FINANCIAL ANALYSIS OF THE EFFECTIVENESS OF MARITIME TRANSPORT COMPANIES

Wioletta Skibińska

Czestochowa University of Technology, Poland

Abstract: The article presents the efficiency of maritime transport corporations. After a short characteristics of maritime transport, research regarding the current situation in the market, based on transport corporations of selected countries has been presented. The year 2009, when the world crisis touched many economic unities, has been analysed and assessed. The efficiency has been analysed by selected financial factors.

Keywords: maritime transport, financial indexes, maritime transport corporations

1. The essence of the maritime transport

Maritime transport is a cheap and safe means of transport which is used to transport freight over long distances [1.]. The main task of maritime transport is carrying bulk cargo used in international trade or exchange [2.]. In the 90's maritime transport covered most of the international goods trade, its share in the current exchange was estimated for 75% of the total international cargo exchange [3.], currently its share has substantially dropped. Its importance and contribution depends on the following circumstances [4.]:

- geographical location,
- type of freight,
- directions of trade in goods of the country,
- the extent to which the foreign trade of the country is dependent on the sea route,
- the technical condition and infrastructure included in maritime transport - transport routes and ports.

Like other kinds of transport, maritime transport has some advantages but it is not free from disadvantages. Table 1. shows the advantages and disadvantages of sea transport.

The essence of maritime transport is the carriage of cargo over long distances, because only in this case it is the most cost efficient. In case of the type of cargo - the preferred cargo in maritime transport is the one which does not require fast delivery and also, does not cause financial loses due to the freezing of assets (duration of the trip).The most frequently transported goods are: mineral resources, iron ore and coal, various chemicals, food or intermediates (mechanical parts), or finished products (cars)[6]. Cargo that should not be transported using maritime transport is primarily cargo that is sensitive to atmospheric influence.

Table 1. Advantages and disadvantages of maritime transport [5.]

Advantages	Disadvantages
The ability to carry loads characterized by the broadest range of transport susceptibility	Low service speed of the means of transport and also its technological inflexibility
Support of world-wide trading routes	Low frequency and punctuality of deliveries, long reloading time
Large competitive advantage regarding shipping prices	Low cargo security, e.g. susceptible to moisture
Unlimited structure of cargo transportation and easy access to major economic centres	It is necessary to use delivery services due to the low availability of sea ports

In maritime transport the following means of transport are used [7.]:

- container ships - vessels designed to carry cargo in containers,
- ferries - ships designed to carry a variety of measures used in land transport (cars, trucks and other vehicles),
- general cargo - cargo vessels characterized by an external form,
- tankers - ships used to transport liquid cargo, such as petroleum [8.],
- dry bulk - a vessel used for dry cargo.

Despite the fact that maritime transport services most part of the goods exchange in the world, it has been pressed by air transport in the last couple of years, which has taken over the majority in passenger transport and is becoming more and more popular in cargo transport. The very dynamics of the development of maritime transport is low and in addition it is very susceptible to fluctuations in the global foreign trade.

2. Financial efficiency of maritime transport

The study covered many transport companies which main field of activity is maritime transport [9.].

Figure 1. shows the percentage of companies participating in the study of transport in the country. As shown in Figure 1., the largest percentage of maritime transport companies which participated in the study was recorded for companies from Norway, Greece and the United States. Such a large percentage can be explained by the fact that all these countries have free access to the sea and hence the large number of such companies operating in the market.

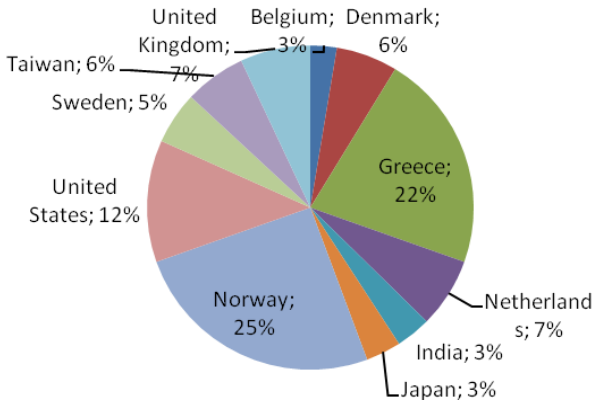

Figure 1. The percentage of companies participating in the study [10.]

