After the arrival of Covid in 2020 and the associated strong global recession, there were hopes that 2021 was going to be a year of economic recovery and enhanced chemical demand. This sentiment has partly been postponed for 2022 due to the persistence of the pandemic and the emergence of new variants that continued to disrupt the market. Chemical tanker shipowners had to sail through progressively stronger fuel prices across the year, an imbalance of trading flows, a reduction in USGC chemical capacity in the wake of winter storms and strong delays centred on Asian ports following the imposition of Covid-related restrictions.

**2021: Owners waiting for favourable winds to blow**

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TOSCA
Chemical/oil stainless steel tanker 7,172.60 MT, built by CHINA MERCHANTS JINLING SHIPYARD (YANGZHOU) DIVISION CO., LTD. in 2021, operated by Gefo.
Demolitions

Demolition prices boomed in 2021 and the market saw around 668,000 dwt of tonnage sent to scrap (55 ships), helping to further rebalance the fleet. The long-anticipated impact on demolition by various environmental regulations was delayed somewhat as some owners obtained extra years to equip their existing fleet with ballast water treatment systems. Nonetheless, a combination of the ageing fleet and incoming, stricter environmental regulations are expected to push chemical tankers towards scrapping in the future.

During 2021, the chemical tanker market experienced several challenges. Notably, there were volume disruptions related to Covid while there was some spillover from a persistently weak CPP tanker market which resulted in swing tonnage there were volume disruptions related to Covid while there was some spillover from a persistently weak CPP tanker market which resulted in swing tonnage.

The strong tank container market also brought some parcels of the year. This situation led to the increased demand for Far Eastern exports. All this pressure in the East, together with Covid restrictions, quarantines, port closures and congestion at the ports was the perfect combination to increase freight rates on routes leaving the Far East. There was some fear that this blockage of the Suez Canal in March was going to create some tonnage tightness in the area but finally it only lasted 6 days. The strong tank container market also brought some parcels to the bulk chemical market. Therefore, the fundamentals are favourable for owners, the fleet growth is limited with a small orderbook, yards are full until 2024-2025 and it seems that the CPP tanker market is expected to eventually improve so swing tonnage should stay at bay. This trend for CDA discussions was to get an increase on the rates as tonnage supply prospects looked tight over the short term.

The chemical tanker orderbook stands at a low level and the expectation is that demand for capacity will outpace fleet growth. Market observers expect chemical demand growth to rebound at an average of 2.5% per year between 2021 and 2026. The signs of recovery in the global economy are already there. For example, the IMF forecasts global GDP growth at 4.4% in 2022, and chemical demand should follow.

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The chemical flows were imbalanced. A big early-year freeze in Texas rebalanced in the shutdown of many production facilities on the USGC, which reduced chemical capacities and combined with strong domestic demand, saw low exports for most of the year. This situation led to the increased demand for Far Eastern exports. All this pressure in the East, together with Covid restrictions, quarantines, port closures and congestion at the ports was the perfect combination to increase freight rates on routes leaving the Far East. There was some fear that this blockage of the Suez Canal in March was going to create some tonnage tightness in the area but finally it only lasted 6 days. The strong tank container market also brought some parcels to the bulk chemical market. Therefore, the fundamentals are favourable for owners, the fleet growth is limited with a small orderbook, yards are full until 2024-2025 and it seems that the CPP tanker market is expected to eventually improve so swing tonnage should stay at bay. This trend for CDA discussions was to get an increase on the rates as tonnage supply prospects looked tight over the short term.

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Fleet development and chemical demand

The evolution of the stainless steel chemical tanker fleet decelerated in 2021 (with 1,293 ships in service against 1,323 in 2020). Deliveries of stainless steel tonnage slowed as 683 ships for a combined 1.4 mln dwt hit the water. This has steadily decreased so that by 2021 26 ships were launched for a combined 386,000 dwt.

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Development of chemical tanker pools

The pooling trend continues among chemical tanker owners. After an excellent chemical tanker freight market with pools with Navig8 and TRF in 2011 and 2021 formed a new pool for stainless steel vessels. This new pool handles seven 33,000 dwt chemical tankers together with EGM Shipholding. Odfjell own four of their vessels, and EGD the seven 33,000 dwt chemical tankers together with EGD pools with Navig8 and TRF and in 2021 formed a new pool which the vessels can adhere to. We are increasingly seeing owners’ questions on how they can pool their vessels, and which measures will be necessary: optimise operations, design upgrades or operational improvements will be required of vessels to meet the targets of CO2 emissions, and to reduce GHG emissions. The IMO has set the target of reducing CO2 emissions by 40% by 2030, and 70% by 2050, and to reduce GHG emissions by 50% by 2050, compared with 2008. The Energy Efficiency Design Index (EEDI) is applied to new ships built after 2013 and two associated IMO indexes have been established as reference points for existing ships: the Efficiency Existing Ship Index (EEXI) and the Carbon intensity indicator (CiI). The EEXI and CiI will come into effect in 2023. The CiI will be used to rate ships on a 5-grade scale: A, B, C, D, E (from best to least performing). Ship design upgrades or operational improvements will be required of vessels receiving a D rating 3 years in a row or for vessels receiving a grade E during any annual review.

