VLS IFO |
| | N/B Jiangsu New YZJ | 3300 | 6-28-2021 | 2-1-2024 | 35 | Jiangsu New YZJ | Yangzijiang Holdings | China | VLS IFO |
| | N/B Jiangsu New YZJ | 3300 | 6-28-2021 | 5-1-2024 | 35 | Jiangsu New YZJ | Yangzijiang Holdings | China | VLS IFO |
| | N/B Zhoushan Changhong Zhoushan GH8086 | 3100 | 3-31-2021 | 1-1-2023 | 35 | Zhoushan Changhong | Zhoushan Changhong | China | IFO 380 |
| | N/B Zhoushan Changhong Zhoushan GH8087 | 3100 | 3-31-2021 | 1-1-2023 | 35 | Zhoushan Changhong | Zhoushan Changhong | China | IFO 380 |
| | N/B Zhoushan Changhong Zhoushan GH8088 | 3100 | 3-31-2021 | 1-1-2023 | 35 | Zhoushan Changhong | Zhoushan Changhong | China | IFO 380 |

Source: Clarksons World Fleet Register and other sources.

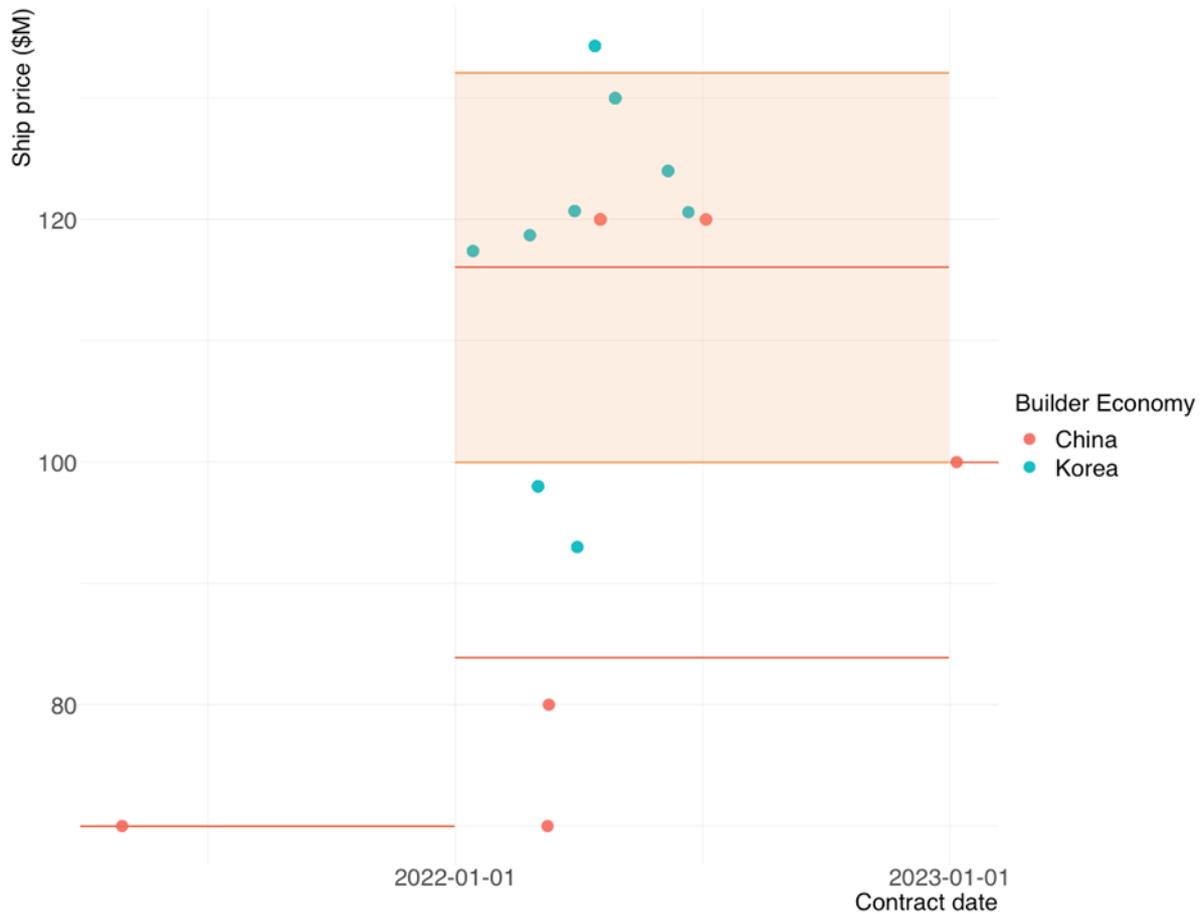
Figure 3.16. Price developments for Containerships (6-7 k TEU) during 2019-2023


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.4. Details of outliers for Containerships (6-7 k TEU) during 2019-2023

| IMO_No. | Name | TEU | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|---------------------------------------|------|-----------|-----------|-----------|-----------------|---------------|---------|--------------|
| | N/B Samsung HI | 7000 | 3-10-2022 | 9-1-2024 | 123.3 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 3-10-2022 | 12-1-2024 | 123.3 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 3-10-2022 | 7-1-2024 | 123.3 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 3-10-2022 | 10-1-2024 | 123.3 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 9-15-2021 | 8-1-2023 | 119.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 9-15-2021 | 11-1-2023 | 119.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 9-15-2021 | 2-1-2024 | 119.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 9-15-2021 | 5-1-2024 | 119.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 9-15-2021 | 8-1-2024 | 119.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Samsung HI | 7000 | 9-15-2021 | 11-1-2024 | 119.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| 9926192 | N/B Qingdao Yangfan Qingdao CV5900-03 | 6014 | 3-23-2021 | 8-1-2023 | 48 | Qingdao Yangfan | Yangfan Group | China | |
| 9926207 | N/B Qingdao Yangfan Qingdao CV5900-04 | 6014 | 3-23-2021 | 11-1-2023 | 48 | Qingdao Yangfan | Yangfan Group | China | |
| 9926219 | N/B Qingdao Yangfan Qingdao CV5900-05 | 6014 | 3-23-2021 | 2-1-2024 | 48 | Qingdao Yangfan | Yangfan Group | China | |
| 9926221 | N/B Qingdao Yangfan Qingdao CV5900-06 | 6014 | 3-23-2021 | 5-1-2024 | 48 | Qingdao Yangfan | Yangfan Group | China | |

Source: Clarksons World Fleet Register and other sources.

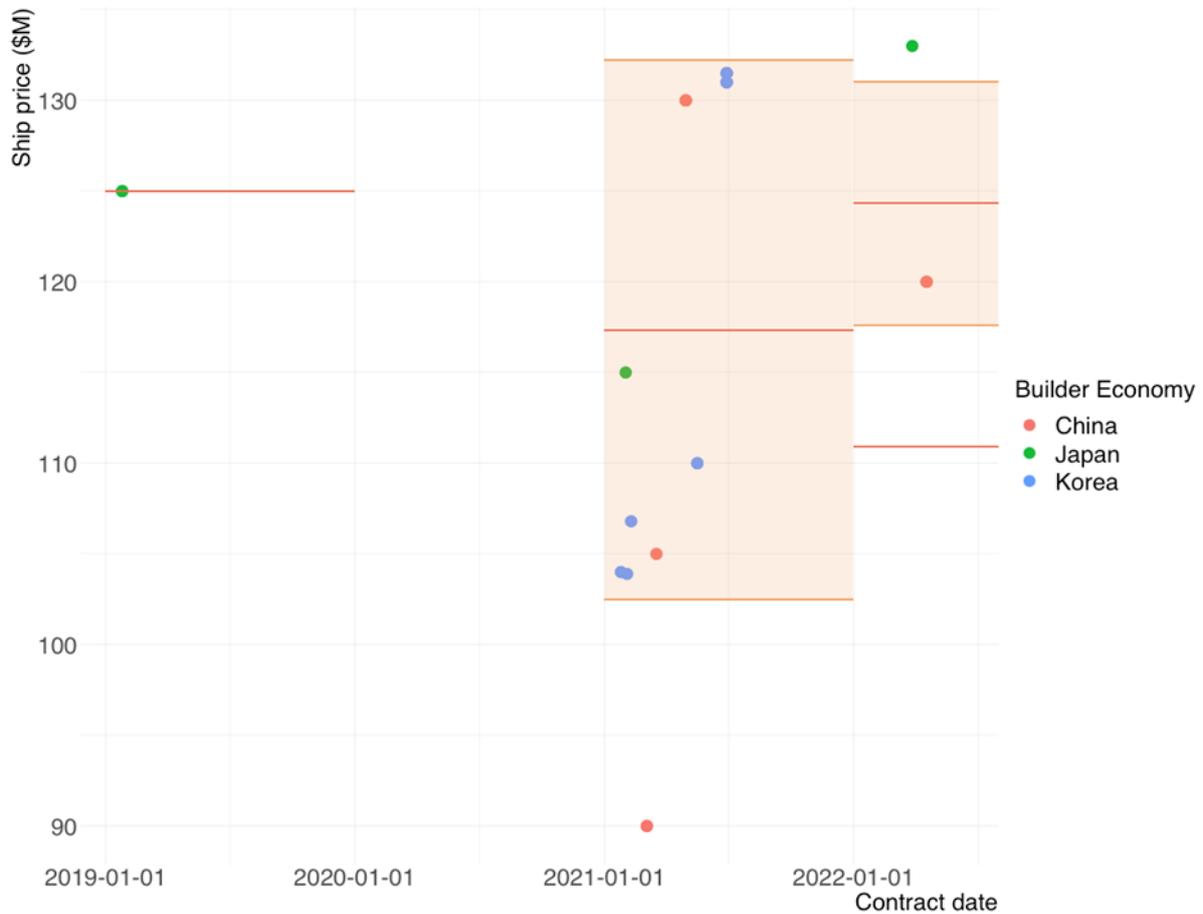
Figure 3.17. Price developments for Containerships (7+ - 9 k TEU) during 2019-2023


