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COMPARATIVE FINANCIAL PERFORMANCE EVALUATION OF AS TALLINK GRUPP AND VIKING LINE ABP

Bachelor's thesis

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I hereby declare that I have compiled the thesis independently and all works, important standpoints and data by other authors have been properly referenced and the same paper has not been previously presented for grading. The document length is 8487 words from the introduction to the end of conclusion.

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ABSCTRACT

The biggest shipping companies in the Baltic sea, Tallink and Viking Line are dependent of passenger transportation between Finland, Estonia and Sweden among other countries. Even the companies are operating during the COVID-19, the number of passengers is decreased dramatically. Fortunately part of companies' revenues comes from cargo transportation, which has not been affected as much as passenger transportation.

The aim of the thesis is to evaluate companies' financial results to give thorough assessment about financial performance during the last five years and also compare the results to each other. The financial performance is measured with financial statement analysis of the income statement and balance sheet and they are used to calculate financial ratios that are used to analyse the results more thoroughly. To reach the aim, tha author analyses financial ratios that include profitability, leverage, activity, liquidity and valuation ratios. Also bankrupcy prediction model is used. The ratios are compared to each other. These analysis requires quantitative research methods.

The analysis shows that both of the companies are having difficult times. The revenues of Tallink and Viking Line have decreased by 50% and 60% respectively. Both of the companies have been historically profitable, but in 2020 everything changed. Both of the companies have not had previously any serious threath of going bankrupt, but after last year, both of them are in distress zone.

Keywords: Financial analysis, Maritime transportation, Tallink Grupp AS, Viking Line Abp, COVID-19

INTRODUCTION

After the COVID-19 started to spread globally in the beginning of 2020, the life has been challenging for both, people and businesses. The shipping companies are not exception. The biggest shipping companies in the Baltic sea, Tallink and Viking Line are dependent of passenger transportation between Finland, Estonia and Sweden among other countries. Even the companies are operating during the pandemic, the number of passengers is decreased dramatically. Fortunately part of companies' revenues comes from cargo transportation, which has not been affected as much as passenger transportation.

The topic of this thesis is comparative financial performance evaluation of AS Tallink Grupp (Tallink) and Viking Line Abp (Viking Line). The thesis aims to evaluate companies' financial results to give thorough assessment about financial performance during the last five years and also compare the results to each other. Based on that, the three research questions are:

- How companies' key financial ratios have changed during the last 5 years and why?
- Which company has done better financially during COVID-19?
- Is there a bankrupcy threath for either of the companies?

The topic for this thesis was chosen because Tallink and Viking Line are the biggest shipping companies operating in the Baltic Sea with millions of passengers annually. However, the companies have taken a big hit financially because of the current travel restrictions caused by the COVID-19. In this situation, financial analysis provides important information for many users, for example investors, employees and customers. The analyses are used to evaluate how these two big companies are doing in this exceptional time and also compare them to each other. Because year 2020 has just ended, the current situation after recent events affecting these companies' financial performance has not been widely researched.

The thesis contains 2 types of data. The primary data, that includes all the financial data, was collected mainly from the companies' annual reports. The financial data was also used for financial

statement analysis basd on financial ratios. The secondary data, presented as a literature review and theory part in this thesis, was studied in order to get a better knowledge about the companies, financial analysis and the Baltic sea transportation market.

The content of this thesis is divided into three parts. The first part is the literature review and theory part that includes financial analysis. The part about financial analysis consists all the explanations for the different analysing methods; financial statement analysis, financial ratio analysis, component analysis and cross-sectional analysis. The first part is followed by the second part, which takes a closer look into transportation market in the Baltic sea and the companies, Tallink and Viking Line. Sea transportation in the Baltic sea gives an overview of the current situation in the industry. Review of the companies includes basic information of the companies and important operating numbers.

The third part provides the methodology that was used in this research. The second part is followed by the third part. The third part includes also all the main analyses illustrated by charts and graphs. Also answers to the research questions are discussed. The results are also compared between Tallink and Viking Line.

1. LITERATURE REVIEW

1.1. Financial statement analysis

Financial analysis is a general concept that evaluates all kind of different finance related activity of a company. The purpose of financial analysis is to gain information about financial situation of a company. The information is often used to determine whether the company is stable, solvent, liquid or profitable enough to make a investing or lending decision. Therefore these analyses are widely used by creditors, investers, management, authorities, employees and customers (Ross, 2012). There are also other useful resons to use these analysis. They provides guidance whether to buy or sell shares, ascertain the value of a company in takeover situations and helping to determine the company value in taxation related situations (Stittle, 2008).

Financial reports of companies are prepared at regular intervals (annually, semiannually and/or quarterly). Financial statements includes income statement, balance sheet and cash flow statement. The financial statements are usually audited by accountants who gives a vision whether the information is acceptable regarding accounting standards. Although the financial statements are audited by accountants, it is important to take into consideration the quality of the statements and financial reporting. Although companies are following international financial reporting standards or generally accepted accounting principles that try to prevent manipulation, in practice the quality of financial reports varies greatly. In 2013, there was a survey that was conducted by Ernst & Young. The survey participants contained more than 3,000 board members, executive managers and employees from all around the Globe. The survey revealed that 20% of the respondents had seen manipulation in the financial reports of their own companies (Ernst & Young, 2013).

According to previously mentioned survey, financial statement manipulation is relatively common. It means that the company uses different sorts of accounting tricks to make the financial performance look better than it actually is. The manipulation usually consists inflating revenues or deflating expenses or liabilities (Robinson et al., 2015).

Income statement provides information about revenues, expenses, net income and earnings per share. It can be created at anytime, for example annually or quarterly (Robinson et al., 2015).

Balance sheet presents company's current financial position at a specific time, usually at the end of the fiscal year. The balance sheet includes overview of assets, liabilities and stockholders' equity (Robinson et al., 2015).

Cash flow statement is a useful tool to get understanding about how company is using cash. The cash flow statement is divided into three parts: operating, investing and financing (Robinson et al., 2015).

It is possible to analyse these three statements by horizontal and vertical analysis, also known as common-size analysis. In addition to previously mentioned financial statements, also financial ratios can be analysed with these techniques. ''Horizontal analysis compares equivalent figures across accounting periods to identify trends. Vertical analysis expresses each figure in a primary financial statement as a percentage of one key figure. In other words, it involves setting one figure as the benchmark in each year and comparing all other figures against this as a percentage.'' (Rodgers 2008) When horizontal analysis is useful for long term trend analysis and planning, vertical analysis can be either short term or long term (Rajasekaran, 2010).

