

Recent Developments And Trends In The Chemical Tanker Market

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Abstract: The shipping industry has gone through some extraordinary negative changes during the last 10 years. A drastic decline in freight and time charter rates have become apparent after the global financial crisis (GFC). A serious fall in fuel prices in 2014 than a significant price rise in 2017 has played havoc with many shipping companies as they presently struggle to cover their costs. The market, unfortunately, didn't respond to the increase in fuel prices as anticipated and has not matched the increases proportionally with demand for freight. The author analysed the effect of the GFC on the chemical tanker industry and its players. The results demonstrate that in time of such crises, chartering demand decreases considerably and the players often decide to restructure and frequently downsize, resulting in only the very competitive corporate players remaining in the chemical tanker marketplace and to mitigate debt speculators generally sell their shares in these companies. However, resilient industries have proven to be those that turn financial crises into a business opportunity. The old adage of "Buy Low Sell High" couldn't be more suited to the situation with the present chemical tanker industry. The author claims that in keeping with almost all historical financial cycles, the chemical tankers are also prone to peaks and troughs. As such the present might be the perfect time for investing in inexpensive second-hand ships or perhaps engaging vessels on time charter, or even purchasing shipping company stocks/shares for viable long term returns while turning a collapsing industry into a more sustainable one.

Keywords: Chemical tankers, tanker market outlook, financial crisis.

1. INTRODUCTION

The generally accepted volume of seaborne trade is that 90% of all international trade is carried by sea transport, of which less than 6% is represented by the chemical market [1]. Although this chemical market is highly specialized, it is also highly competitive. As with other tankers, the size of dedicated chemical tankers has consistently increased since their inception in the 1950s. Nowadays very sophisticated ships, often bigger than 50k dwt-ton parcel tankers are plying their trade in international waters. If you break this down into specific development periods, the market can be investigated in three main phases [2],[3]:

1. 1950-1970 Birth of the chemical tanker industry
2. 1970-1980 Developments and Innovations
3. 1980-Up to date Restructuring and Regulatory Changes

During periods when the market favours owners, market participants tend to become less risk-averse, often ordering larger and/or more technically advanced vessels, rather than smaller vessels where profits earned may be proportionately less [4]. When owners take these higher investment risks, two main factors have to be taken into account; first, the potential lack of alternative employment and space-utilization of larger vessels and second, the different demand patterns for ships in differently-sized market segments [5].

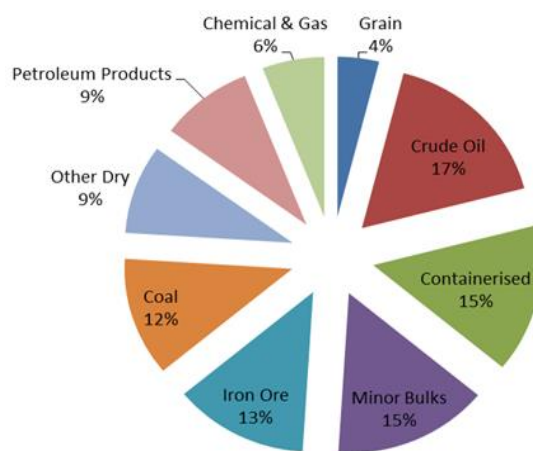


Figure 1. Structure of International Seaborne Trade
[6]Source: UNCTAD 2015

Figure 1 shows the proportion of international seaborne cargo trade and the chemical tanker market taking less than 6% of the share. The sector is highly specialized within the market segment distinguishing its vessel requirement quite apart from other commodities. With regards to quantity, the chemical tanker market takes first place within all the other Tanker Divisions, which includes Crude Oil, Refined Petroleum Products as well as the Gas market (LPG and LNG) [7]. Of course, the risk of operating a 100k dwt ship is higher than operating four 25k dwt ships [8] and the petroleum product freight market has been consistently more volatile than the global chemical freight market. There is a myriad of factors influencing freight levels [9], [10], so forecasting with a modicum of accuracy requires significantly superior skills, and even this may not be enough; some have been regularly proven right, having said that 'it is better to be lucky than smart' [11], [23], [24]. Just to manage a voyage that finishes in the right place at the right time, thus avoiding ballasting, can significantly improve freight rates to well below the 'market level'. Prices are also influenced by the competitive games that the players often inflict on each other. Large companies with

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sufficient financial strength can upset the status quo by keeping prices below the market rate for a period of time, trying to position the smaller players out of the game.

