RBB | Economics

Concentration levels in the container shipping industry

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1 Introduction

At the request of the World Shipping Council (WSC), this note provides some basic background information on the level of concentration in the container shipping industry. It is sometimes alleged that the container shipping industry is highly concentrated, thereby implying that the industry is not competitive and that customers would suffer as a result.

This is, as a matter of fact, a misconception. The container shipping industry is not concentrated. It is characterised by a large number of competing firms, both globally and on the shipping lanes that are most relevant for US trade.

Another potential misconception is related to consortia agreements and their impact on concentration levels in the industry. Consortia concern cooperation agreements between carriers that allow them to pool vessels and offer joint services.

Consortia agreements do not amount to commercial cooperation: each of the members of a consortium is free to determine its own commercial terms, including prices, at which it sells its share of the consortium's capacity. In practice this means that consortia members compete with each other, and with other carriers, when selling their services to customers. In addition, carriers are free to offer and add their own services outside of the consortia to which they are a member.

Since consortia agreements are limited to operational cooperation that results in efficiencies, and do not extend to joint selling, competition authorities across the world have, invariably, taken a favourable view of them.

This is evidenced for example by no enforcement action against consortia agreements by the Federal Maritime Commission, a block exemption for consortia agreements in the European Union and similar types of legal exemptions in other important maritime jurisdictions such as Australia, India, Singapore and Hong Kong.

2 Concentration levels

2.1 The Herfindahl-Hirschman Index (HHI)

A commonly accepted measure for the level of concentration in markets is the Herfindahl–Hirschman Index (HHI). The HHI is the sum of the squared market shares of the firms competing in a market. The HHI takes a value of between zero, in case the market consists of a large number of small players and 10,000 (100^2) in a market served by a single firm (a monopoly).

The advantage of using the HHI as a measure, as compared to taking the combined market share of the 3 or 4 largest firms in the market, is that it takes account of the size distribution in the market. The HHI increases as the number of firms in the market decreases and if differences in size between the firms active in a market increase.

The HHI is used by competition authorities, including the competition agencies in the US (the antitrust branch of the Department of Justice (DOJ) and the Federal Trade Commission (FTC) and in the EU by the European Commission, as a first screen for the existing level of concentration in a market, and the change in concentration that would result from mergers and acquisitions.

The horizontal merger guidelines of the DOJ and the FTC state that they generally consider markets in which the HHI is between 1,500 and 2,500 points to be moderately concentrated and consider markets in which the HHI is in excess of 2,500 points to be highly concentrated.[1]

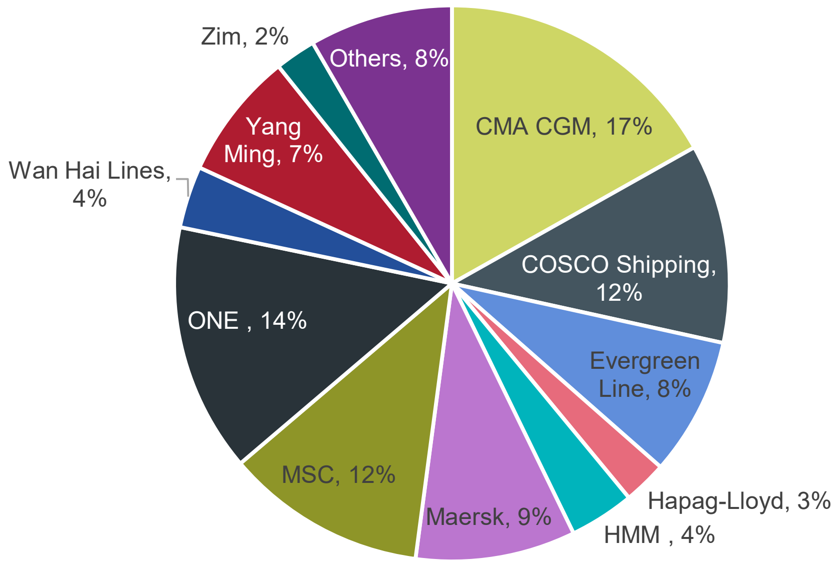
2.2 HHI's on major US container shipping trade lanes

We have calculated market shares and HHI levels in the container shipping industry by looking at the capacity shares of the carriers that are active on two trade lanes that are highly relevant for US trade: Asia – US West Coast and Northern Europe – US.

The figure below shows the capacity shares of the carriers active on the Asia – US West Coast trade.

1 https://www.justice.gov/atr/herfindahl-hirschman-index

Figure 1: Capacity shares Asia – US West Coast

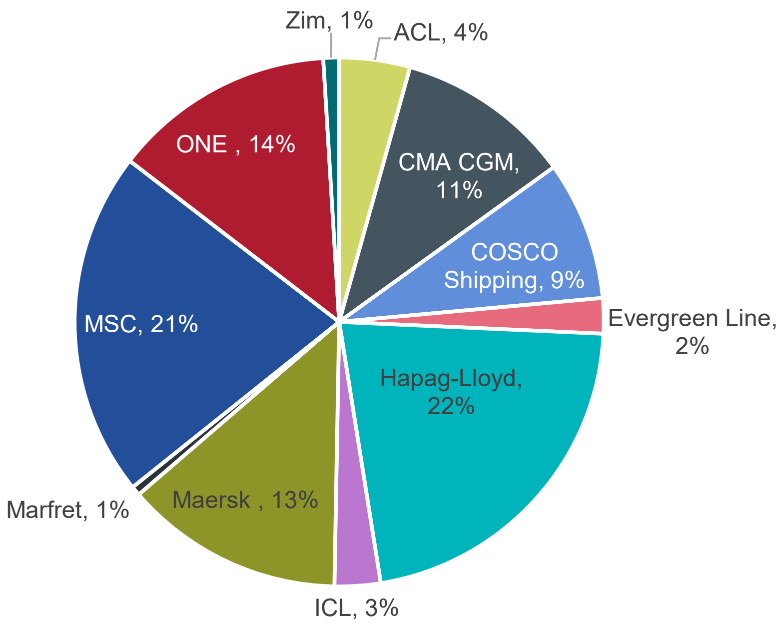


Source: Alphaliner, RBB calculations

The HHI based on these capacity shares is 1018. This includes the squared market shares of the individual lines in the group "other". Even if we would recalibrate the market shares by leaving out the smaller operators in this group, the HHI would be slightly above 1200, which is still below a level that would be considered "moderately concentrated".