1.2. Financial ratio analysis

Financial ratio analysis is important part of financial statement analysis. The ratios are calculated for example from the financial statements, and they indicate firm's performance and financial situation. Often the ratios are much more relevant than only the numbers in financial statements because the ratios can be used to compare companies of different size, industry averages or main competitor. The financial ratios are categoraized into 5 groups: liquidity, leverage, activity, profitability and market value ratios (Goel, 2015). There are hundreds of different ratios which is why this thesis contains the most common and relevant ratios. Ratios are a great tool to make a cross-sectional analysis. Cross-sectional analysis can be used to head-to-head analysis with single or multiple competitors and also industry-wide.

Profitability. Profitability ratios measure the company's efficiency in generating profit and therefore are probably the most widely used way to analyse company. (Bernstein, 1983). Examples of profitability ratios are gross profit margin, operating profit margin, net profit margin, basic earning power, return on assets (ROA), return on equity (ROE) and earnings per share (Ross, 2012).

Gross profit margin is the ratio that shows how efficiently a firm uses resources to make profit. It is calculated by dividing gross profit by sales. Operating profit margin is used to measure profitability by dividing the operating profit by total revenue. It shows the percentage of profit a company produces from operations and excluding taxes and interest. (Goel, 2015) Net profit margin is the final measurement of company's profitable. It tells that how much each earned euro is translated into profits. It is calculated by dividing net income by sales (Goel, 2015). It is also measurement of how profitable the company is after deducting all expenses, taxes, interest and preferred stock dividends (Reddy, 2013).

Return on assets is used to show the percentage of how effective the company's assets are in terms of generating revenue. It can be calculated by dividing net income by total assets (Ross, 2012). Return on equity is a profitability ratio mainly for shareholders and investors. It is used to measure the amount return they receive from their capital investment in a company. It is calculated by dividing net income by total equity (Goel, 2015). However, according to studies, ROE can be too abstract and it needs to be investigated by dividing it to the three components: profit margin, equity multiplier and asset turnover (Rothschild, M, 2006).

Earnings per share is a measurement that indicates how much money a company makes for each share of its stock. It is calculated by dividing net profit by common shares outstanding (Bragg, 2002). The formulas for profitability ratios can be found from appendix 5.

Liquidity. Liquidity ratios or short term solvency ratios are used to calculate firm's ability to pay off its short-term debt. If the company has no problems with liquidity, it is always a good sign. Often the liquidity ratios tells if the company can comfortable continue its operations and growth. Problems with liquidity increases the chances of bankruptcy. Examples of liquidity ratios are net working capital, current ratio, quick ratio and equity multiplier (Wendy, 2013).

Net working capital (NWC) shows the difference between current assets and current liabilities. Positive NWC shows that the company is able to meet its short term debt as well as invest to the growth in the future. If the NWC is negative, it is usually a bad sign as the company has to get more debt or raise money to remain solvent.

Current ratio is similar to NWC, but in form of ratio. It is a ratio that measures company's current assets to current liabilities. Current ratio should be positive, as it means the company is able to pay off the short term debt. However, if the ratio is too high, there is probably idle current assets slowing down the growth (Stittle, 2008). Quick ratio is similar to current ratio but it focuses on liquid assets. It is often more useful because it shows the ability to pay short term debt with assets that are either ready or available at short notice (Wiley, 2013).

Equity multiplier is used to calculate how much assets are financed with stockholder's equity. It is calculated by dividing total assets by total equity. The higher ratio means that the higher amount of assets is financed with debt (Goel, 2015). Formulas for liquidity ratios can be found from appendix 5.

Leverage. Leverage or long-term solvency ratios are used to measure firm's long-run ability to meet it's obligations. The ratios are useful tool to forecast companys survival. In addition to that, they are also used to see if the company is financing its activity with equity or debt. Especially creditors and investors are using these ratios because it is important to get a vision about the company's long-term outcome. Examples of leverage ratios are debt ratio, debt to equity and interest coverage ratios (Ross, 2012).

Debt ratio is used to calculate whether the company's assets are financed with debt or not. It is calculated by dividing total debt by total assets. The ratio indicates the company's degree of leverage (Weygandt, 2012).

Debt to equity is also known as financial leverage ratio. It is a indicator that shows whether company's capital structure is tilted towards debt or equity in terms of financing. The ratio is calculated by dividing long-term liabilites by equity (Sanjay, 2015). Equity multiplier is very similar as debt to equity ratio and it is used to calculate how much assets are financed with stockholder's equity. It is calculated by dividing total assets by total equity. The higher ratio means that the higher amount of assets is financed with debt (Goel, 2015).

Interest coverage ratio is used to measure the company's ability to pay interest on outstanding debt. Higher ratio is usually a good sign. Creditors often uses this to decide whether it is safe to borrow money. It is calculated by dividing EBIT by interest expenses (Sanjay, 2015). Leverage ratio formulas can be found from appendix 5.

Activity. Activity ratios are a good indicator of how effective the management is, because they reveal the utilization of company's resources. Examples of activity ratios are asset turnover, inventory turnover and cash conversion cycle.

Asset turnover ratio is used to measure how efficiently the company is using its assets to generate revenue. It can be calculated by dividing sales by total assets.

Inventory turnover ratio is used to show how many times company's inventory is sold and replaced over a period. It is a good indicator how efficiently the inventory is managed by company. It is calculated by dividing sales by average inventory (Bragg, 2002).

Lastly cash conversion cycle is used to express the number of days it takes to convert investments into cash flows. According to Zeidan (2017), "Maximizing shareholder value depends on minimizing the CCC constrained by operating margins and sales". Formulas for activity ratios can be found from appendix 5.

Valuation. Valuation ratios are a important tool to measure company's worth. The ratios are effective tool to compare different investing opportunities. Most common valuation ratios are calculated with the share price and financial performance measures. Therefore the examples of valuation ratios selected for this thesis are price/earnings, price/sales and price/book ratio.

Price/earnings ratio is used to tell what the market is willing to pay for a stock based on its current earnings. Usually a company that has a high P/E ratio is doing great. But the high ratio can also be a sign that the stock is overvalued. Companies that haven't got earnings, do not have P/E ratio (Vickerstaff, 2014).

Price/sales ratio is used to show how the market values every unit of currency in company's sales. When P/S is calculated, market capitalization is divided by total revenue.

Price/book ratio compares stock's market value and book value. It shows how much shareholders are paying for the company's net assets. P/B ratio is also commonly used to find potential investments.

Enterprise multiple is usually an alternative to the P/E ratio to determine the fair market value of a company. This ratio is a good tool, if the P/E ratio is negative and can not be used. It is calculated by dividing enterprise value by EBITDA. Stocks with the enterprise multiple less that 7.5 is usually considered a good value and if the ratio is below 10, the company is usually healthy. It is important to compare the ratio with the industry averages or main competitors (Hayes, 2019). Valuation ratios can be found from appendix 5.