As it is commonly known, Norway is a country operating huge underwater oil deposits which are then transported to customers. For many years Greece has been home to the so-called shipowners - companies that own or hire vessels to their customers [11.], while in the United States, due to their size as well as access to both the Pacific and Atlantic Ocean, there are also many companies engaged in maritime transport. Other countries in which the researched operators of similar profile exist are the United Kingdom, Taiwan, Sweden and the Netherlands. The smallest percentage of the shipping companies involved in the study originated from Belgium, Japan, Denmark and India.
Following are selected financial ratios which enable us to assess the efficiency of maritime transport companies which participated in the study.
Figure 2. presents the RONOA indicator divided according to means of transport used in maritime transport (2005 and 2009).

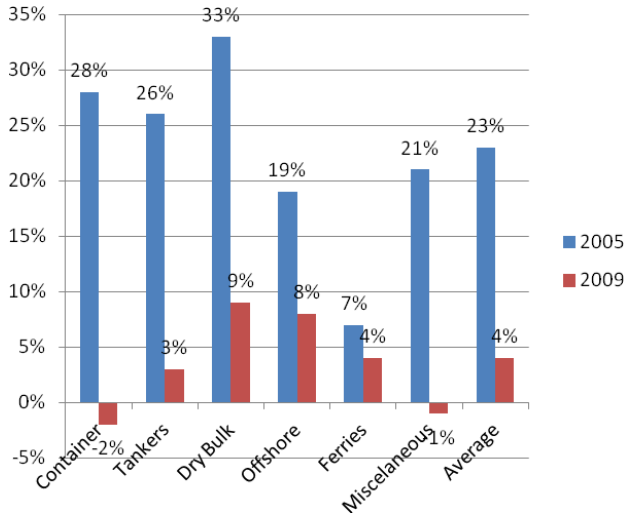

Figure 2. The RONOA indicator divided according to the means of transport used in maritime transport (2005 and 2009) [10.]

As the analysis in Figure 2. shows in 2005 shipping activity was profitable at a very high level. The most profitable was transport of loose goods, for which Dry Bulk ships were used. However, all used types of transport (except ferries) assured high profitability. Low profitability of ferries, both in 2005 and in the year 2009 was caused by the fact that the vessels are usually small in size (compared to oil tankers or container ships), which are used for short-distance trips. They are used primarily to carry people, cars and trucks. Over the next 5 years, the profitability of shipping companies fell substantially, the biggest drop was recorded on container ships, where profitability in 2009 was negative, this indicates that the use of container in shipping resulted in losses. The reason for the fall of RONOA in 2009 was also and increase in fixed assets, so increasing the number of ships which companies were unable to charter and favourable financial terms. The analysis of Figure 2 shows that the highest profitability is still in handling loose cargo, despite a dramatic fall from 33% to 9% the Dry Bulk ships are still the most profitable ones. The overall profitability of maritime transport with the division according to ships has been decreasing steadily for the last 5 years, from 23% in 2005 to the level of 4% in the year 2009.
Figure 3 presents the ROCE indicator divided according to means of transport used in maritime transport in 2005 and 2009.

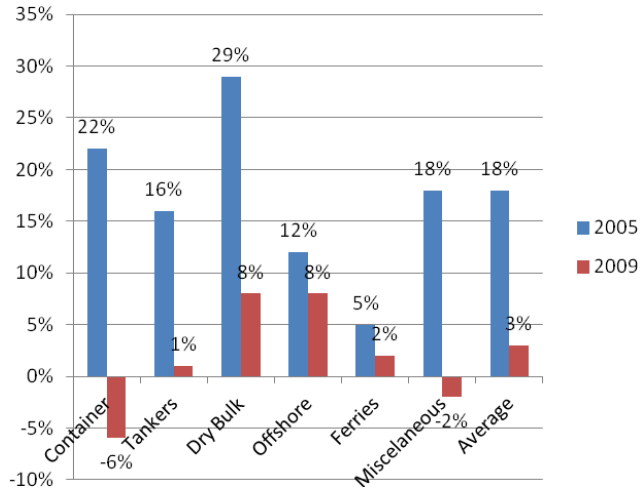

Figure 3. The ROCE indicator divided according to the means of transport used in maritime transport (2005 and 2009) [10.]