The figure below shows the capacity shares of the carriers on the Northern Europe – US trade. This trade is somewhat more concentrated with two carriers having a share above 20%, also explaining a higher HHI of 1508. However, this still indicates that the Northern Europe – US trade only just exceeds the threshold of being considered moderately concentrated and is far off a level associated with a highly concentrated market.

Figure 2: Capacity shares Northern Europe - US



Source: Alphaliner, RBB calculations

So, for both trade lanes we find more than 10 suppliers, all with markets shares below 25% and HHI levels which are not indicative of the market being highly concentrated.[2]

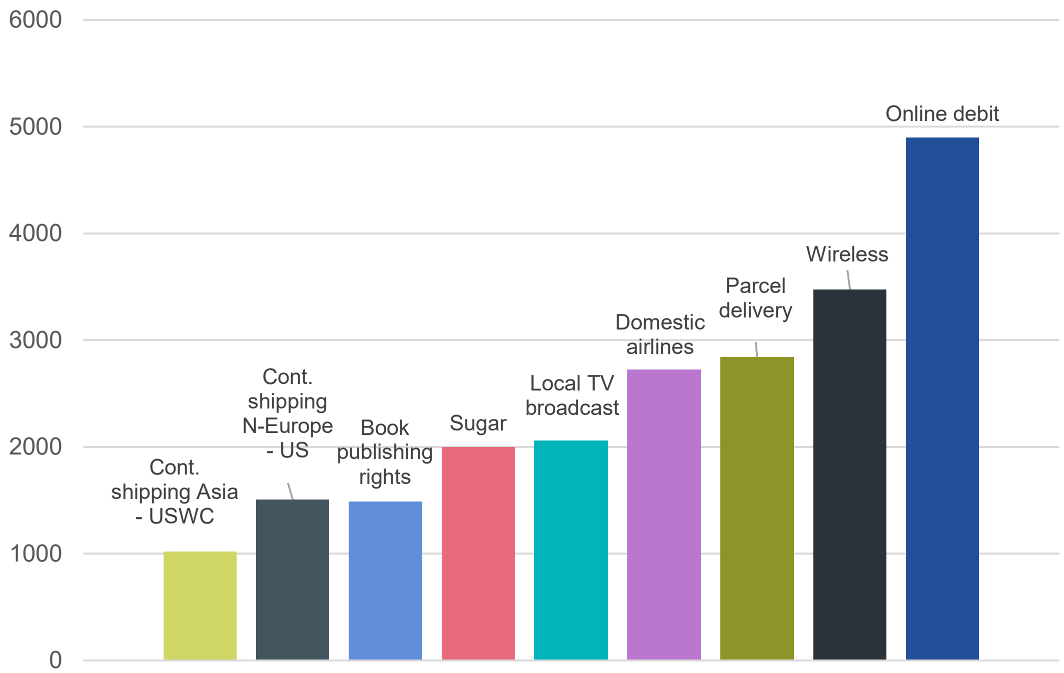
2.3 Comparison with other industries

To put our findings in perspective we have collected some information on other industries, to the extent publicly available. We have looked at pre-merger market share levels in recent merger challenges by the DOJ (which typically include information on HHI levels), as well as other public sources.

The graph below compares the HHI levels om the two trade lanes discussed above with these other industries. The comparison, which could be easily expanded upon, shows by way of example that concentration levels in many other industries are markedly higher than those in container shipping.

[2] Our findings are in line with market research company Drewry which, in its own assessment of HHI on the trade lanes discussed in this note concluded that both should be considered “competitive” based on similar HHI levels as we find based on a different data source.

Figure 3: Comparing HHI levels[3]



Source: RBB Economics

2.4 Conclusion

In this short note we have looked at the concentration levels in the container shipping industry on two highly relevant trade lanes. Contrary perhaps to popular belief, our assessment shows that the container shipping industry is in fact not highly concentrated, and that there are many examples of industries with (much) higher concentration levels.

[3] Sources: Book publishing: https://www.justice.gov/opa/press-release/file/1445916/download (minimum level of HHI, likely to be higher in practice), Refined sugar (regional markets): https://www.justice.gov/opa/press-release/file/1451136/download, Local broadcast television (regional markets): https://www.justice.gov/opa/press-release/file/1417991/download, domestic airlines (on certain origin-destination routes): https://www.justice.gov/opa/press-release/file/1434621/download, Parcel delivery: https://www.parcelandpostaltechnologyinternational.com/news/parcels/pandemic-sees-us-parcel-volumes-grow-by-nearly-40-in-2020.html, wireless: https://www.justice.gov/opa/press-release/file/1187721/download, https://www.statista.com/statistics/199359/market-share-of-wireless-carriers-in-the-us-by-subscriptions/, on-line debit (Visa market share only): https://www.justice.gov/opa/press-release/file/1334726/download.