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.5. Details of outliers for Containerships (7+ - 9 k TEU) during 2019-2023

| IMO_No. | Name | TEU | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|-------------------------------------|------|-----------|----------|-----------|---------------------|---------------------|---------|--------------|
| | N/B Hyundai HI (Ulsan) | 7900 | 4-14-2022 | 5-1-2025 | 134.3 | Hyundai HI (Ulsan) | HD Hyundai | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 7900 | 4-14-2022 | 3-1-2025 | 134.3 | Hyundai HI (Ulsan) | HD Hyundai | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 7900 | 4-14-2022 | 4-1-2025 | 134.3 | Hyundai HI (Ulsan) | HD Hyundai | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 7900 | 4-14-2022 | 6-1-2025 | 134.3 | Hyundai HI (Ulsan) | HD Hyundai | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 7900 | 4-14-2022 | 2-1-2025 | 134.3 | Hyundai HI (Ulsan) | HD Hyundai | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 7900 | 4-14-2022 | 1-1-2025 | 134.3 | Hyundai HI (Ulsan) | HD Hyundai | Korea | LNG, VLS IFO |
| 9970002 | N/B Daehan Shipbuilding Haenam 4010 | 7950 | 4-1-2022 | 5-1-2024 | 93 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | IFO 380 |
| 9970026 | N/B Daehan Shipbuilding Haenam 4012 | 7950 | 4-1-2022 | 6-1-2024 | 93 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | IFO 380 |
| 9969998 | N/B Daehan Shipbuilding Haenam 4009 | 7950 | 4-1-2022 | 4-1-2024 | 93 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | IFO 380 |
| 9970014 | N/B Daehan Shipbuilding Haenam 4011 | 7950 | 4-1-2022 | 5-1-2024 | 93 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | IFO 380 |
| | N/B Shanhaiguan SB | 7096 | 3-11-2022 | 5-1-2024 | 80 | Shanhaiguan SB | CSSC | China | VLS IFO |
| | N/B Shanhaiguan SB | 7096 | 3-11-2022 | 8-1-2024 | 80 | Shanhaiguan SB | CSSC | China | VLS IFO |
| | N/B Dalian Shipbuilding | 7100 | 3-10-2022 | 1-1-2024 | 70 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| | N/B Dalian Shipbuilding | 7100 | 3-10-2022 | 1-1-2024 | 70 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| | N/B Hyundai HI (Ulsan) | 8000 | 3-3-2022 | 1-1-2024 | 98 | Hyundai HI (Ulsan) | HD Hyundai | Korea | VLS IFO |
| | N/B Hyundai HI (Ulsan) | 8000 | 3-3-2022 | 1-1-2024 | 98 | Hyundai HI (Ulsan) | HD Hyundai | Korea | VLS IFO |
| | N/B Hyundai HI (Ulsan) | 8000 | 3-3-2022 | 1-1-2024 | 98 | Hyundai HI (Ulsan) | HD Hyundai | Korea | VLS IFO |
| | N/B Hyundai HI (Ulsan) | 8000 | 3-3-2022 | 1-1-2024 | 98 | Hyundai HI (Ulsan) | HD Hyundai | Korea | VLS IFO |
| | N/B Hyundai HI (Ulsan) | 8000 | 3-3-2022 | 1-1-2024 | 98 | Hyundai HI (Ulsan) | HD Hyundai | Korea | VLS IFO |
| | N/B Hyundai HI (Ulsan) | 8000 | 3-3-2022 | 1-1-2024 | 98 | Hyundai HI (Ulsan) | HD Hyundai | Korea | VLS IFO |

Source: Clarksons World Fleet Register and other sources.

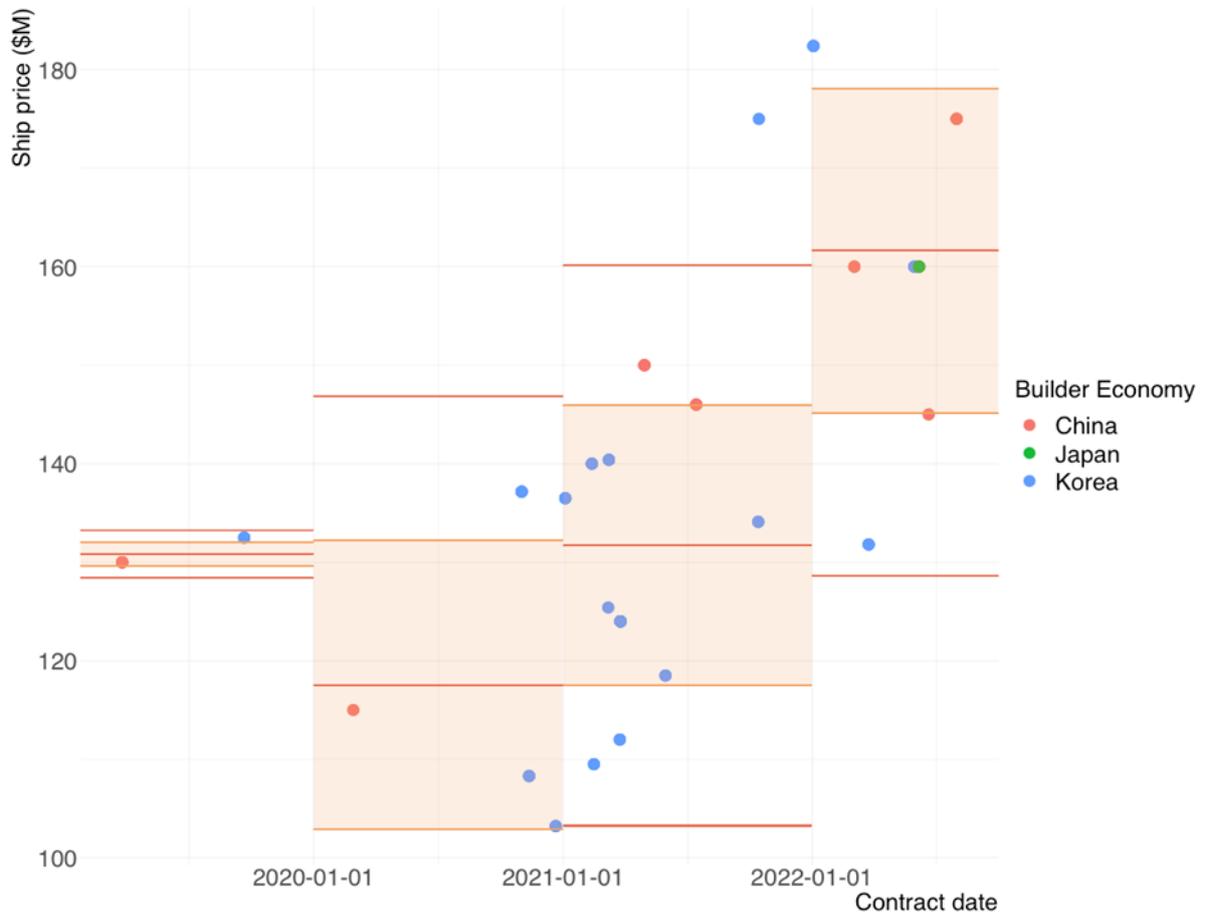
Figure 3.18. Price developments for Containerships (11-13 k TEU) during 2019-2023


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.6. Details of outliers for Containerships (11-13 k TEU) during 2019-2023

| IMO_No. | Name | TEU | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|--|-------|-----------|-----------|-----------|-----------------|----------------------|---------|-----------|
| | N/B Nihon Shipyard | 12000 | 3-28-2022 | 12-1-2024 | 133 | Nihon Shipyard | Imabari Shipbuilding | Japan | VLS IFO |
| | N/B Nihon Shipyard | 12000 | 3-28-2022 | 8-1-2024 | 133 | Nihon Shipyard | Imabari Shipbuilding | Japan | VLS IFO |
| 9937311 | N/B Yangzi Xinfu SB Taizhou YZJ2015-2270 | 11800 | 3-4-2021 | 7-1-2022 | 90 | Yangzi Xinfu SB | Yangzijiang Holdings | China | IFO 380 |
| 9937323 | N/B Yangzi Xinfu SB Taizhou YZJ2015-2271 | 11800 | 3-4-2021 | 8-1-2022 | 90 | Yangzi Xinfu SB | Yangzijiang Holdings | China | IFO 380 |
| 9937335 | N/B Yangzi Xinfu SB Taizhou YZJ2015-2822 | 11800 | 3-4-2021 | 9-1-2022 | 90 | Yangzi Xinfu SB | Yangzijiang Holdings | China | IFO 380 |
| 9937347 | N/B Yangzi Xinfu SB Taizhou YZJ2015-2823 | 11800 | 3-4-2021 | 10-1-2022 | 90 | Yangzi Xinfu SB | Yangzijiang Holdings | China | IFO 380 |

Source: Clarksons World Fleet Register and other sources.