Analysing the data contained in Figure 3. one can state that in the year 2009, compared to 2005, there is a significant drop in the value of ROCE index. As in the case of the RONOA index (see figure 2), the ROCE in 2005 had the highest value for carrying loose cargo transported by Dry Bulk ships, right behind them were container ships and tankers. Also, by analogy, in 2005, the lowest ROCE value fell on the ferries. And as before, the biggest drop in the value of the ROCE ratio was recorded in the case of container ships, up from 22% to -6%, which indicates that currently the maritime transport using container ships is a business bringing loses. In 2009, the largest total assets ability to generate profits was due to the Dry Bulk and general cargo vessels - and is 8%.Meanwhile the average value of the ROCE decreased within 5 years from 18% in 2005 down to 3% in 2009.

Figure 4 shows the return on equity, the so called ROE index divided by type of transport used in maritime transport in 2005 and 2009.

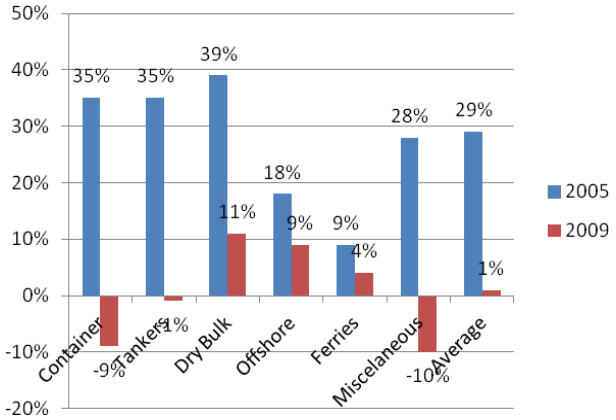

Figure 4. The ROR indicator divided according to the means of transport used in maritime transport (2005 and 2009) [10.]

As shown in Figure 4. above, the value of teh ROE in 2005 fluctuated on almost the same level for container ships, tankers and Dry Bulk, the return on equity of shareholders amounted to more than 30%, somewhat lower values were recorded on ferries and general cargo ships but the average ROE, which is average profitability of the business activities of maritime transport was very high and was 29%.Compared with 2005, in 2009 there was a large drop in the value of the ROE. The largest loses were brought by container ships and other types of ships used in maritime transport, and the average level of profitability for the whole sector of the maritime transport was merely 1%.
Figure 5 presents the solvency ratio indicator divided according to means of transport used in maritime transport in 2005 and 2009.

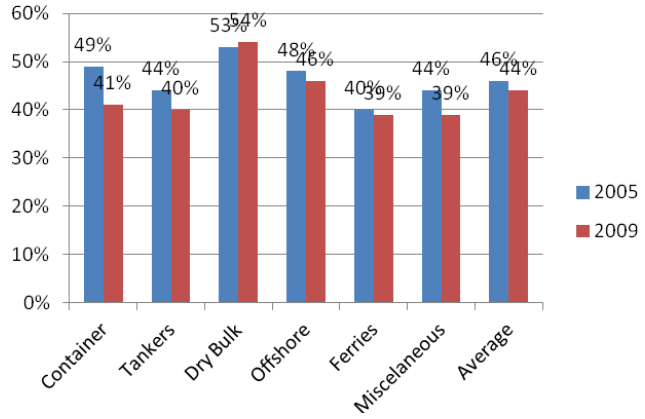

Figure 5. The solvency ratio indicator divided according to the means of transport used in maritime transport (2005 and 2009) [10.]

The solvency ratio of the entire sector of maritime transport companies, both in 2005 and in 2009, stands at a very high level and provides a full solvency of enterprises. The situation when in 2009 there were no noted falls can be explained that because of the crisis, the companies implemented a deep financial restructuring, which allowed them to maintain solvency.

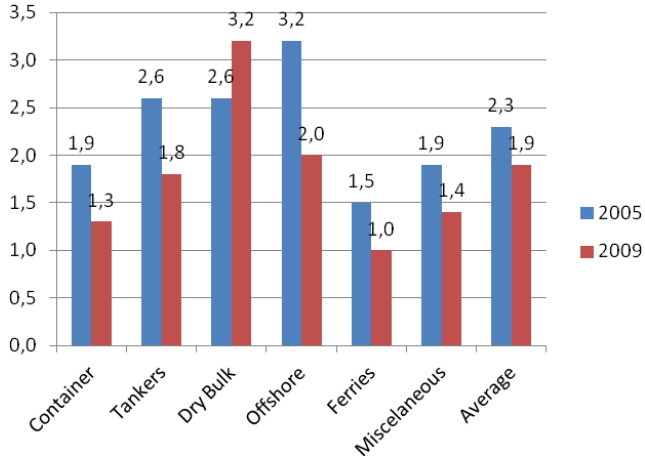

Figure 6. Current liquidity ratio indicator divided according to the means of transport used in maritime transport (2005 and 2009) [10.]