DuPont model. The DuPont model was created by DuPont corporation. It is used to analyse Return on equity by decomposing it into its components. The three components are net profit margin, total asset turnover and equity multiplier. Return on equity is one of the most important ratio because it measures how the company is generating profits from shareholders investments. Return on equity can sometimes be very high or low, therefore it can be misleading sometimes. It is important to investigate which component is affecting ROE the most (Narayanan, 2010).

$$DuPont\ Model = Net\ profit\ margin \times Asset\ turnover\ \times Equity\ multiplier. \quad (1)$$

1.3. Bankruptcy prediction models

Historically there have been developed numerous models to predict bankruptcy for a company. In 1967 William Beaver was the first person to develop a model that uses financial ratios. The Beaver model was quite simple as it compares only one specific ratio with the critical value. The problem with this model is that the used ratio can not contain all relevant information needed to make a accurate prediction (Beaver 1966).

The breakthrough was 1968 when Edward I. Altman developed a model based on multiple discriminant analysis methodology and is commonly known as Z-model. It was a improved model made from Beaver's model. Instead of just one, Altman chose five financial ratios that were tested

to work most precisely. All the ratios are from a different category: liquidity, profitability, productivity, leverage and efficiency.

Altman Z-score formula:

$$Z = 0.012 \times X1 + 0.014 \times X2 + 0.033 \times X3 + 0.006 \times X4 + 0.999 \times X5, \quad (2)$$

where

Z= Bankruptcy indicator
X1 = Working capital / Total assets
X2= Retained earnings / Total assets
X3= EBIT / Total assets
X4= Market value of equity / Book value of total liabilities
X5= Sales / total assets

X1 is a ratio that defines company's liquidity and short-term financial health. The bigger the ratio is, the more a company is able to invest and grow after handling short-term obligations. X2 is a important ratio that reveals if the company has to use loan to finance it's expenditures rather than retained earnings. X3 is a ratio that is used to measure if the revenues are good enough to stay profitable while funding ongoing operations and making debt payments. X4 is a ratio that is used to measure how company's market value could decline before liabilities exceeds assets. X5 is a standard measure how efficiently the company is using its assets to generate revenue (Altman, 1968).

The result of Altman's model can be readable as follows: if the Z-score is over 2.99, the company is healthy and there is no threath for bankrupt. Whereas the score is below 1.81, the company is in distress zone and in high risk of going bankrupt. The zone between 2.99 and 1.81 is called gray zone. If the score is in the gray zone, there is a risk for false classification, but the possibility of going bankrupt is real during the following couple of years. The higher the score is, the more likely the company is financially healthy (Altman 1968).

Regarding Altman's researches, the Z-score forecasts a bankrupt most accurately one year before (95%). The accuracy decreases to 72% and 52% when the forecasted time is two and three years respectively.

Altman's original model from 1968 was made mainly for publicly traded manufacturing companies. After that, he has created two other variants: Z' and Z''. Z' model was developed in 1983 to analyse the risk of bankrupt of private companies. The X4 ratio was changed to be calculated as book value of equity / book value of liabilities. Z'' model behalf was founded in 1993 and it is used with publicly traded non-manufacturing companies. In the third variant, the X5 ratio is removed completely, as it is not relevant with non-manufacturing companies. Different weights and score ranges are applied with every variant. The differences with the variants are visible in the table below. (Altman, 2000)

Table 1. Altman Z models

	Z-score (1968)	Z' (1983)	Z'' (1993)
Variables			
X1	1,21	0,717	6,56
X2	1,41	0,847	3,26
X3	3,3	3,107	6,72
X4	0,6	0,42	1,05
X5	0,999	0,998	
Bankrupt firm	<1,81	<1,23	<1,10
Non-bankrupt firm	>2,67	>2,90	>2,60
Gray zone	1,81-2,67	1,23-2,90	1,10-2,60

Source: Anjum, 2012

2. MARKET OVERVIEW AND REVIEW OF THE COMPANIES

2.1. Shipping in the Baltic Sea

The Baltic sea is one of the busiest maritime places on earth. Up to 15% of the world's cargo traffic is handled there. The sea offers great shortcut to transport cargo and passengers compared to roads and therefore it effectively connects the northern european countries. The maritime is very busy especially between Finland, Estonia, Sweden, Germany and Russia. In the baltic sea, there are over 2000 ships operating at any given time and even 6000 ships can navigate through the Baltic sea per month. More than 50% of the ships are cargo ships, 20% are oil tankers and 15% are passenger ships operating normally over 50 million passengers annually. (Madjidian et al. 2013). The busiest passenger route is Helsinki-Tallinn.

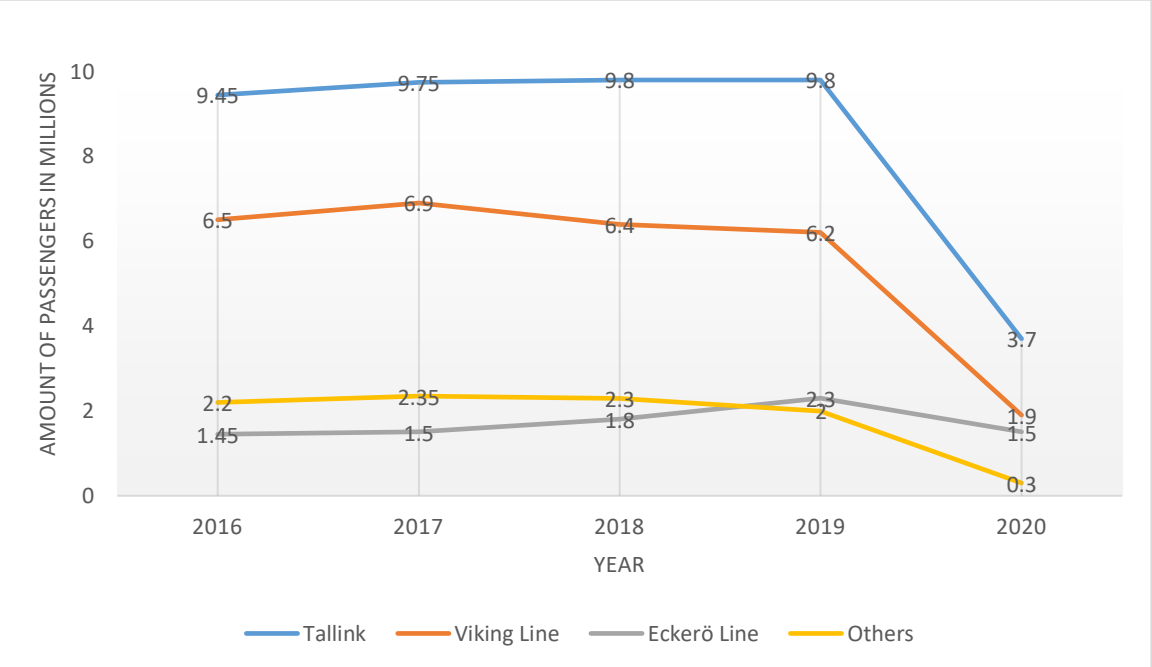

Figure 1. Amount of passengers in 2016-2020 in the Northern Baltic sea

Source: Tallink

With reference to the table above, market share in years 2016-2019 have been quite stable. In 2016 the passenger volume totalled 19,6 million passengers, and since then, Tallink has been a dominant company in the region with 48% of total passengers in 2016. Viking Line behalf had a share of 33% of the passengers. Eckerö line and other companies was left with 11% and 8% respectively.