Figure 3.19. Price developments for Containerships (13+ -15 k TEU) during 2019-2023


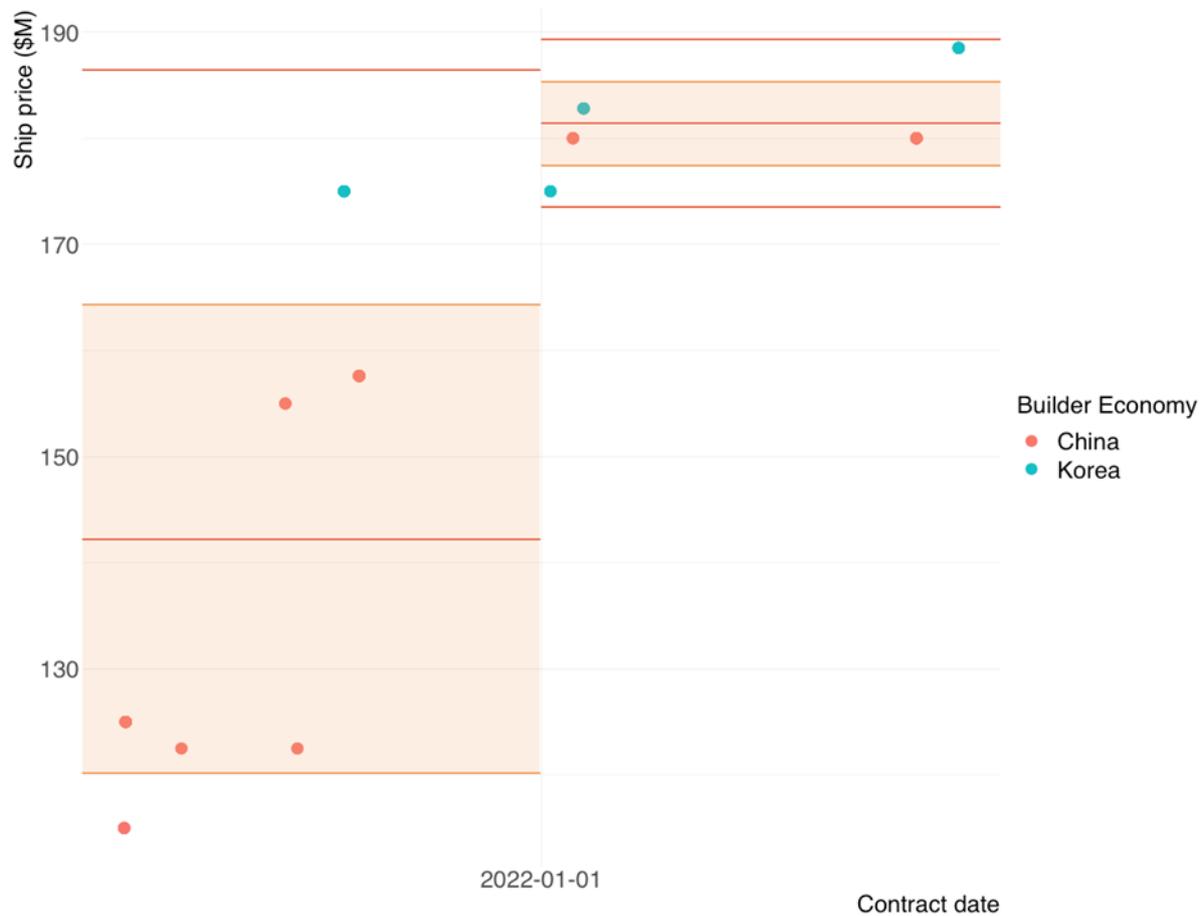
Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.7. Details of outliers for Containerships (13+ -15 k TEU) during 2019-2023

| IMO_No. | Name | TEU | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|-----------------------------------|-------|------------|-----------|-----------|--------------------|------------------|---------|--------------|
| | N/B Jiangnan SY Group | 14000 | 6-21-2022 | 7-1-2025 | 145 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Jiangnan SY Group | 14000 | 6-21-2022 | 9-1-2025 | 145 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Samsung HI | 13100 | 3-25-2022 | 9-1-2024 | 131.8 | Samsung HI | Samsung HI | Korea | VLS IFO |
| | N/B Samsung HI | 13100 | 3-25-2022 | 11-1-2024 | 131.8 | Samsung HI | Samsung HI | Korea | VLS IFO |
| | N/B Samsung HI | 13100 | 3-25-2022 | 8-1-2024 | 131.8 | Samsung HI | Samsung HI | Korea | VLS IFO |
| | N/B Samsung HI | 13100 | 3-25-2022 | 10-1-2024 | 131.8 | Samsung HI | Samsung HI | Korea | VLS IFO |
| | N/B Samsung HI | 13100 | 3-25-2022 | 12-1-2024 | 131.8 | Samsung HI | Samsung HI | Korea | VLS IFO |
| | N/B Hyundai Samho HI | 15000 | 1-3-2022 | 7-1-2024 | 182.4 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho HI | 15000 | 1-3-2022 | 8-1-2024 | 182.4 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho HI | 15000 | 1-3-2022 | 9-1-2024 | 182.4 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho HI | 15000 | 1-3-2022 | 10-1-2024 | 182.4 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho HI | 15000 | 1-3-2022 | 11-1-2024 | 182.4 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho HI | 15000 | 1-3-2022 | 12-1-2024 | 182.4 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho | 15000 | 10-15-2021 | 1-1-2024 | 175 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho | 15000 | 10-15-2021 | 4-1-2024 | 175 | Hyundai Samho HI | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Jiangnan SY Group | 15000 | 4-30-2021 | 10-1-2023 | 150 | Jiangnan SY Group | CSSC | China | LNG, VLS IFO |
| | N/B Jiangnan SY Group | 15000 | 4-30-2021 | 12-1-2023 | 150 | Jiangnan SY Group | CSSC | China | LNG, VLS IFO |
| | N/B Jiangnan SY Group | 15000 | 4-30-2021 | 1-1-2024 | 150 | Jiangnan SY Group | CSSC | China | LNG, VLS IFO |
| | N/B Jiangnan SY Group | 15000 | 4-30-2021 | 1-1-2024 | 150 | Jiangnan SY Group | CSSC | China | LNG, VLS IFO |
| | N/B Jiangnan SY Group | 15000 | 4-30-2021 | 1-1-2024 | 150 | Jiangnan SY Group | CSSC | China | LNG, VLS IFO |
| | N/B Jiangnan SY Group | 15000 | 4-30-2021 | 1-1-2024 | 150 | Jiangnan SY Group | CSSC | China | LNG, VLS IFO |
| 9935088 | N/B Hyundai HI (Ulsan) Ulsan 3388 | 13200 | 3-25-2021 | 3-1-2023 | 112 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |
| 9935090 | N/B Hyundai HI (Ulsan) Ulsan 3389 | 13200 | 3-25-2021 | 5-1-2023 | 112 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |
| 9935105 | N/B Hyundai HI (Ulsan) Ulsan 3390 | 13200 | 3-25-2021 | 7-1-2023 | 112 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |
| 9935117 | N/B Hyundai HI (Ulsan) Ulsan 3391 | 13200 | 3-25-2021 | 9-1-2023 | 112 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |
| 9935129 | N/B Hyundai HI (Ulsan) Ulsan 3392 | 13200 | 3-25-2021 | 11-1-2023 | 112 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |
| 9930935 | N/B Daewoo (DSME) Geoje 4366 | 15000 | 2-15-2021 | 3-1-2023 | 109.5 | Daewoo (DSME) | Daewoo (DSME) | Korea | IFO 380 |
| 9930947 | N/B Daewoo (DSME) Geoje 4367 | 15000 | 2-15-2021 | 4-1-2023 | 109.5 | Daewoo (DSME) | Daewoo (DSME) | Korea | IFO 380 |
| 9930959 | N/B Daewoo (DSME) Geoje 4368 | 15000 | 2-15-2021 | 5-1-2023 | 109.5 | Daewoo (DSME) | Daewoo (DSME) | Korea | IFO 380 |
| 9930961 | N/B Daewoo (DSME) Geoje 4369 | 15000 | 2-15-2021 | 6-1-2023 | 109.5 | Daewoo (DSME) | Daewoo (DSME) | Korea | IFO 380 |
| | N/B Hyundai HI (Ulsan) | 14812 | 11-1-2020 | 8-1-2022 | 137.16 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 14812 | 11-1-2020 | 10-1-2022 | 137.16 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 14812 | 11-1-2020 | 12-1-2022 | 137.16 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9927275 | N/B Hyundai HI (Ulsan) Ulsan 3181 | 14812 | 11-1-2020 | 1-1-2023 | 137.16 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9927287 | N/B Hyundai HI (Ulsan) Ulsan 3182 | 14812 | 11-1-2020 | 2-1-2023 | 137.16 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9927299 | N/B Hyundai HI (Ulsan) Ulsan 3183 | 14812 | 11-1-2020 | 4-1-2023 | 137.16 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9897755 | Arcachon Bay / CMA CGM Yosemite | 14812 | 9-21-2019 | 10-1-2022 | 132.5 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9897767 | Bonavista Bay / CMA CGM Sequoia | 14812 | 9-21-2019 | 11-1-2022 | 132.5 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9897779 | Rose Bay | 14812 | 9-21-2019 | 12-1-2022 | 132.5 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9897781 | Salt Bay | 14812 | 9-21-2019 | 2-1-2023 | 132.5 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| 9897793 | Superior Bay | 14812 | 9-21-2019 | 4-1-2023 | 132.5 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |

Source: Clarksons World Fleet Register and other sources.

Figure 3.20. Price developments for Containerships (15+ - 17 k TEU) during 2019-2023