Figure 6. presents Current liquidity ratio indicator divided according to means of transport used in maritime transport in 2005 and 2009.
Current liquidity ratio shows the ability of companies to adjust their commitments by using working balances. The optimal value of this indicator is the interval (1.2 - 2.0), this means that the optimal situation is when the business assets of a company are from 1.2 to 2 times greater than its liabilities. In 2005, only in case of ferries and container ships, the value of this ratio was within the proper range, in the case of tankers, general cargo and Dry Bulk, this ratio was higher than 2.0 which could prove the accumulations of goods or downtime of ships in ports for longer periods of time. In the year 2009 compared to 2005, only in the case of ferries, this ratio decreased below 1.2, while for Dry Bulk this ratio was significantly increased up to value of 3.2.In other cases, the value of this indicator has decreased and stood at an optimum level, it can prove a well-conducted business restructuring, for example, sales of unused vessels. Also, the average value of the current liquidity ratio is in the range and is 1.9.

Summary

The analysis of the maritime transport market concludes that already in the year 2008, a significant decline in turnover and income was recorded. However, the year 2009 was the year of high losses incurred by companies in this market. This year the total turnover in these companies was 12% lower than in 2008. However, the crisis in the financial sector caused these companies not to be able to borrow more loans and liabilities of these companies were very high, because during the growing global economy, many companies submitted orders for new ships. Of course, payment for the ships were not governed by the current means of payment, but with the loans taken for this purpose. This led to that nearly 20% of the researched maritime companies have been forced to carry out financial restructuring and sale of their shares, both to institutional investors and private ones. Also, over 39% of surveyed companies were forced to cancel orders for new ships [10.].
In the light of the current supply and demand, it becomes a question of whether global demand will be able to absorb a greatly expanded navy. This question causes that right now, shipping companies are able to go for a big compromise on freight rates. Looking at the state of today's global economy, it is not clear whether the world is coming out of the crisis, or maybe waiting for its next wave (eg, lowering the rating of the United States, the bankruptcy of Greece, Spain, Ireland and Portugal, which will affect the state of the global economy).The presented analysis shows that for many years, shipping companies have achieved high revenue and profits, and in time of crisis, many of them carried out a restructuring of both financial and regarding the whole of its business. As a result of the carried out actions, it can be expected that in the future years the financial condition of these companies will improve.

References

[1.] BRANCH, A.E.: **Elements of Shipping**,- NY, Routledge, 2007. p. 9.
[2.] FRANKEL, E.G.: **The World shipping industry**, NY, Croom Helm Publishers, 2002. p. 4.
[3.] SZCZEPANIAK, T.: **Transport międzynarodowy**, Warszawa, PWE, 1996. p.111.
[4.] LUN, Y.H.V.; LAI, K.H.; CHENG, T.C.E.: **Shipping and Logistics Management**, London, Springer, 2010. p. 63.
[5.] STAJNIAK, M.; HAJDUL, M.; FOLTYŃSKI, M.; KRUPA, A.: **Transport and Forwarding**, Poznan, Institute of Logistics and Warehousing, 2007. p. 34-35.

[6.] LORANGE, P.: **Shipping company strategies**, Oxford, Elsevier Ltd., 2005. p. 27.
[7.] **Pojęcia stosowane w badaniach statystycznych statystyki publicznej**, Główny Urząd Statystyczny 2009.
[8.] FELDMAN, R.: **Transportation Expression**, NY, Bureau of Transportation Statistics, 1996. p. 60.
[9.] In the research the following financial ratios were used: Rono (Return On Net Operating Assests) is one of the most important indicators of performance measurement, measuring the return on business assets which are used in the operating company; ROCE (Return On Capital Employed) is another indicator of efficiency, presents
the return of activity in which all assets of the company are used; ROE (Return On Equity) - this index indicates the size of the net profit that is attributable to each unit of the invested capital; Current Ratio - current ratio shows a company's ability to regulate their working balances liabilities Source: Pomykalska, B.; Pomykalski, P.: **Financial analysis of a company**, Warsaw, OWN, 2007, p. 59.
[10.] **Insight into the performance of the global shopping**, Pricewaterhouse Coopers, 2010, p. 28-31.
[11.] **Report of the Committee of Experts on the Application of Conventions and Reccomendations**, Geneva, International Labour Office, 2009, s. 658.