In 2019 before COVID19, the passenger market share in the northern baltic sea between the main operators was divided as follows from the total market of 20.3 million passengers: Tallink 9,8 million passengers (48%), Viking Line 6,2 million passengers (31%), Eckerö Line 2,3 million passengers (11%), and other smaller companies gained 2 million passengers (10%) (Tallink, 2019).

In comparison to 2019, in the pandemic year 2020, the volume of passengers decreased dramatically and the passenger volumes was divided as follows from the total market of 7.4 million passengers: Tallink 3,7 million passengers (50%), Viking Line 1,9 million passengers (26%), Eckerö Line 1,5 million passengers (20%) and other smaller companies gained 0,3 million passengers (4%). (Tallink 2021).

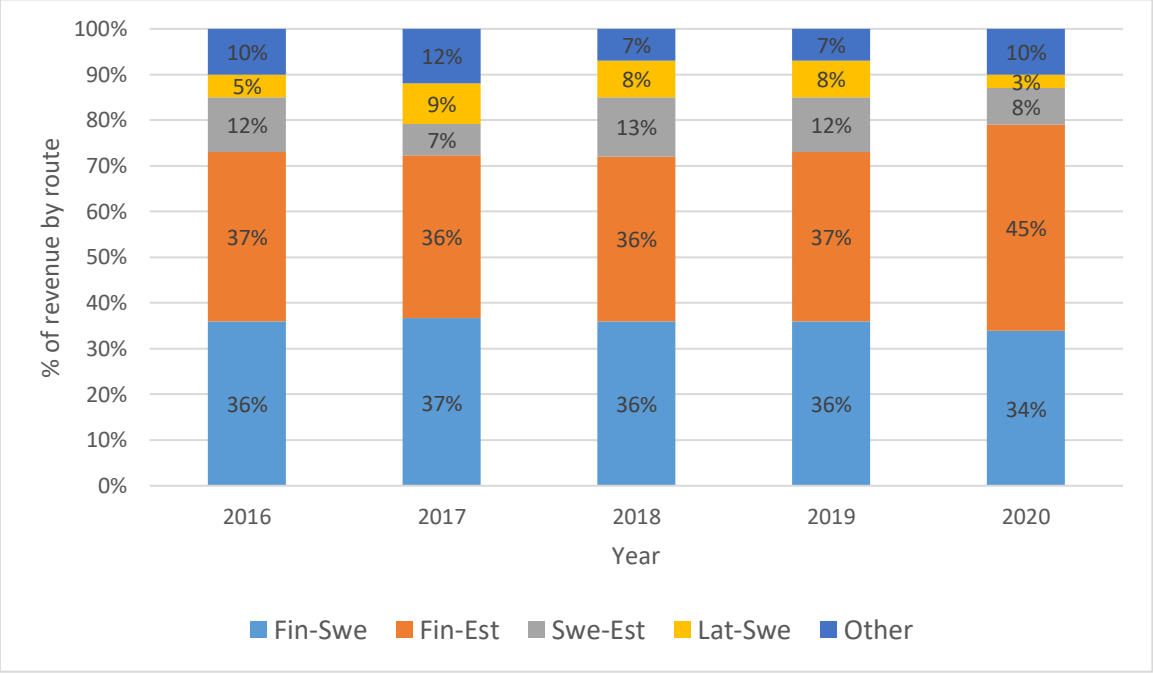

Figure 2. Revenue by route, Tallink 2016-2020 in the Northern Baltic sea
Source: Tallink

Tallink with wide operation network was chosen to be an example of how the revenues as a percentage have changed between different routes in the Baltic sea. The route between Finland

and Sweden has been quite stable between 2016-2019 and there was only changes of 1%. However in 2020 pandemic time, there was slighlty bigger decrease from 36% to 34%.

The route between Finland and Estonia followed the same pattern in years 2016-2019, being the main source of revenue with the route between Finland and Sweden. However, in 2020 it increased from 37% to 45% to become the biggest source of revenue. This is a logical outcome, as the travel restrictions between Finland and Estonia have not been so strict compared to Sweden. For the same reason, routes between Estonia and Sweden, and Sweden and Latvia have also decreased by 4% and 5% respectively.

2.2. AS Tallink Grupp

AS Tallink Grupp is an Estonian shipping company and it is operating passenger and cargo ferries. Tallink operates in Estonia, Finland, Sweden and Latvia. Tallink is a publicly traded company, listed in the Nasdaq Tallinn. It was founded in 1989. Tallink is a biggest shipping company in the baltic sea, and one of the biggest in the whole world. Tallink is operating many routes between Finland, Estonia, Sweden and Latvia. In the last five years, Tallink's revenues were formed as follows:

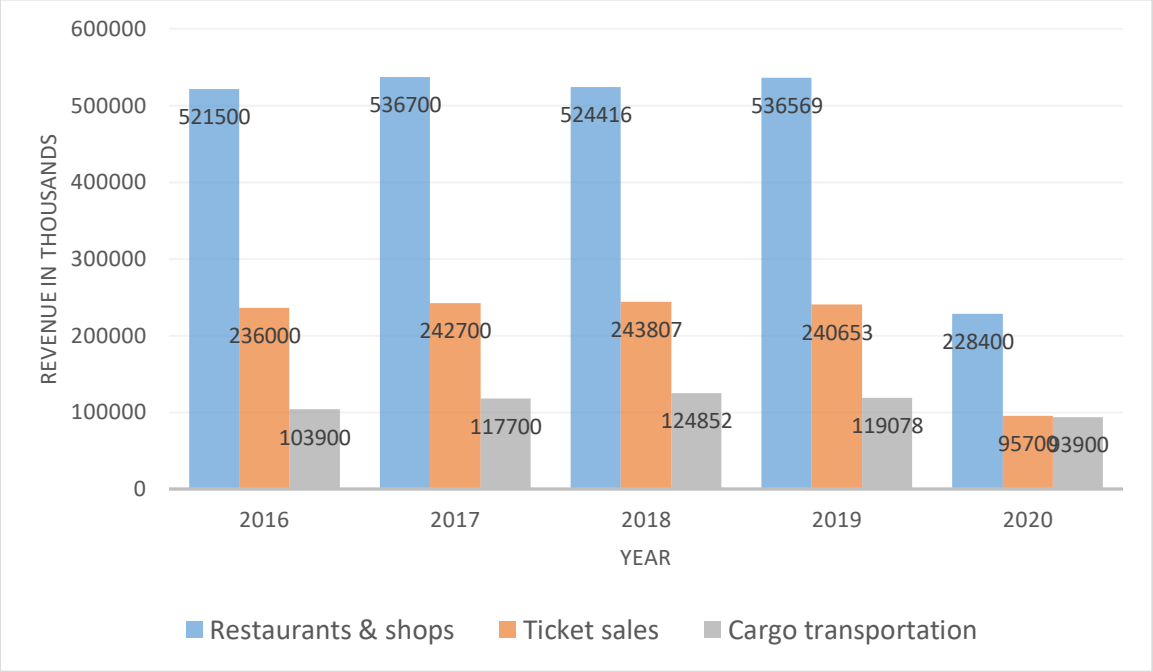

Figure 3. Revenues by business segment 2016-2020

Data source: Tallink

Tallink's main business segment is definitely connected to passenger transportation. In the graph above, it is clearly visible that the main revenues have came from the passengers. In 2016-2019 the revenues from the ticket sales remained almost the same. However, in 2020 when the covid-19 started to spread globally, the amount of passengers decreased dramatically. The amount of passengers decreased over 50%, and the same percentage can be seen in ticket, restaurant and shop sales.

Fortunately Tallink has also an other business segment, cargo transportation. In the same graph below, it can be seen that the revenues from cargo transportation have not decreased so dramatically. But almost 30 million decrease in revenues is still noticeable.

Alongside normal annual revenues in 2020 during COVID-19, the governments have been giving assistance to Tallink, as it is an important part of the logistic chain in the northern Baltic sea. Tallink has received total of 36,6 million euros from governments of Estonia, Finland, Sweden and Germany. Previously mentioned governments have given 15,1 millions, 9,7 millions, 11,6 millions and 0,064 millions respectively. In addition to regular assistance, 10,5 million euros COVID-19 related aid was received from Estonian unemployment insurance fund, for the employees. Also ships' fairway dues was lowered after April 2020, and it lowered the costs by 3,4 million euros in 2020. All the aid in 2020 were 51,2 million euros in total (Tallink 2021).

2.3. Viking Line Abp

Viking Line is a Finnish shipping company ferries for both, passengers and cargo. It operates in Finland, Sweden and Estonia. Viking Line is a puclicly traded company, traded in Nasdaq Helsinki. It was founded in 1959. Viking Line is considered as a second largest shipping company in the Baltic sea with a fleet of 7 vessels. Viking Line is operating many routes between Finland, Sweden and Estonia. Viking Line's revenues during the last five years was divided as follows:

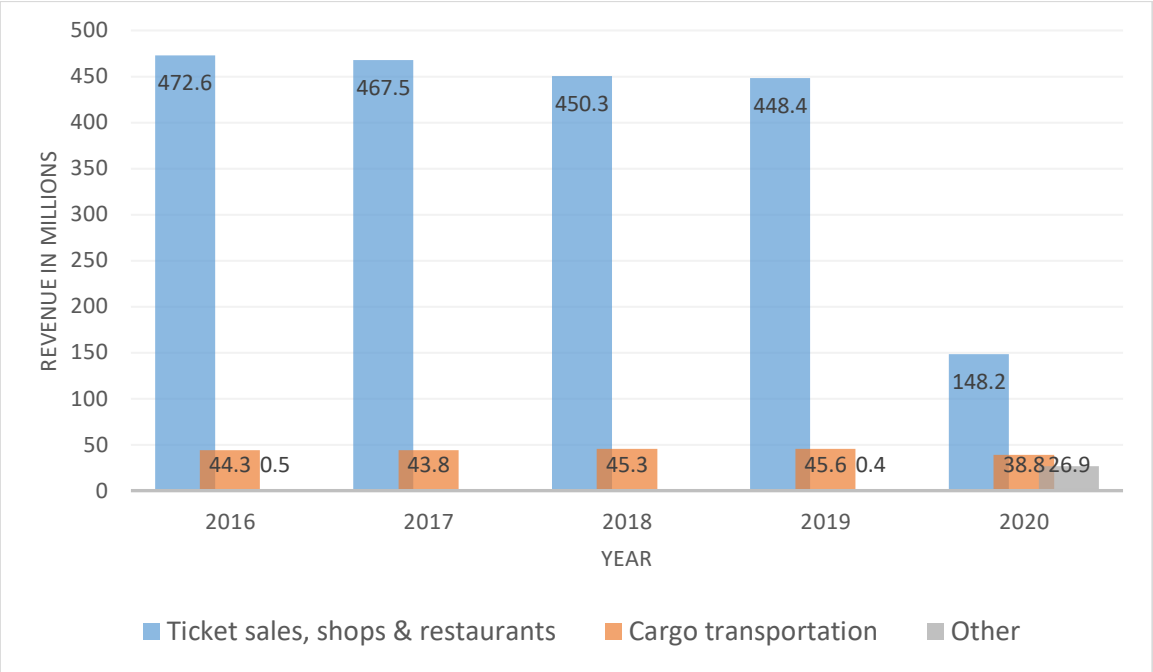

Figure 4. Revenues by business segment 2016-2020

Data source: Viking Line

The main source of Viking Line's revenue is ticket sales for passenger transportation and other sales related to travelling. As visible in the graph above, Viking line's revenues from passenger transportation was very stable from 2016-2019. However in 2020 after the spread of covid-19, the revenues have dropped significantly. In 2020 it was only about 33% of the normal annual revenues.

Viking Line has also an other source of revenue, a cargo transportation. The COVID-19 has not affected to this segment as dramatically. It decreased only 15%, but the total revenue losses are over 300 millions.