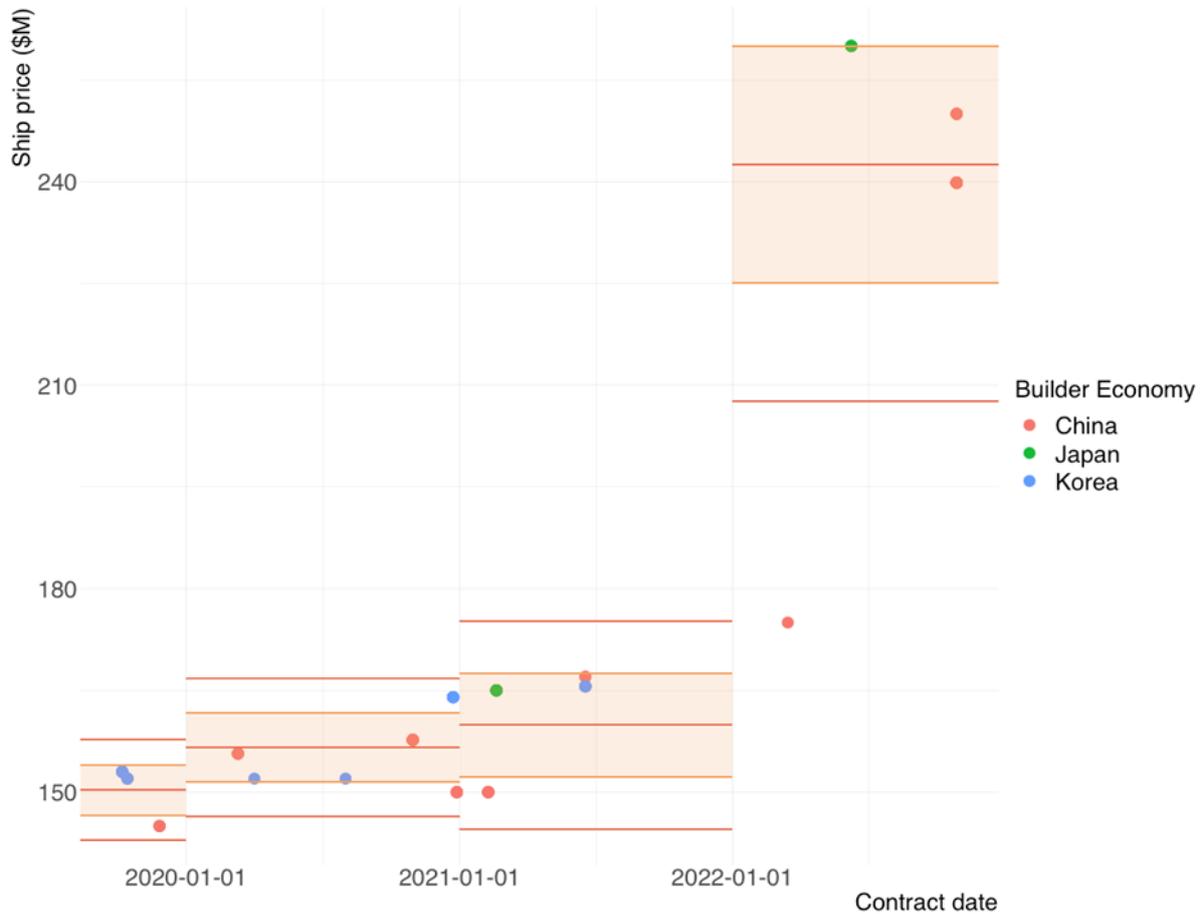


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.8. Details of outliers for Containerships (15+ - 17 k TEU) during 2019-2023

| IMO_No. | Name | TEU | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|------------------------|-------|-----------|-----------|-----------|--------------------|------------------|---------|-------------------|
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 1-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 2-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 4-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 5-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 2-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 3-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 5-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 6-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 7-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 9-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 10-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 11-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Jiangnan SY Group | 15500 | 3-30-2021 | 7-1-2023 | 115 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Jiangnan SY Group | 15500 | 3-30-2021 | 9-1-2023 | 115 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Jiangnan SY Group | 15500 | 3-30-2021 | 11-1-2023 | 115 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Hudong Zhonghua | 15500 | 3-30-2021 | 1-1-2024 | 115 | Hudong Zhonghua | CSSC | China | IFO 380 |
| | N/B Hudong Zhonghua | 15500 | 3-30-2021 | 3-1-2024 | 115 | Hudong Zhonghua | CSSC | China | IFO 380 |
| | N/B Hudong Zhonghua | 15500 | 3-30-2021 | 5-1-2024 | 115 | Hudong Zhonghua | CSSC | China | IFO 380 |

Source: Clarksons World Fleet Register and other sources.

Figure 3.21. Price developments for Containerships (23-25 k TEU) during 2019-2023


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.9. Details of outliers for Containerships (23-25 k TEU) during 2019-2023

| IMO_No. | Name | TEU | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|------------------------|-------|-----------|-----------|-----------|--------------------|------------------|---------|-------------------|
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 17000 | 10-5-2022 | 1-1-2025 | 188.5 | Hyundai HI (Ulsan) | HD Hyundai | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 1-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 2-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 4-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 1-7-2022 | 5-1-2025 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 2-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 3-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 5-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 6-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 7-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 9-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 10-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 16000 | 8-23-2021 | 11-1-2024 | 175 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | Methanol, VLS IFO |
| | N/B Jiangnan SY Group | 15500 | 3-30-2021 | 7-1-2023 | 115 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Jiangnan SY Group | 15500 | 3-30-2021 | 9-1-2023 | 115 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Jiangnan SY Group | 15500 | 3-30-2021 | 11-1-2023 | 115 | Jiangnan SY Group | CSSC | China | IFO 380 |
| | N/B Hudong Zhonghua | 15500 | 3-30-2021 | 1-1-2024 | 115 | Hudong Zhonghua | CSSC | China | IFO 380 |
| | N/B Hudong Zhonghua | 15500 | 3-30-2021 | 3-1-2024 | 115 | Hudong Zhonghua | CSSC | China | IFO 380 |
| | N/B Hudong Zhonghua | 15500 | 3-30-2021 | 5-1-2024 | 115 | Hudong Zhonghua | CSSC | China | IFO 380 |

Source: Clarksons World Fleet Register and other sources.

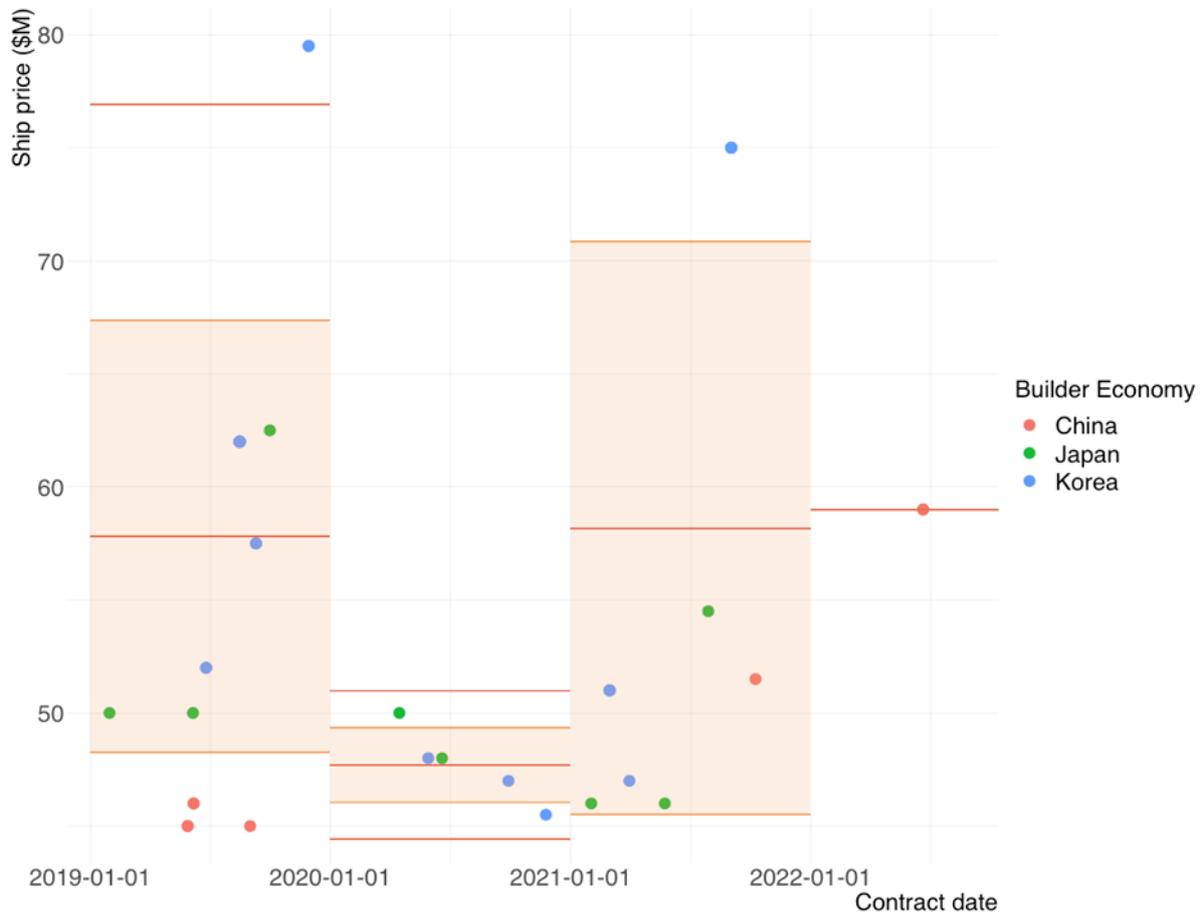
Crude tankers

Similar to containerships, price information on crude tankers was more readily available, with price data collected for 73% of ship orders. The Secretariat divided ships into three classes: 1) 111-117 k dwt (Aframax), 2) 152-160 k dwt (Suezmax), 3) 298-300 k dwt (UL/VLCC).

The results are shown in Figure 3.22 to Figure 3.24. Price fluctuations of crude oil tankers appear less uniform than those of bulk carriers and containerships and are likely to show variations in the studied time period. While average prices of Aframax crude tankers fluctuate in a price range from approx. 48 USD M to 58 USD M (Figure 3.22), Suezmax tankers experience a downward trend in average prices from a high of 68 USD M in 2019 to 58 USD M in 2020 but increase again in 2021-2022 (Figure 3.23). Average prices for UL/VLCC crude tankers show very little change between 2018 and 2020, with a marked increase in 2021 (Figure 3.24). There is a possibility that these changes are due to the volatility of the crude oil market and shifts in energy policy.