2. MARKET RE-STRUCTURING & GROWTH

Since the global economic recession of the last decade began impacting the chemical industry, fundamental changes have occurred within its logistics, altering the complex structure of the industry. This, in turn, has had a profound effect on the shipping companies that carry their products. The negative externality has sparked wholesale structural transformations of the chemical tanker market, which has destroyed years of effort to balance out the "supply-demand curve" of the sea transport sector. For decades the chemical tanker companies have been attempting to upgrade with larger and more technologically advanced vessels to amortize inefficient and risky operations. Life of a typical tanker being approximately 35 years they very rarely live out a full life with big firms constantly choosing to hire modern, newly built vessels to minimize risk. Unfortunate events like the sinking of "Erika" and "Prestige" created a market downturn which left the sector in tatters prompting change. The Commission was forced by public opinion to bring about action designed to transform the prevailing mentality in the seaborne oil and chemical trade. Whilst the industry realized that powerful incentives were needed in order to persuade the carriers, charterers, classification societies and other key bodies to give a higher profile to quality considerations, this didn't eventuate. On the one hand, the regulating bodies felt that the net should be tightened on those who pursue short-term personal financial gain at the expense of safety and the marine environment, yet on the other rested the test of economic reality. Sustainable decisions were not being taken by the industry regulating bodies as sometimes poor quality; badly maintained new ships were preferred over higher quality, reliable yet more expensive older units. This was never the plan; the aim was to improve safety and efficiency with the newly built vessels. But by continuing to build and promote lesser ships the shipping companies were seemingly placing the final nails on the chemical tanker industry coffin. The hardline business decision-makers, in order to reduce their exposure with their chemical tanker freighters, began diversifying their investments into other markets. Shipowners began reducing shareholding in their own company and instead started taking tonnage on time or bareboat charters as well as utilizing commercial management and pool arrangements, as they strived for mobility in times of change [12]. To paraphrase business professor Leon C. Megginson [12b] "It is not the strongest that survive, but rather that which is most adaptable to change", this is an apt statement that could be made about the tanker shipping companies as they strive to put behind the turbulent recent decades. If we assess the companies that have managed to survive the failing industry, it's the investors that have restructured, improved their versatility and joined forces with competitors that have gained a competitive edge in the chemical tanker market and managed to ameliorate the effects of the crisis IMO III cargo type accounted for the largest volume share in 2016 due to high shipment of vegetable oils & fats and other non-volatile chemicals across regions.

The main companies that have shown signs of resilience have been some of the bigger owners who have been around for a long time;

- Odfjell has practised rationalization and imposed many redundancies. Soon after recovering, the company entered into a pooling arrangement to include Sinochem's larger stainless-steel chemical units into Odfjell's fleet.
- The Milestone pool decided to separate their ways with Jo Tankers. Tokyo Marine (renamed MOL Chemical Tankers) is continuing as before, filling the void left by Jo Tankers with T/C vessels. Whilst Jo Tankers sold out the majority of their chemical tanker interests to the largest owner in the sector; Stolt Nielsen.
- The merger of Ace Tankers and Eastern Pacific into Ace-Quantum is another serious contender in the marketplace.
- Many of the shares of the BLT Chembulk have been sold to a USA Investor to clear debts. They've restructured and changed their name to Chembulk Tankers.

The global chemical tanker market is expected to be difficult yet buoyant over the next few years with the rates remaining below reasonable profitable levels. Market conditions are expected to remain tough in the short to mid-term. Looking into supply and demand it is obvious that growth in demand is not being pushed up, and this is not due to an oversupply of vessels, as most critics would have us believe, but because growth in demand is just simply not there. (Derived Demand).

No	NAME OF THE COMPANY	No
1	Stolt	119
2	Odfjell	85
3	Navig8	75
4	Sinochem	60
5	MOL Chemical	60
6	Nordic	46
7	Uni Chartering	39
8	Bahri (NCC/UACC)	38
9	Team Tankers	36
10	Womar	34

Figure 2. 10 Globally Dominating Chemical Tanker Companies - Compiled by author

Figure 2 shows the 10 largest chemical tanker owners/operators as per their size (number of chemical tankers) which comprise of 592 tankers in total and covers 13.5% of the total global tanker market [13]. Figure 3, on the other hand, shows the difference between supply and demand for chemical tankers [14]. The golden era for the chemical tanker owners is considered to have ended in 2007 by a considerable increase of the tonnage, bullwhip effect being the main reasons [15].