Alongside normal annual revenues in 2020 during the COVID-19, governments have been there for Viking Line as the company is an important part in logistic chain as well as in safety and supply purposes. Finnish national emergency supply agency, Transport and communication agency as well as Swedish and Estonian authorities have given aid in total of 25,9 million euros in 2020. Also Viking Line received salary related aid in total of 6,6 million euros (Viking Line, 2020)

3. EMPIRICAL ANALYSES AND RESULTS

3.1 Research methodology

Quantitative methods was used to make this research. ‘’Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon.” (Babbie 2010)

The financial data was gathered mainly from companies’ annual reports. The companies’ annual reports were easily accessible from their websites. The numbers from income statement and balance sheets were collected from years 2016-2020. The numbers was used to calculate the financial ratios based on financial statements from years previously mentioned. Collected data was used to create graphs for cross-sectional analysis to visualize the differences between Tallink and Viking Line. All the necessary financial statements and financial ratios including used formulas, can be found from appendices.

DuPont model was used to break the return on equity into its components. The DuPont model is an important tool that gives better view of the possible weaknesses and strengths regarding generating profits from shareholders investments.

Altman Z” score was used to analyse the possibility for bankrupt. Altman Z” variant is a valid model to analyse publicly traded non-manufacturing companies. (Altman, 2000)

Although financial analysis is a very effective way to analyse companies, there is also some things that needs to be taken into consideration. To begin with, the comparability between different years might be inaccurate as the company might have changed the accounting style. For example, the expenses can be written in cost of goods sold in one period and somewhere else in the other period.

The same problem is with comparability, because companies can aggregate their financial information differently, therefore the ratios are not perfectly comparable to each other. (Ross, 2014) This might lead the user of financial analysis to make an error of judgement of the results about the comparison of companies. Also, the financial statements are published with a delay, even 6 moths. Therefore, the financial situation can be changed dramatically by the time the research is completed.

3.2. Financial statements

The Income statements showed similar trends within the companies. Tallink's annual total revenue was very stable in 2016-2019, little over 900 millions, but in 2020, it decreased to 442 millions, about 50%. The drop in revenues has caused a lot of damage and the main thing is that the company is not profitable anymore. In 2016-2019 annual net income was over 40 millions, whereas in 2020 it was turned into net losses of nearly 110 millions. Tallink has managed to drop some expenses from 2019 to 2020. For example staff related costs have decreased by 55 millions and marketing related expenses by 20 millions. However, cutting from expenses has not been enough to be able to make a profitable year in 2020.

Viking Line is a smaller company and therefore the numbers are slightly lower. Normal revenues have been between 495 millions and 520 millions in 2016-2019. What is different to Tallink, is that the decrease is higher as a percentage, over 60%. Viking Line has also managed to decrease its expenses during the COVID-19. For example staff related costs have decreased over 40 millions. Also marketing related expenses dropped by nearly 20 millions. However, Viking Line is in a same situation as Tallink, net income was positive from 2016-2019, about 5-10 millions annually. In 2020, net losses totaled 42 millions.

What comes to a balance sheet, there is visible similar trends. Tallink's total assets have been quite stable from 2016-2020, over 1,5 billions. However, current assets have experienced a huge decrease as the company has been recently unprofitable. There has been a 30 million drop from 2019 to 2020. It is noticeable that the company has been forced to use its liguid assets. Also inventory has decreased. Tallink's current liabilities have been very stable in the past years, but the changes are huge, when it comes to non-current liabilities. Tallink has been forced to increase the

long-term debt by over 100 millions, from 488 millions (2019) to 593 millions (2020). However, that is necessary, to survive the COVID-19.

Viking Line's balance sheet is having same trends. Total current assets have taken a huge decrease from 150 millions (2016) to 68 millions (2020). That is a result of not being profitable, so the liquid assets have been essential to use. What is different to Tallink, is that Viking Line has not taken noticeable amount of debt because of COVID-19. It is rather managed to decrease the amount of liabilities from 2019-2020.

3.3. Financial ratio analysis

3.3.1. Profitability

To measure the companies' profitability, four ratios are calculated: Gross profit margin, net profit margin, return on assets and return on equity. Also Dupont analysis is used to investigate return on equity.

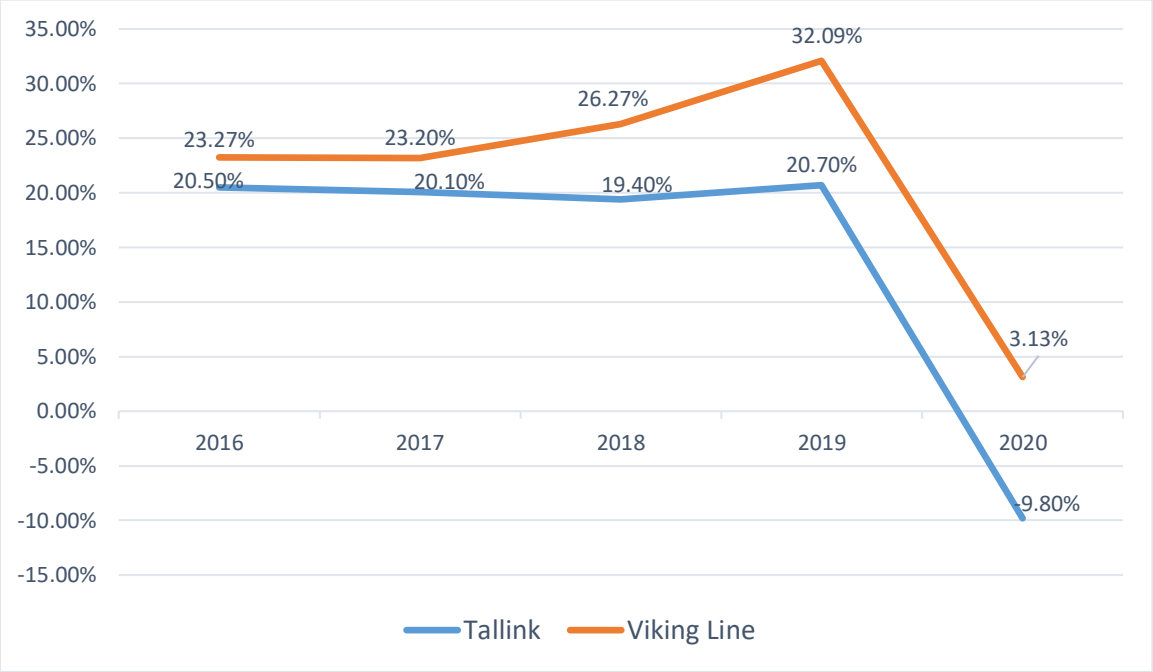

Figure 5. Gross profit margin of Tallink and Viking Line 2016-2020

Data source: Author's calculations

The graph above illustrates the gross profit margin and its movements within five years. Tallink has been very stable in 2016-2019 regarding the gross profit margin. The ratio increased from 20.5% to 20.7% in 4 years, and during the period, it did vary only about 1%. The ratio of over 20% is considered as quite healthy especially in transportation industry. It can be said, that Tallink has not experienced big changes in gross profit and net sales. However, the reason for a little decrease in 2018 can be found from the income statement, as the cost of revenue increased from 85 millions to 102 millions caused by higher fuel costs. The flat curve above experienced a significant drop in 2020 from 20.7% to -9.8% decreasing a total of 29.5%. That can be explained as a decrease in revenues, from 949 million to 442 million. Negative operating profit margin unfortunately means that the company is far from profitable and the costs exceeds revenues.