Prices for all three size classes also include significant outliers, with mean + 2σ plots in all the three figures as well as one mean - 2σ plot for UL/VLCC crude tankers. As with bulkers and containerships, price outliers indicated by mean + 1 (or 2) σ plots for 7-9 k TEU and 13+ -15k TEU include LNG fuel capable ships (Table 3.10 and Table 3.12)

Figure 3.22. Price developments for Crude tankers (111-117 k dwt) during 2019-2023

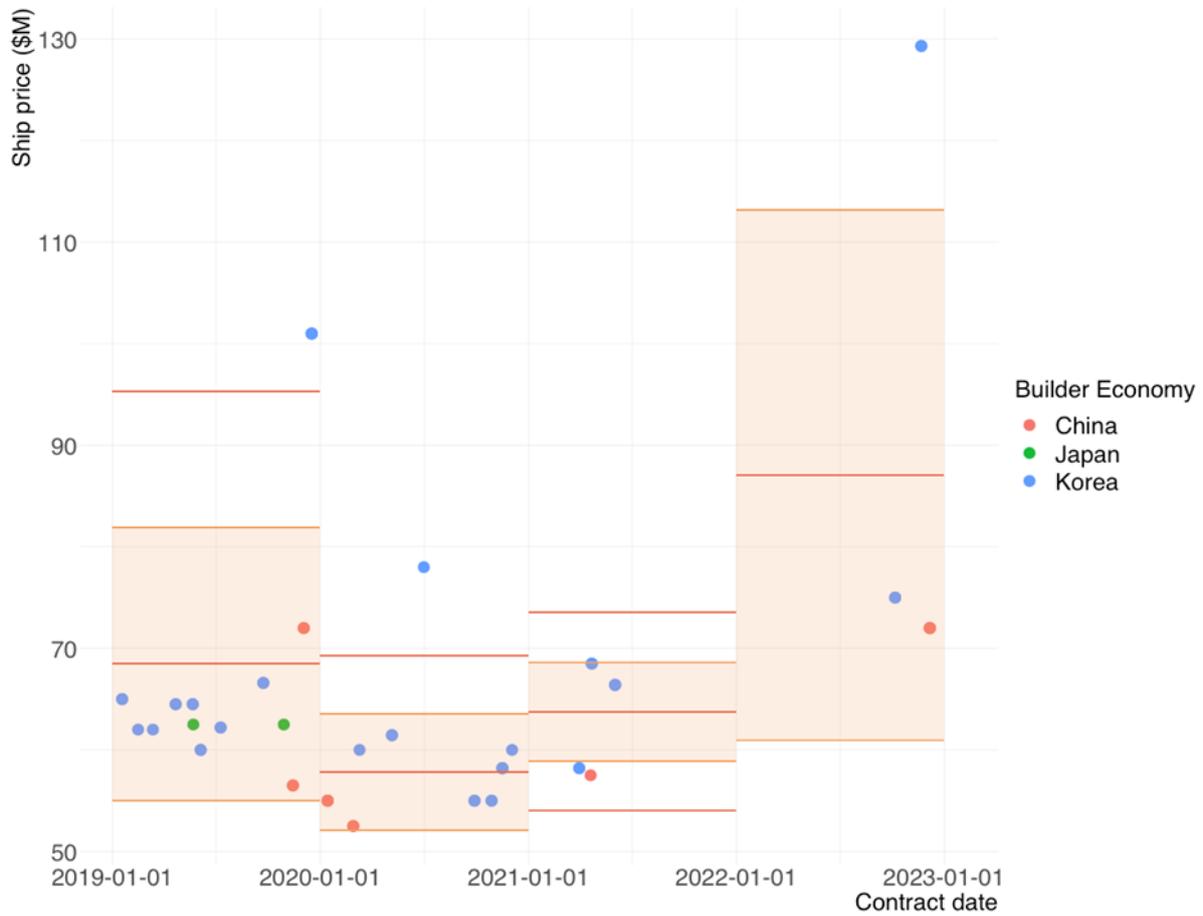


Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.10. Details of outliers for Crude tankers (111-117 k dwt) during 2019-2023

| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|---------------------------------------|--------|------------|-----------|-----------|---------------------|----------------------|---------|--------------|
| | N/B Daehan Shipbuilding Haenam 5081 | 115000 | 9-2-2021 | 9-1-2023 | 75 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | LNG, VLS IFO |
| | N/B Daehan Shipbuilding Haenam 5082 | 115000 | 9-2-2021 | 10-1-2023 | 75 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | LNG, VLS IFO |
| | N/B Daehan Shipbuilding Haenam 5083 | 115000 | 9-2-2021 | 11-1-2023 | 75 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | LNG, VLS IFO |
| | N/B Daehan Shipbuilding Haenam 5084 | 115000 | 9-2-2021 | 12-1-2023 | 75 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | LNG, VLS IFO |
| | N/B Daehan Shipbuilding | 115000 | 11-24-2020 | 3-1-2022 | 45.5 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | VLS IFO |
| 9910533 | N/B Sumitomo (Yokosuka) Yokosuka 1408 | 112000 | 4-15-2020 | 1-1-2022 | 50 | Sumitomo (Yokosuka) | Sumitomo HI | Japan | IFO 380 |
| 9901025 | N/B Samsung HI Geoje 2367 | 114000 | 11-29-2019 | 1-1-2022 | 79.5 | Samsung HI | Samsung HI | Korea | VLS IFO |
| 9901037 | N/B Samsung HI Geoje 2368 | 114000 | 11-29-2019 | 3-1-2022 | 79.5 | Samsung HI | Samsung HI | Korea | VLS IFO |
| 9903918 | Sea Dragon | 114000 | 9-1-2019 | 10-1-2021 | 45 | Shanghai Waigaoqiao | CSSC | China | VLS IFO |
| 9891660 | Aigeorgis | 116092 | 6-7-2019 | 5-1-2021 | 46 | New Times SB | New Century SB Group | China | IFO 380 |
| 9891672 | Pegasus Star | 115000 | 6-7-2019 | 8-1-2021 | 46 | New Times SB | New Century SB Group | China | IFO 380 |
| 9886718 | Sea Turtle | 114085 | 5-29-2019 | 5-1-2021 | 45 | Shanghai Waigaoqiao | CSSC | China | VLS IFO |
| 9886720 | Sea Urchin | 114000 | 5-29-2019 | 7-1-2021 | 45 | Shanghai Waigaoqiao | CSSC | China | VLS IFO |

Source: Clarksons World Fleet Register and other sources.

Figure 3.23. Price developments for Crude tankers (152-160 k dwt) during 2019-2023


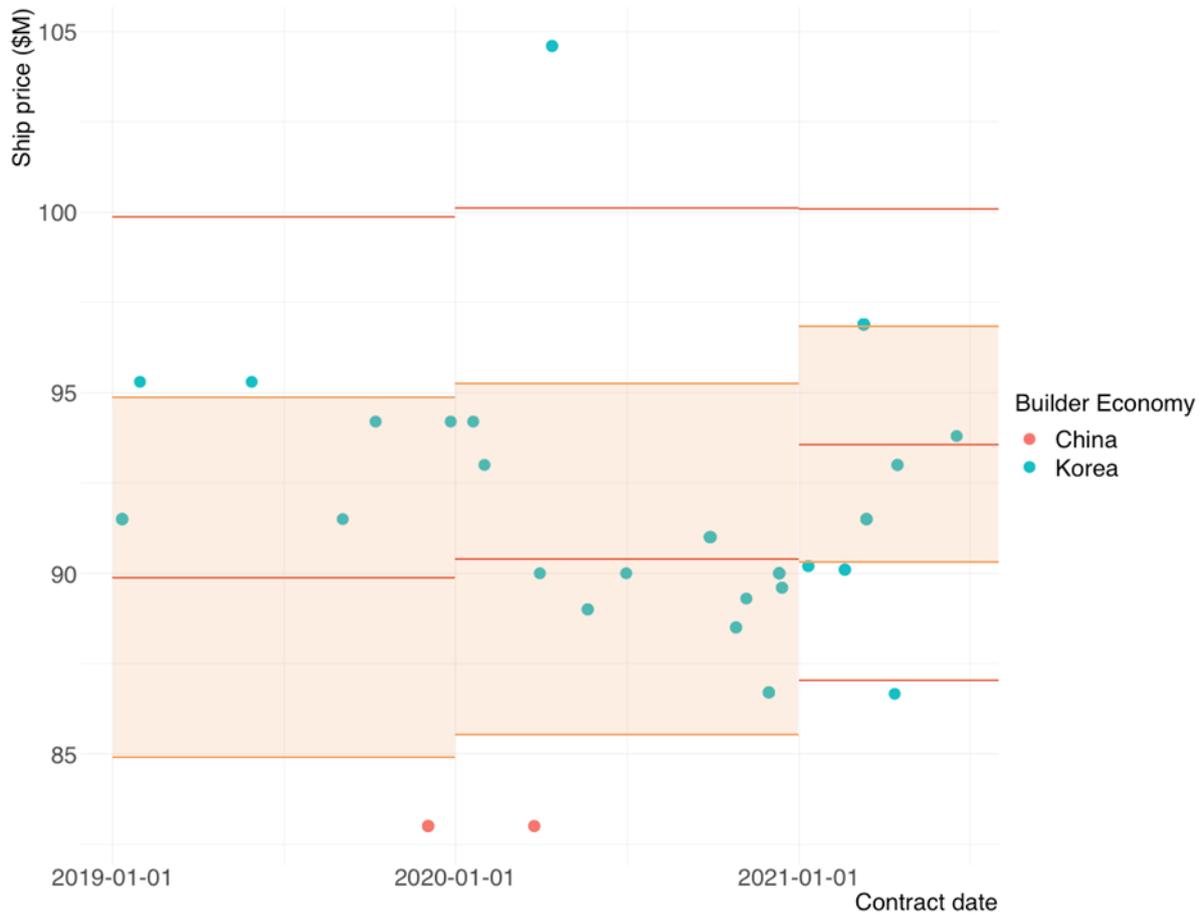
Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.11. Details of outliers for Crude tankers (152-160 k dwt) during 2019-2023

| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|-------------------------------------|--------|------------|-----------|-----------|---------------------|----------------------|---------|-----------|
| | N/B Samsung HI | 160000 | 11-22-2022 | 3-1-2025 | 129.33 | Samsung HI | Samsung HI | Korea | VLS IFO |
| | N/B Samsung HI | 160000 | 11-22-2022 | 6-1-2025 | 129.33 | Samsung HI | Samsung HI | Korea | VLS IFO |
| | N/B New Times SB | 156500 | 4-20-2021 | 1-1-2023 | 57.5 | New Times SB | New Century SB Group | China | VLS IFO |
| | N/B Samsung HI | 157000 | 3-31-2021 | 1-1-2023 | 58.2 | Samsung HI | Samsung HI | Korea | IFO 380 |
| | N/B Samsung HI | 157000 | 3-31-2021 | 1-1-2023 | 58.2 | Samsung HI | Samsung HI | Korea | IFO 380 |
| | N/B Daehan Shipbuilding Haenam 5800 | 155000 | 7-1-2020 | 6-1-2022 | 78 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | |
| 9902225 | Eagle Ampos | 153000 | 12-17-2019 | 11-1-2021 | 101 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |
| 9902237 | N/B Hyundai HI (Ulsan) Ulsan 3196 | 153000 | 12-17-2019 | 1-1-2022 | 101 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |
| 9902249 | N/B Hyundai HI (Ulsan) Ulsan 3197 | 153000 | 12-17-2019 | 4-1-2022 | 101 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | VLS IFO |

Source: Clarksons World Fleet Register and other sources.