Apart from that, the EU has the ‘Fit for 55’ target where it wants to reduce the region’s greenhouse gas emissions by 55% by 2030, compared with 1990 baseline. This package includes legislative proposals and some of them are linked to shipping, i.e. the EU Emission Trading System (EU ETS) that will set a cap on the total amount of GHG emissions that can be emitted, and shipowners will have to buy permits when their ships’ pollute or will face fines and possible bans from EU ports. The measure will be phased in over a three-year period from 2023.

The question today is how to adapt and improve the emissions of existing vessels, and which measures will be necessary: optimise operations, reduce speed, etc. Another question is how to build the next generation of vessels and to anticipate the technology to be used in future vessels, evaluating what will be the efficiency and availability of alternative fuels. Currently, there is significant uncertainty concerning future propulsion.

Northwest Europe: FAME, CPP and DPP

2021 continued where we left off from the previous year. The effects of Covid cast its dark shadow over the world and many sectors. The IMO has set the target of reducing CO2 emissions, and to reduce GHG emissions by 50% by 2050, compared with 2008. The Energy Efficiency Design Index (EEDI) is applied to new ships built after 2013 and two associated IMO indexes have been established as reference points for existing ships: the Efficiency Existing Ship Index (EEXI) and the Carbon intensity indicator (CiI). The EEXI and CiI will come into effect in 2023. The CiI will be used to rate ships on a 5-grade scale: A, B, C, D, E (from best to least performing). Ship design upgrades or operational improvements will be required of vessels receiving a D rating 3 years in a row or for vessels receiving a grade E during any annual review.

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Path of decarbonisation

We are increasingly seeing owners’ questions on how their chemical tanker newbuildings can adhere to future, stricter environmental regulations. The IMO has the target of reducing CO2 emissions by 40% by 2030, and 70% by 2050, and to reduce GHG emissions by 50% by 2050, compared with 2008. The Energy Efficiency Design Index (EEDI) is applied to new ships built after 2013 and two associated IMO indexes have been established as reference points for existing ships: the Efficiency Existing Ship Index (EEXI) and the Carbon intensity indicator (CiI). The EEXI and CiI will come into effect in 2023. The CiI will be used to rate ships on a 5-grade scale: A, B, C, D, E (from best to least performing). Ship design upgrades or operational improvements will be required of vessels receiving a D rating 3 years in a row or for vessels receiving a grade E during any annual review.

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Currently, there is significant uncertainty concerning future propulsion. Today we see a trend to build dual-fuel LNG chemical tankers. However, biofuels, methanol, ammonia and hydrogen are all under consideration. Some owners have planned biofuel projects, and a biofuel testing programme with the goal of evaluating what will be the efficiency and availability of alternative fuels. 

Northeast Asian market

2021 was the best and most fruitful year for chemical tanker owners in last 20 years in the Northeast Asian market, partially due to the spillover effect from a roaring container/ISO tank market. The Northeast Asian (NEA) market in Q1 was very firm due to strong seasonal demand for energy combined with bad weather. COA volumes remained stable and spot inquiries increased. The export market from China was also strong, there were still many inquiries for products such as BA, VAC, Acetone, etc. It became more difficult to find space within March. As bunker prices continued to rise, owners pushed charterers to pay higher freight rates. Entering into Q2, the market in NEA was still firm for the first two months and most of the owners were surprised as it slackened as summer arrived. Owners tried their best to push the freight up to a higher level as they remained very optimistic about the short-term prospects for the extra, Asia market. Due to stricter Covid regulations in China, shipping management costs steadily increased, and together with high bunker costs, owners tried to raise freight levels. The market started to go downhill from June, the traditional slack season, and continued to slide through the barrier was already reached, and owners would not go any lower despite the pressure. Fortunately, Q4 saw far better results, with the spot market steadily gaining pace. The position list went from completely over-tonnaged to very tight during the period which gave leverage to owners to increase freight consequently.

Transatlantic market

After 2020 being under the shadow of Covid which maintained the Transatlantic trade in a lull, 2021 started timidly. COA volumes on Transatlantic routes were steady, but spot activity was too important to allow in creating any inﬂuence on the market. This could have described most of the year if it wasn’t for the extreme extreme weather conditions in Texas early in 2021 completely impeded business with plant closures, force majeure, and a sharply reduced supply of feedstock on the market from the US to the Continent. It took until May for the infrastructure to fully come back online, but despite this improvement, shipping remained hindered. Demand in the US claimed most of the production, and consequently experts plummed COA volumes were once again, and up until the end of Q3, the only salable for irregular players, struggling for every container they could get. Then Q4 marked a turn, activity progressively picked up, helped by the year-end move to empty inventories.