Viking Line had quite similar first two years from 2016-2017 as the ratio remained in 23%. After that there was a good increase from 2017 to 2019, first 3% and then 6% to climb as high as 32%. This can be explained with lower cost of revenues. In 2020, the decrease with the companies was basicly similar, about 30%. On the other hand, Viking Line was able to get a positive ratio of 3%. However, gross profit margin of 3% is very low. Apparently Viking line was able to reduce the cost of revenue, so that even the revenues dropped in the pandemic time, the ratio did not go as low as it was with Tallink.

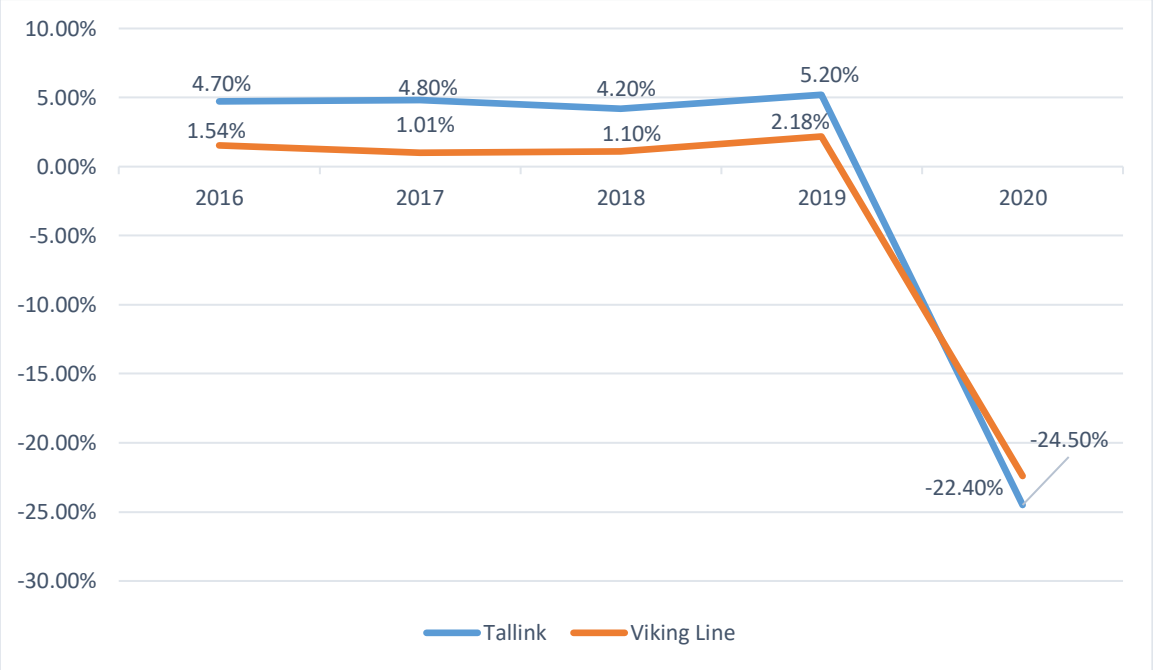

Figure 6. Net profit margin of Tallink and Viking Line 2016-2020

Data source: Author's calculations

Figure X of net profit margin above is showing slightly different results than the operating profit margin and the results are reversed. From 2016 to 2019 Tallink has had a ratio moving between 4.7% and 5.2%. In 2020 the percentage dropped as low as -24% because of huge lost of revenues and too high total expenses. Viking Line had a lot lower net profit margin in years 2016-2019, moving between 1.54% and 2.18%. That means that Tallink has higher cost of revenue, but when all the expenses all taken into consideration, Tallink is generating more profit. However, both got positive number before 2020 and in the water trasportation industry, the average ratio is not higher than 5%. In 2020 the net profit margin of Viking Line also dropped to -22% mainly for lost revenues and too high expenses. In 2020, both of the companies are unable to cover their costs by sales.

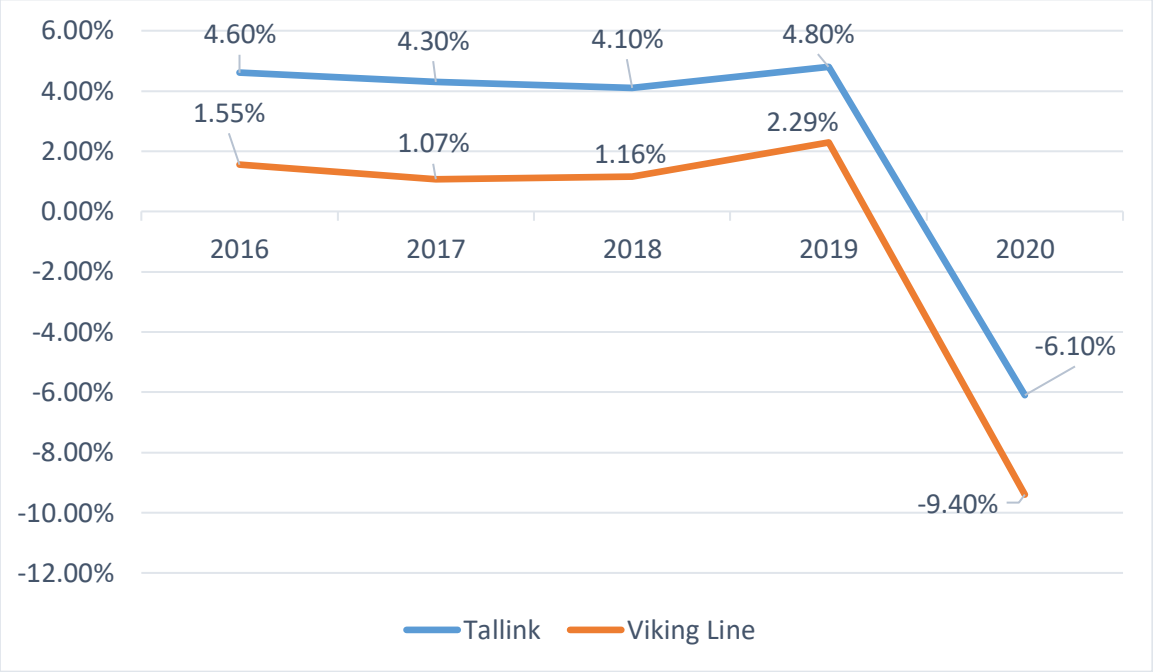

Figure 7. Return on assets of Tallink and Viking Line 2016-2020

Data source: Author's calculations

Tallink can be considered very stable regarding its efficiency to using assets to generate profits. The ratio did not change much between years 2016 and 2019. Only in 2018 it decreased a little lower to 4.1%, but increased quickly back to new high, 4.8%. The little drop can be explained by higher cost of revenues and therefore lower net income. However in 2020 the pandemic striked and the ratio dropped to -6%. Viking Line had a similar curve. It was 1.5% in 2016 and it decreased to 1.07% and remained lower before the 2019, when the return on assets increased to 2.2%. The little drop in 2017-2018 can be explained by the increase of selling, general and administrative