Figure 3.24. Price developments for Crude tankers (298-300 k dwt) during 2019-2023



Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.12. Details of outliers for Crude tankers (298-300 k dwt) during 2019-2023

| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|---|--------|-----------|-----------|-----------|---------------------|------------------|---------|--------------|
| 9937799 | N/B Daewoo (DSME) Geoje 5507 | 300000 | 4-13-2021 | 2-1-2023 | 86.66 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933535 | Advantage Verdict | 300000 | 3-11-2021 | 9-1-2022 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933547 | Advantage Victory | 300000 | 3-11-2021 | 10-1-2022 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933559 | Advantage Vision | 300000 | 3-11-2021 | 11-1-2022 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933561 | Advantage Vital | 300000 | 3-11-2021 | 1-1-2023 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933573 | N/B Daewoo (DSME) Geoje 5496 | 300000 | 3-11-2021 | 1-1-2023 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933585 | N/B Daewoo (DSME) Geoje 5497 | 300000 | 3-11-2021 | 1-1-2023 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933597 | N/B Daewoo (DSME) Geoje 5498 | 300000 | 3-11-2021 | 1-1-2023 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933602 | N/B Daewoo (DSME) Geoje 5499 | 300000 | 3-11-2021 | 1-1-2023 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933614 | N/B Daewoo (DSME) Geoje 5500 | 300000 | 3-11-2021 | 1-1-2023 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| 9933626 | N/B Daewoo (DSME) Geoje 5506 | 300000 | 3-11-2021 | 1-1-2023 | 96.89 | Daewoo (DSME) | Daewoo (DSME) | Korea | LNG, VLS IFO |
| | N/B Hyundai Samho HI | 300000 | 2-19-2021 | 8-1-2022 | 90.1 | Hyundai Samho HI | Hyundai HI Group | Korea | IFO 380 |
| | N/B Hyundai Samho HI | 300000 | 2-19-2021 | 10-1-2022 | 90.1 | Hyundai Samho HI | Hyundai HI Group | Korea | IFO 380 |
| | N/B Hyundai Samho HI | 300000 | 2-19-2021 | 12-1-2022 | 90.1 | Hyundai Samho HI | Hyundai HI Group | Korea | IFO 380 |
| 9928645 | Hellas Fos II | 299169 | 1-11-2021 | 5-1-2022 | 90.2 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | IFO 380 |
| 9928657 | Hellas Tiger | 299169 | 1-11-2021 | 8-1-2022 | 90.2 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | IFO 380 |
| 9910234 | N/B Samsung HI Geoje 2388 | 300000 | 4-13-2020 | 1-1-2022 | 104.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| 9910246 | N/B Samsung HI Geoje 2389 | 300000 | 4-13-2020 | 3-1-2022 | 104.6 | Samsung HI | Samsung HI | Korea | LNG, VLS IFO |
| | N/B Dalian Shipbuilding | 300000 | 3-25-2020 | 7-1-2022 | 83 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| | N/B Dalian Shipbuilding | 300000 | 3-25-2020 | 9-1-2022 | 83 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| 9900655 | New Era | 300000 | 12-3-2019 | 7-1-2021 | 83 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| 9900667 | N/B Dalian Shipbuilding Dalian T300K-96 | 300000 | 12-3-2019 | 1-1-2022 | 83 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| 9900679 | N/B Dalian Shipbuilding Dalian T300K-97 | 300000 | 12-3-2019 | 3-1-2022 | 83 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| 9900681 | N/B Dalian Shipbuilding Dalian T300K-98 | 300000 | 12-3-2019 | 5-1-2022 | 83 | Dalian Shipbuilding | CSSC | China | VLS IFO |
| 9885594 | Halcyon | 299942 | 5-29-2019 | 11-1-2020 | 95.3 | Hyundai Samho HI | Hyundai HI Group | Korea | |
| 9878826 | Babylon | 299700 | 1-30-2019 | 6-1-2020 | 95.3 | Hyundai Samho HI | Hyundai HI Group | Korea | |

Source: Clarksons World Fleet Register and other sources.

Product tankers

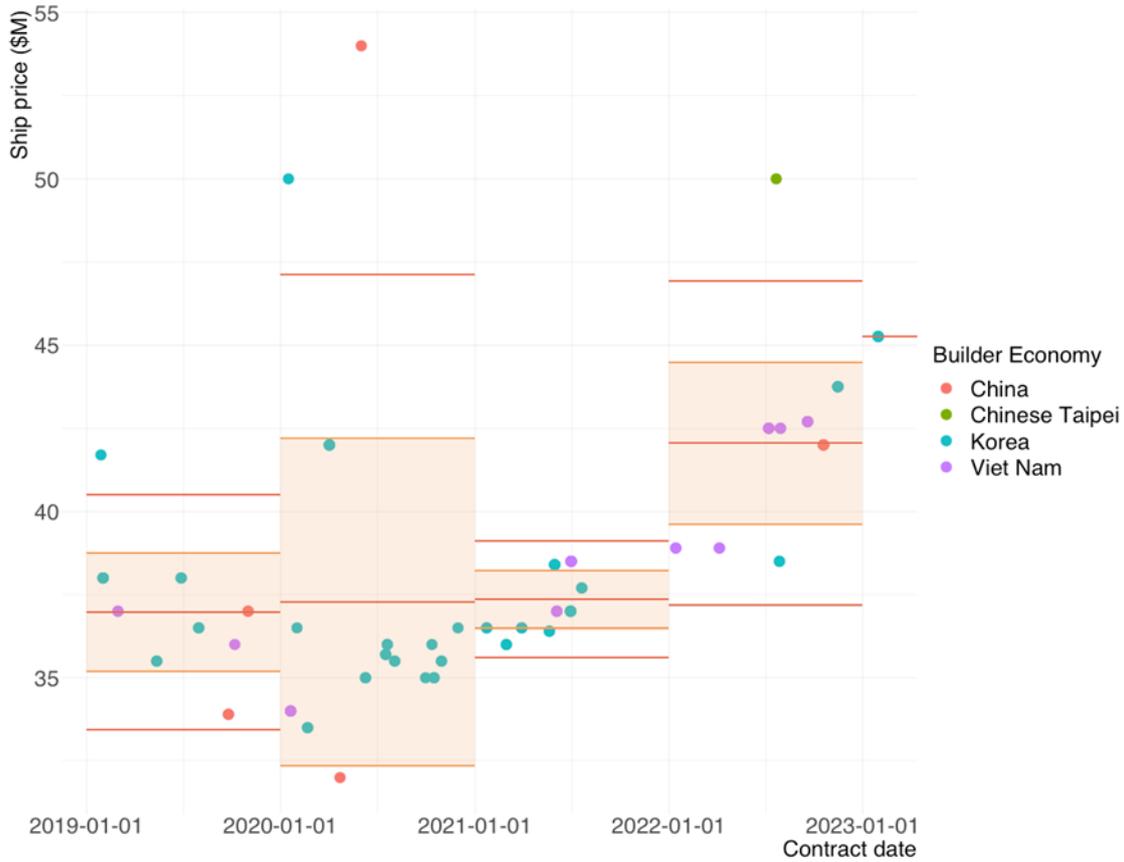
The Secretariat also studied two size classes of product tankers in the scope of this analysis: 1) 49-50 k dwt (MR) and 2) 110-120 k dwt (LR2).

The results are shown in Figure 3.25 to Figure 3.26. For both size classes, average prices follow a gradual positive trend between 2018 and 2022, with MR product tankers reaching an average of 42 USD M and LR2 tankers 64 USD M in 2022.

MR product tankers generally have higher rates of price dispersion than LR2 tankers, with four outliers (mean + 2 σ plots). For LR2 tankers price dispersion was particularly high in 2021.

For both sizes, most of outliers (mean + 1 or 2 σ plots) are of LNG-capable ships.