Figure 3. Changes in chemical tanker supply and demand
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Growth of Chemical Tankers

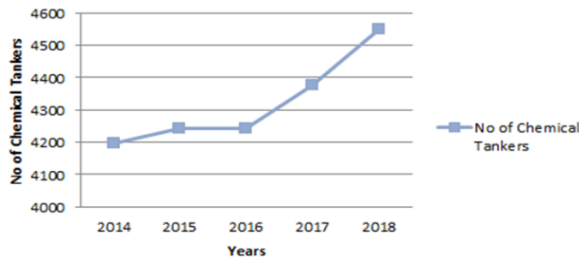


Figure 3. Changes in chemical tanker supply and demand

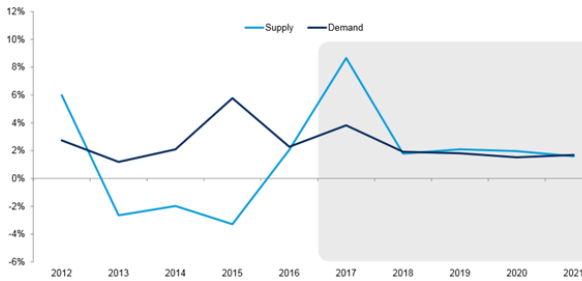


Figure 4. New Expected Deliveries of Chemical Tankers as per their tonnage

Figure 3 shows that supply was based on fleet trading in chemicals/veg oils and demand was based on tonne-miles. This analysis shows the number of new tanker orders decreasing rapidly by the end of 2018.

DWT	2018	2019	2020	2021
1000 - 5000	11	1	2	2
5001 - 10000	35	19	2	0
10001 - 20000	55	24	11	0
20001 - 30000	13	12	11	0
30001 - 40000	11	7	3	0
40001 - 50000	40	53	11	7
50001 - 60000	2	2	3	0
IN TOTAL	167	118	43	9

Figure 5. Growths of Chemical Tankers- Compiled by the author

It is clear that chemical tanker owners operating in the Black Sea / Eastern Mediterranean regional market will suffer the most. Considering the main dominating tonnage size for this area are between 10,000 – 20,000 dwt and the largest orders for new tonnage by newcomers will be in this category (Fig.4), however, the expected demolition required to balance supply and demand is not likely to take place. By the end of 2018, some 167 new built tankers are expected to enter the market, bringing the total global chemical tanker market to 4553 as compared to present vessel numbers of around 4385, making the growth in the industry 3.8%, which is again higher than the growth of other sea-born trade. The table below shows the dynamic changes of the chemical tankers from 2014 till June 2018:

With the expected large quantity of newcomers to the market by 2019, we can predict supply-demand equilibrium for the chemical tanker trade by late 2020 early 2021.

Economist Intelligence Unit (EIU) Forecast (%)

YEAR	2015	2016	2017	2018*	2019*	2020*
Global GDP	2.8	2.4	3.0	3.1*	3.0*	2.3*
Growth in Sea Born Trade	1.8	2.6	2.8	3.2*	3.2*	3.2*
Growth in Chemical Tankers*	0.8	0.4	2.6	3.8	2.6*	0.9*

Figure 6. EIU Economic and Commodity Forecast [16], June 2018 Source: UNCTAD

*Estimated projections for the medium term also point to continued expansion, with volumes growing at an estimated compound annual growth rate of 3.2 per cent between 2018 and 2022. Cargo flows are set to expand across all segments, with containerized and major dry bulk commodities trades recording the fastest growth.

X Growth in chemical tankers number is estimated by the author. The entry of new tankers into the market in 2018 is expected to be around 167, making growth is around 3.8 which will strain the already oversupplied market. According to the Economic Intelligence Unit (EIU), global GDP increased to 3.1% by early 2018, up from 3.0% in 2017 and 2.4% in 2016. The forecast for this rate of growth is expected to remain steady for rest of 2018, and early 2019 but expectations for 2020 are lower due to the number of newly built chemical tankers expected by the end of this year. The above-stated oversupply together with the bullwhip is expected to remain till at least 2022. Thus this challenging market will also follow suit like most of the charterers will continue taking advantage of the discounted rates due to the increasing supply of Chemical Tankers. The global chemical tanker shipping market is anticipated to reach USD 2.50 trillion by 2025, according to a new report by Grand View Research, Inc. The growing chemical trade on account of increasing manufacturing activities across the world is projected to augment market demand. Adding fuel to the fire, increasing bunker prices have placed a greater strain on the vessel owners they cannot reflect these margins to freight rates due to the oversupply of tonnage. Although one of the biggest expenses for running the ship is bunker consumption, other external negative factors on the freight, such as new regulations coming into force (ie. Mediterranean and Black in SECA [17] area) should also not be underestimated [18].