Accordingly, the spot market made a comeback, deploying the position list and thereby boosting owners’ conﬁdence as well as freight rates. The market from Europe to the US Gulf saw a very difficult Q1 to Q2. If COA volumes were steady, it was not unusual to have vessels sailing light in despair of ﬁnding a completion cargo. There was almost no arbitrage available since US production was mostly captured by domestic use. Stocks in Europe were under stress and as such, very little volume was left to be traded on the spot market. For this whole period freight rates remained ﬂat. If owners had accepted to live on minimum wage for this route, the barrier was already reached, and owners would not go any lower despite the pressure.

Fortunately, Q4 saw far better results, with the spot market steadily gaining pace. Indeed, the position list went from completely over-tonnaged to very tight during the period which gave leverage to owners to increase freight consequently. 
in China, the market changed. As Covid restrictions were introduced at most ports in mid-China, it produced many issues for both owners and charterers. Most vessels were stuck in CJK. The average waiting time for a pilot was 3 to 7 days and the situation worsened as the Typhoon season arrived. Going into Q4, due to Covid, the shortage of pilots at river ports in mid-China impacted the efficiency of such ports. Accordingly, the wait for a pilot for foreign vessels at CJK soared to around 7–14 days. This situation persisted until the end of the year. Consequently, many foreign shipowners refused to call at Yangtze River ports in order to avoid these issues.

In turn, this propelled freight rates for Chinese-flagged ships voyaging to and from China to record levels. The negotiations and renewal of COAs are now complex and difficult to move forward. On one hand, owners are proposing big increases for the freight based on the prevailing economics as the market grapples with how to achieve the new carbon intensity indicator (CII). In turn, this will have to reflect the fuel supply capacity, bunkering infrastructure and the associated government policies will evolve in China. Accordingly, negotiations have dragged on for months.

**Chinese domestic market**

It was a prosperous year for domestic owners in 2021, Chinese domestic market was very hot in Q1 and Q2 2021 due to high demand against the backdrop of very cold weather and as衍生 市场 promotion and demand for oil which will remove the competition from swing tonnage. It was a prosperous year for domestic owners in 2021. The Chinese domestic market was not as hot as the first half of the year due to planned plant maintenance. Indeed, this saw freight rates return towards normal levels. However, as Covid restrictions were introduced at most of the ports in mid-China, congestion rose which saw tonnage tighten again.

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**Conclusion**

Chemical Tanker market prospects are pointing in the direction of an upcycle for owners. The orderbook is small, the outlook for the chemical Tanker market prospects are pointing in the direction of an upcycle for owners. The orderbook is small, the outlook for the chemical market is positive and favorable for owners. The orderbook is small, the outlook for the chemical market is positive and favorable for owners. However, there are signs that the market is beginning to cool down as demand for oil increases and the market begins to stabilize. However, as Covid restrictions were introduced at most of the ports in mid-China, congestion rose which saw tonnage tighten again. The negotiations and renewal of COAs are now complex and difficult to move forward. On one hand, owners are proposing big increases for the freight based on the prevailing economics as the market grapples with how to achieve the new carbon intensity indicator (CII). In turn, this will have to reflect the fuel supply capacity, bunkering infrastructure and the associated government policies will evolve in China. Accordingly, negotiations have dragged on for months.

**Small tankers and chemical carriers (3,000-25,000 dwt)**

2021 saw strong S&P activity with more than 230 sales recorded, including 62 stainless steel tankers changing hands and only 5 bitumen tankers. The average age of vessels sold increased again but left year it took a giant leap and stood at a record of 18 years indicating a rise from the older unit. The orderbook remains quite low and in deadweight terms (2 m dwt equating to 4.5% of the active fleet) but remains higher than the demolition seen last year (3.8% of the fleet).

The average size of coated tankers sold has decreased to 9,000 dwt compared with 14,500 dwt for stainless steel tankers. The post-pandemic economic recovery, the progressive easing of movement restrictions and the steady upward movement of crude oil prices combined to drive bunker prices significantly higher. So, there was the stick: the much-feared sudden impact of bunker prices that did not materialize in 2020 finally arrived and disproportionately hit the smaller vessels. VLSFO prices started at $435/mt and rose by 50% to finish the year at $625/mt. However, for most vessels of this size, scrubbers have never been an option and what mattered most were MGO prices which increased by approximately $230/mt from $475/mt to $705/mt making many vessels economically irrelevant.

Nonetheless, there was a carrot too: healthy demolition prices offered an escape door to this profitability inferno. 2021 saw a historically high number of small tankers sent to breakers. No less than 140 vessels for 1.26 m dwt was scrapped (+200% year-on-year). Indeed, last year saw many small tankers demolished as in the previous 5 years combined.

**2022 Outlook**

World steel prices show little sign of weakening and the purge of the older fleet will continue to boost scraping. It has been quite a dreadful year for the smaller units. However, the long-awaited resumption of scrapping combined with some port congestion in the fourth quarter supported charter rates and gave hopes to the owners for the future. Negotiations are becoming more balanced between sellers and buyers with some sale candidates being withdrawn from the S&P market. The relentless upsurge in bunker prices and the introduction in 2023 of the carbon intensity indicator (CII) will both help to build up a more balanced fleet and should curb newbuilding orders. The two factors can be seen as a blessing in disguise, but only for those who will stay on the scene as many small operators are expected to exit the market altogether.