Figure 3.25. Price developments for Product tankers (49-50 k dwt) during 2019-2023



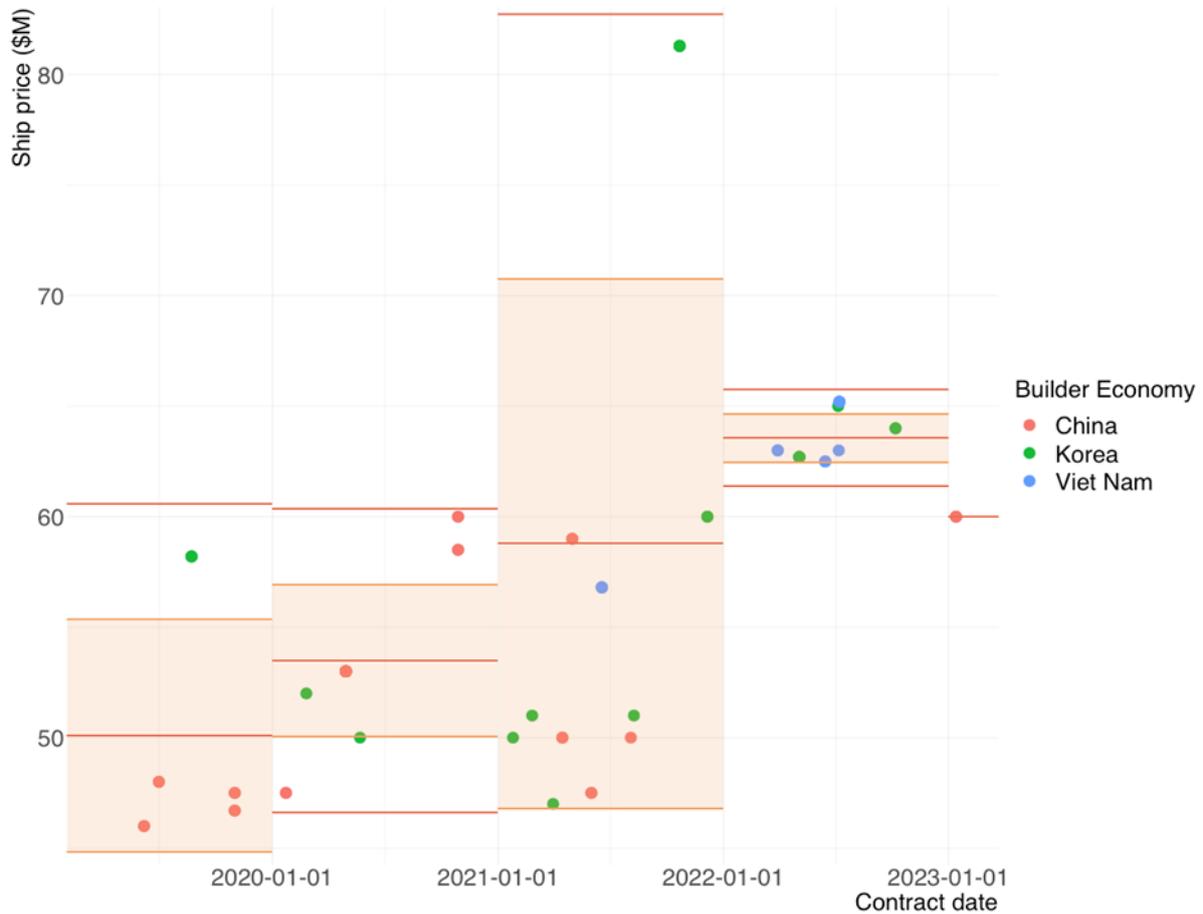
Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.13. Details of outliers for Product tankers (49-50 k dwt) during 2019-2023

| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|---|-------|-----------|-----------|-----------|---------------------|-------------------|----------------|--------------|
| | N/B STX SB (Jinhae) | 50000 | 7-28-2022 | 1-1-2024 | 38.5 | K SB (Jinhae) | K Shipbuilding | Korea | IFO 380 |
| | N/B STX SB (Jinhae) | 50000 | 7-28-2022 | 1-1-2024 | 38.5 | K SB (Jinhae) | K Shipbuilding | Korea | IFO 380 |
| | N/B CSBC (Kaohsiung) | 50000 | 7-22-2022 | 1-1-2024 | 50 | CSBC (Kaohsiung) | CSBC Corporation | Chinese Taipei | VLS IFO |
| | N/B Hyundai Viet Nam SB | 50000 | 4-6-2022 | 10-1-2023 | 38.9 | Hyundai Viet Nam SB | HD Hyundai | Viet Nam | VLS IFO |
| | N/B Hyundai Viet Nam SB | 50000 | 4-6-2022 | 12-1-2023 | 38.9 | Hyundai Viet Nam SB | HD Hyundai | Viet Nam | VLS IFO |
| | N/B Hyundai Viet Nam SB | 50000 | 1-14-2022 | 7-1-2023 | 38.9 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | |
| | N/B Hyundai Viet Nam SB | 50000 | 1-14-2022 | 9-1-2023 | 38.9 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | |
| | N/B Hyundai Viet Nam SB | 50000 | 7-1-2021 | 5-1-2023 | 38.5 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | VLS IFO |
| | N/B Hyundai Viet Nam SB | 50000 | 7-1-2021 | 8-1-2023 | 38.5 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | VLS IFO |
| 9951044 | N/B Hyundai Viet Nam SB Ninh Phuoc S515 | 50000 | 7-1-2021 | 7-1-2023 | 38.5 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | LNG, VLS IFO |
| 9951056 | N/B Hyundai Viet Nam SB Ninh Phuoc S516 | 50000 | 7-1-2021 | 9-1-2023 | 38.5 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | LNG, VLS IFO |
| 9951068 | N/B Hyundai Viet Nam SB Ninh Phuoc S517 | 50000 | 7-1-2021 | 10-1-2023 | 38.5 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | LNG, VLS IFO |
| 9951070 | N/B Hyundai Viet Nam SB Ninh Phuoc S518 | 50000 | 7-1-2021 | 12-1-2023 | 38.5 | Hyundai Viet Nam SB | Hyundai HI Group | Viet Nam | LNG, VLS IFO |
| | N/B Hyundai Mipo | 50000 | 5-31-2021 | 1-1-2023 | 38.4 | Hyundai Mipo | Hyundai HI Group | Korea | VLS IFO |
| | N/B Hyundai Mipo | 50000 | 5-31-2021 | 2-1-2023 | 38.4 | Hyundai Mipo | Hyundai HI Group | Korea | VLS IFO |
| | N/B Hyundai Mipo | 50000 | 5-31-2021 | 2-1-2023 | 38.4 | Hyundai Mipo | Hyundai HI Group | Korea | VLS IFO |
| | N/B Hyundai Mipo | 50000 | 5-31-2021 | 3-1-2023 | 38.4 | Hyundai Mipo | Hyundai HI Group | Korea | VLS IFO |
| | N/B Hyundai Mipo | 50000 | 5-21-2021 | 10-1-2022 | 36.4 | Hyundai Mipo | Hyundai HI Group | Korea | VLS IFO |
| | N/B Hyundai Mipo | 50000 | 5-21-2021 | 12-1-2022 | 36.4 | Hyundai Mipo | Hyundai HI Group | Korea | VLS IFO |
| | N/B K SB (Jinhae) Jinhae 1928 | 49736 | 3-1-2021 | 1-1-2022 | 36 | K SB (Jinhae) | K Shipbuilding | Korea | IFO 380 |
| | N/B K SB (Jinhae) Jinhae 1929 | 49736 | 3-1-2021 | 2-1-2023 | 36 | K SB (Jinhae) | K Shipbuilding | Korea | IFO 380 |
| | N/B Chengxi Shipyard | 50000 | 6-1-2020 | 1-1-2022 | 54 | Chengxi Shipyard | CSSC | China | LNG, VLS IFO |
| | N/B Chengxi Shipyard | 50000 | 4-22-2020 | 5-1-2022 | 32 | Chengxi Shipyard | CSSC | China | VLS IFO |
| 9905162 | Point Lisas | 49996 | 1-16-2020 | 5-1-2021 | 50 | Hyundai Mipo | Hyundai HI Group | Korea | VLS IFO |
| 9896244 | N/B COSCO HI (Dalian) Dalian N1032 | 49900 | 9-25-2019 | 9-1-2021 | 33.9 | COSCO HI (Dalian) | COSCO Shipping HI | China | |
| 9896256 | N/B COSCO HI (Dalian) Dalian N1033 | 49900 | 9-25-2019 | 10-1-2021 | 33.9 | COSCO HI (Dalian) | COSCO Shipping HI | China | |
| 9877810 | Sunrise Glory | 50000 | 1-28-2019 | 8-1-2020 | 41.7 | Hyundai Mipo | Hyundai HI Group | Korea | IFO 380 |

Source: Clarksons World Fleet Register and other sources.

Figure 3.26. Price developments for Product tankers (110-120 k dwt) during 2019-2023



Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.14. Details of outliers for Product tankers (110-120 k dwt) during 2019-2023

| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|-----------------------------------|--------|------------|-----------|-----------|---------------------|---------------------|----------|--------------|
| | N/B DH Shipbuilding Haenam 5090 | 115000 | 10-7-2022 | 10-1-2024 | 64 | DH Shipbuilding | KHI & HANTO & SG | Korea | IFO 380 |
| | N/B DH Shipbuilding Haenam 5091 | 115000 | 10-7-2022 | 11-1-2024 | 64 | DH Shipbuilding | KHI & HANTO & SG | Korea | IFO 380 |
| | N/B Hyundai Viet Nam SB | 115000 | 7-8-2022 | 9-1-2025 | 65.2 | Hyundai Viet Nam SB | HD Hyundai | Viet Nam | VLS IFO |
| | N/B Hyundai Viet Nam SB | 115000 | 7-8-2022 | 7-1-2025 | 65.2 | Hyundai Viet Nam SB | HD Hyundai | Viet Nam | VLS IFO |
| | N/B Hyundai Viet Nam SB | 115000 | 7-8-2022 | 12-1-2025 | 65.2 | Hyundai Viet Nam SB | HD Hyundai | Viet Nam | VLS IFO |
| | N/B Hyundai Viet Nam SB | 115000 | 6-15-2022 | 5-1-2025 | 62.5 | Hyundai Viet Nam SB | HD Hyundai | Viet Nam | VLS IFO |
| | N/B Hyundai Viet Nam SB | 115000 | 6-15-2022 | 2-1-2025 | 62.5 | Hyundai Viet Nam SB | HD Hyundai | Viet Nam | VLS IFO |
| | N/B Hyundai HI (Ulsan) | 114000 | 10-22-2021 | 8-1-2023 | 81.3 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 114000 | 10-22-2021 | 11-1-2023 | 81.3 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 114000 | 10-22-2021 | 2-1-2024 | 81.3 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B Hyundai HI (Ulsan) | 114000 | 10-22-2021 | 4-1-2024 | 81.3 | Hyundai HI (Ulsan) | Hyundai HI Group | Korea | LNG, VLS IFO |
| | N/B GSI Nansha Guangzhou 20110031 | 110000 | 10-28-2020 | 1-1-2023 | 60 | GSI Nansha | CSSC | China | LNG, VLS IFO |
| | N/B GSI Nansha Guangzhou 20110032 | 110000 | 10-28-2020 | 1-1-2023 | 60 | GSI Nansha | CSSC | China | LNG, VLS IFO |
| | N/B GSI Nansha Guangzhou 20110035 | 110000 | 10-28-2020 | 1-1-2023 | 58.5 | GSI Nansha | CSSC | China | LNG, VLS IFO |
| | N/B GSI Nansha Guangzhou 20110036 | 110000 | 10-28-2020 | 1-1-2023 | 58.5 | GSI Nansha | CSSC | China | LNG, VLS IFO |
| 9912866 | Stresa | 113862 | 5-22-2020 | 11-1-2021 | 50 | Daehan Shipbuilding | Daehan Shipbuilding | Korea | VLS IFO |
| 9904871 | N/B GSI Nansha Guangzhou 19121031 | 114000 | 1-23-2020 | 10-1-2021 | 47.5 | GSI Nansha | CSSC | China | IFO 380 |
| 9904883 | N/B GSI Nansha Guangzhou 19121032 | 114000 | 1-23-2020 | 12-1-2021 | 47.5 | GSI Nansha | CSSC | China | IFO 380 |
| 9893204 | Onex Peace | 114623 | 8-23-2019 | 3-1-2021 | 58.2 | Hyundai Samho HI | Hyundai HI Group | Korea | VLS IFO |
| 9893216 | Onex Precious | 114623 | 8-23-2019 | 5-1-2021 | 58.2 | Hyundai Samho HI | Hyundai HI Group | Korea | VLS IFO |
| 9893228 | Onex Phoenix | 115000 | 8-23-2019 | 9-1-2021 | 58.2 | Hyundai Samho HI | Hyundai HI Group | Korea | VLS IFO |