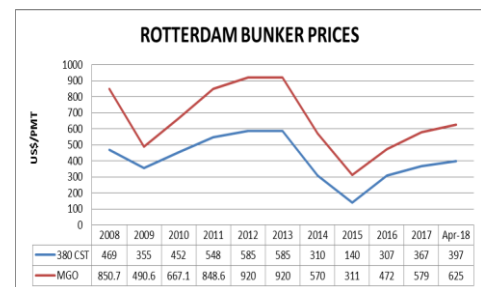


Figure 7. Fluctuation of bunker prices [19] 2008-2018

Figure 7 shows the 380 Cst and MGO Rotterdam bunker fuel price in US\$ per tonne over the period 2008 to April 2018. Bunker prices fluctuate concurrently with changes in the cost of crude oil [20]. The table shows that the bunker prices in 2015 dropped by 83% and since then by April 2018 increased by 100%, however, while the freight rates also increased, it was not proportionate to the increase in bunker prices.

3. DISCUSSION

The freight market has always been adjusted according to supply and demand. When these forces are similar and close to equal, both the charterers and the vessel owners are happy. But when they are not, it's a difficult time for the decision makers. Market psychology often induces people to act emotionally rather than rationally, impelling them to take the wrong decision. This is an important reason for avoiding "impatient capital [21]" investment. The chemical tanker market is actually not too difficult to work out. The two main parties; ship owners and the charterers determine the market. Through negotiation, they establish the freight levels, which they represent the balance between ships and cargoes [22]. At differing times, either party can be influenced by factors that can invoke dissimilar emotions, which can influence them to make the right or the wrong decision. Although the market has been particularly difficult for the ship owners during the last decade, they continued investing and building new tankers. One can't help but ask; what could be the main reason behind such a decision during a difficult market situation? We must take into consideration the myriad factors behind an owner's decision to exit or enter the shipping market and their agenda once there, including when to purchase, bareboat or time charter, so of course one first needs to look into the history of ship owners as a whole to attain a better understanding. The last decade, in particular, has seen major changes in the structure of ship owners. Going back a generation; the shipping world was driven by only a few major family-owned companies. Whilst there is still a place in this day and age, to some degree, for that type of ownership, we have entered a new era of consolidation, the yards offering competitive new building costs and market competitive ship acquisitory endeavours. Ship owning as a result is now far more driven by cost of finance. Whilst finance was difficult to obtain immediately after the financial crash, it is evident by the number of new building orders since, that this was short-lived and finance is readily available, albeit with far tighter controls. With restrictions on finance and the global downturn coinciding with record high oil & bunker prices, a new breed of ship owners began to emerge and change the shipping market place. It is the legacies of the financial crisis and resulting market conditions that have escalated consolidation thus causing the more traditional owning companies to begin re-trenching. These traditional owning companies have historically been driven by technical or managerial prowess and job creation with the ability to succeed in varying arenas, whether tankers, gas, dry cargo, containers off-shore or storage. But in a world with an ever increasing dependency on the growth of the Chinese industry, this has produced a tanker market with considerable insecurities, deflationary pressures, fluctuating exchange rates etc. Other entities, which are more financially capable, have the advantage that they are less

dependent on accessing finance or able to operate with smaller margins, due to economies of scale e.g. oil companies, commodity trading houses and even banking companies themselves. Publicly listed companies still represent less than 50 percent of the shipping fleet, therefore, the balance of the world fleet remains in the hands of private equity companies, Oil Companies, State-owned, etc., despite all the global pressures. Given this scenario, there is still plenty of scope for growth in either direction, so it is not necessarily all doom & gloom for the smaller owner. We can assume that the various types of "Owners" have differing reasons for procurement, apart from the sole aim of making a profit even whilst using quite intuitive methods to save costs, such as eco-ships, slower speed etc. Some owners have a more long-term view; to build or purchase is the preferred option, but some prefer the flexibility of time charter with period options. Most Oil Companies tend to bareboat or time charter these days. Procurement reasons mainly include coverage for COA's, own cargoes/ volume, domestic / cabotage requirements, market speculation, strategic positions, FFA-paper commitments and both paper & physical swaps.

4. CONCLUSION

Regardless of the serious drop and then there-rise in fuel prices since 2013, cargo prices have remained proportionately low and shipping companies are struggling to cover their operating as well as capital costs. External factors on generating freight levels, such as political, meteorological as well as global economic trends are playing an important role in owners' decisions. The growth in demand is constantly coming up below expectations and the surplus of the fleet isn't helping to maintain the equilibrium. Although the chemical tanker market is more stable than the clean petroleum products market, the oversupply of the tankers makes the procedure more difficult for the owners. The results demonstrate that in time of crisis the demand for chartering is decreased considerably and the players often make important decisions to restructure and frequently downsize. The negative impact of the financial crisis has forced market players to make serious changes leaving a reduced group of larger, more competitive corporate players in the chemical tanker market. At the same time, other speculative investors have sold their shares to mitigate their debt.

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