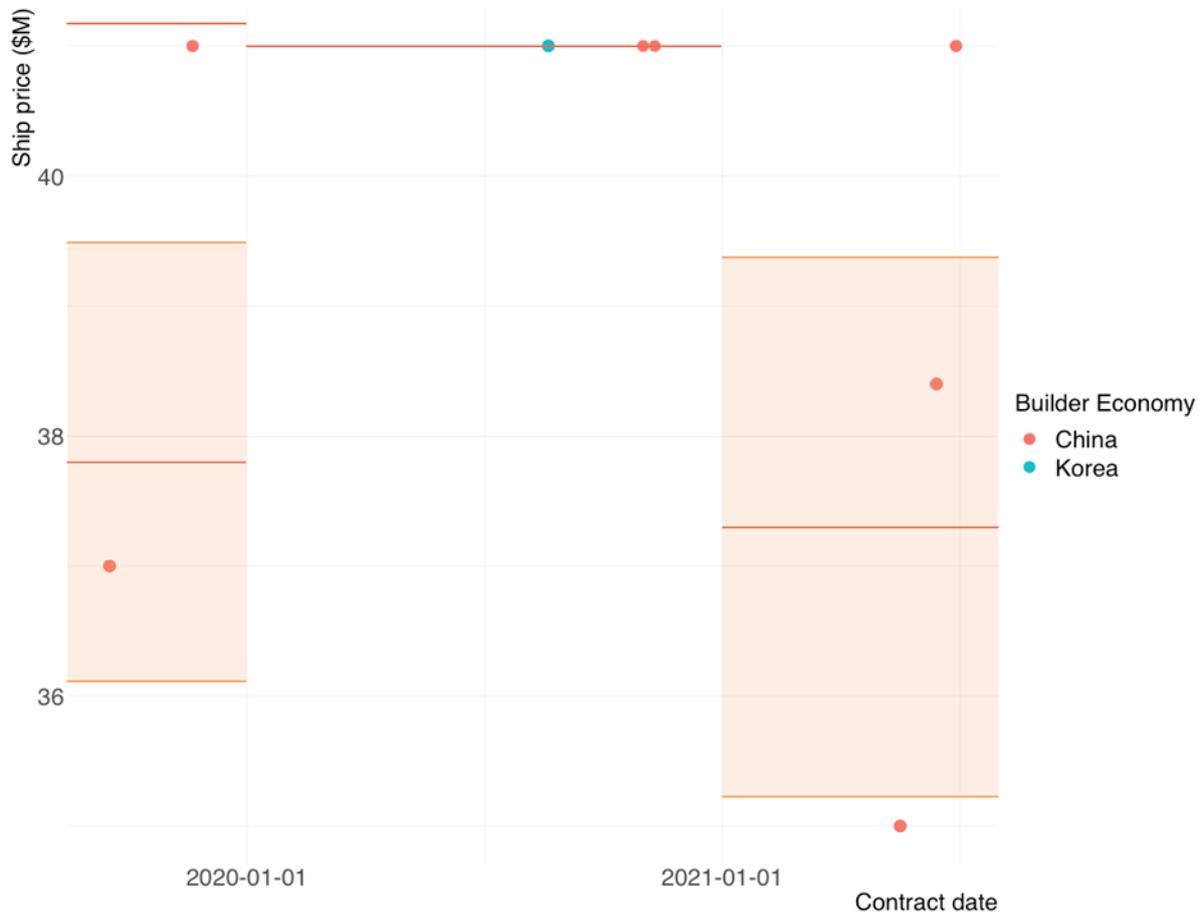
Source: Clarksons World Fleet Register and other sources.

Chemical tankers

Among the five ship types analysed in this document, price information on chemical tankers was most limited (prices could be collected for 23% of ships in the dataset only). The results are shown in Figure 3.27 for one size class: 49-50 k dwt (MR). In Figure 3.27, no clear upward or downward trend can be seen, with average prices fluctuating between a high of 41 USD M in 2020 to just below 38 USD M in 2019 and 2021.

Limited availability of price data for chemical tankers and the very small sample size risk skewing the data, lowering the possibility to extrapolate these results for more general market trends.

Figure 3.27. Price developments for Chemical tankers (49-50 k dwt) during 2019-2023



Source: OECD calculations based on the Clarksons World Fleet Register and other sources.

Table 3.15. Details of outliers for Chemical tankers (49-50 k dwt) during 2019-2023

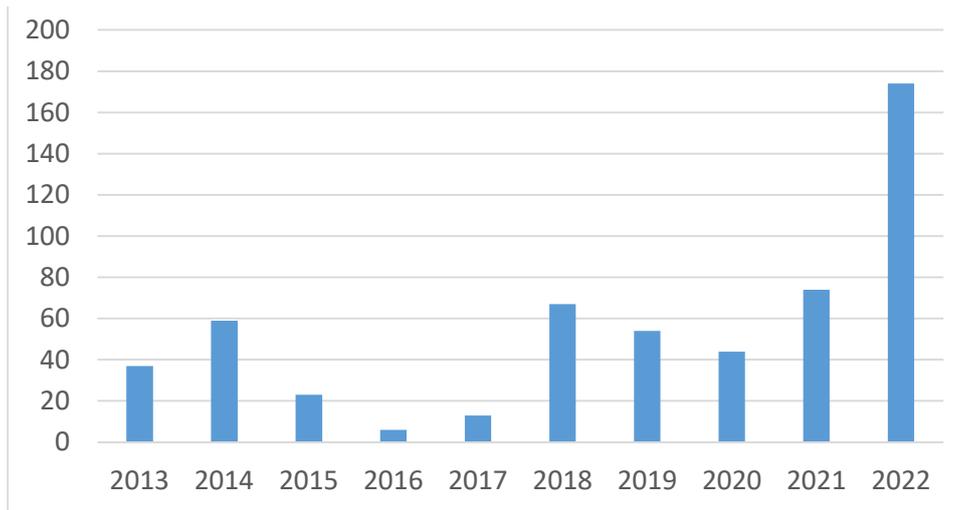
| IMO_No. | Name | Dwt | Contract | Built | Price \$m | Builder | Builder_Group | Economy | Main_Fuel |
|---------|-----------------|-------|------------|-----------|-----------|------------|---------------|---------|-------------------|
| | Provident | 49900 | 6-30-2021 | 10-1-2023 | 41 | GSI Nansha | CSSC | China | Methanol, VLS IFO |
| | Progressive | 49900 | 6-30-2021 | 12-1-2023 | 41 | GSI Nansha | CSSC | China | Methanol, VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 2-1-2024 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 4-1-2024 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 6-1-2024 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 8-1-2024 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 11-1-2024 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 1-1-2025 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 3-1-2025 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | N/B GSI Nansha | 49600 | 5-18-2021 | 5-1-2025 | 35 | GSI Nansha | CSSC | China | VLS IFO |
| | Stena ProPatria | 49900 | 11-20-2019 | 1-1-2022 | 41 | GSI Nansha | CSSC | China | Methanol, VLS IFO |
| | Stena ProMare | 49900 | 11-20-2019 | 1-1-2022 | 41 | GSI Nansha | CSSC | China | Methanol, VLS IFO |

Source: Clarksons World Fleet Register and other sources.

3.3 Proposed future work on ship prices & costs

The Secretariat will include LNG carriers as selected ships to be studied for the following meetings given the rapid increase of contracts for LNG carriers. In fact, contracts for LNG carriers have been awarded for 551 vessels in the last 10 years (2013-2022), of which 75% (413 vessels) were added in five years (2018-2022) and notably of which 32% (174 vessels) in one year (2022) (Figure 3.28).

Figure 3.28. The number of contracts for LNG carriers (2013-2022)



Source: Clarksons World Fleet Register.

4. Conclusion

This document aims to facilitate the discussions about developments of ship prices and costs. It shows that the second-hand price index plummeted by about 31% between August 2022 and February 2023, undercutting the newbuilding index. This is thought to be due to a decline in strong short-term demand for vessels, using second-hand ship procurement. At the same time, the price index of newbuilding has been relatively stable. This may reflect increasing contracts in high value-added vessels with access to alternative fuels. This conclusion is supported by a description of newbuilding prices of major ship types and extended ship size classes, which indicates that some of the outliers include LNG-fuel or Methanol-fuel vessels. The Secretariat will include LNG carriers as selected ships to be studied for the following meetings given the rapid increase of contracts for LNG carriers.

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