expenses. In 2019, Viking Line managed to reduce its cost of revenue, so the ratio increased to new high again. In 2020 the ratio dropped in proportion with Tallink, to -9.4%. It can be said, that neither of the companies are able to generate profits with their assets at the moment, due to decreased sales.

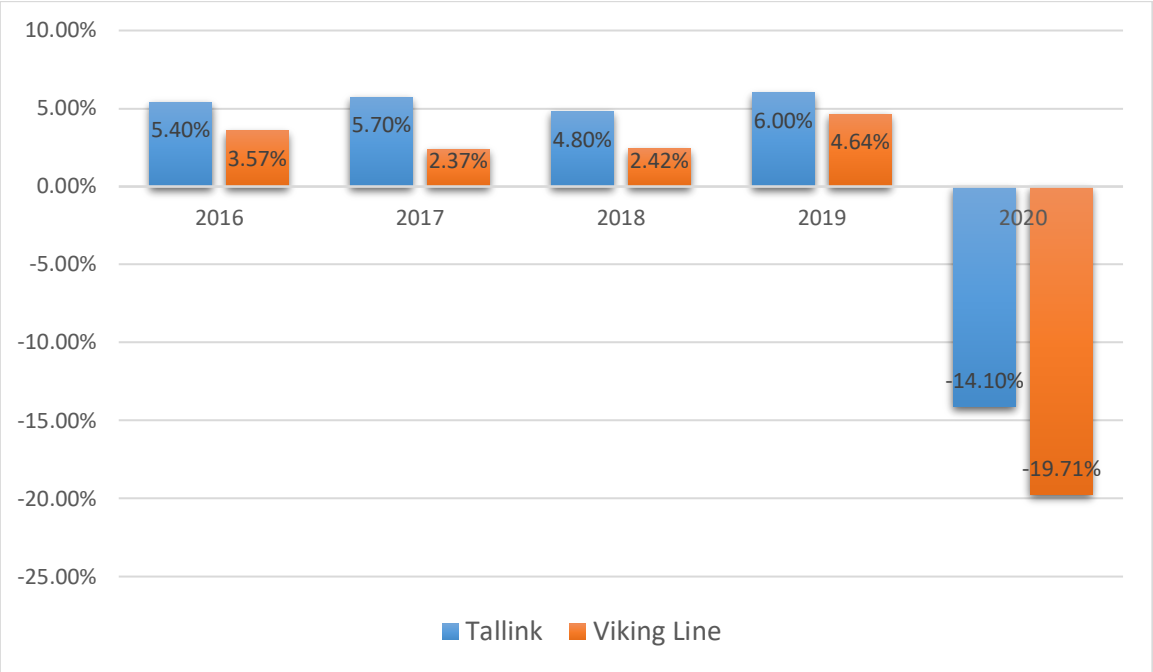

Figure 8. Return on equity of Tallink and Viking Line 2016-2020

Data source: Author's calculations

The graph above shows the movements of return on equity in 2016-2020. Tallink has been clearly a more attractive company for investors, as the ROE has been mostly between 5% and 6%. However, that is still quite low, and does not necessarily attract investors. The same pattern is noticeable here, Viking Line is slightly behind Tallink by 2%-3% every year. In 2019 both of the companies got their ratio to the new high within the five year timeframe. And that should be investigated with Dupont model. In 2020 the ratio dropped far below 0 with both of the companies. Negative ROE could be left even without calculating, however it is almost always a bad sign.

Table 2. Application of DuPont model

	Year	ROE =	PM x	TAT x	EM
Tallink	2020	-14.10%	-24.50%	0.29	2.12
	2019	6.00%	5.20%	0.73	1.86
	2018	4.80%	4.20%	0.74	1.75
	2017	5.70%	4.80%	0.74	1.86
	2016	5.40%	4.70%	0.72	0.67
Viking Line	2020	-19.71%	-22.40%	0.42	2.24
	2019	4.64%	2.18%	1.05	2.02
	2018	2.42%	1.10%	1.05	2.03
	2017	2.37%	1.01%	1.06	2.16
	2016	3.57%	1.54%	1.01	2.27

Data source: Author's calculations

The table x above is showing important information about how the return on equity is formed. In 2020, high decrease in profit margin has caused the biggest impact to the return on equity on both of the companies. That is inevitable as the revenues have become too low in relation to all the expenses.

In 2020, companies' asset turnover has decreased also over 50%, as the companies are not able to properly operate with all their fleet. In normal situation, where the return on equity is positive, the over 50% lower total asset turnover would have a high impact to the return on equity. When the return on equity is negative, low asset turnover might look good, as it does not affect the ROE significantly, but that is not the case. Decreasing asset turnover usually means only lower revenues.

Between years 2016 and 2020, equity multiplier has nearly tripled on Tallink. That has been the biggest factor affecting the ROE in 2016-2019. Viking Line has been very stable regarding equity multiplayer, only little changes during the last five years. The calculated equity multiplier in table above showed that Tallink is clearly using less debt to finance its assets. In 2016, the ratio was extremely low, but between 2017 and 2019, it has been quite normal, just below 2. In 2020 Tallink has clearly been using a little bit more debt to get the ratio up to 2.12. However, the ratio is 2 on average, therefore only half of the assets are financed with debt. Viking Line has been quite stable with how its been financing its assets. The ratio has been within 0.25 the last five years, 2.02-2.27. Therefore, it can be said that a little over 50% of assets have been financed with debt.

Profitability ratios showed that the companies are performing somewhat similarly but on the other hand there is some differences. Eventhough Viking Line was performing better when it comes to operating profit margin, the net profit margin is the ratio that matters more. This is just telling that Viking Line has a little lower cost of goods sold in relation to net sales. However, when all the expenses were taken into calculations, Tallink was performing better in 2016-2019. It looks like in terms of profitability, Viking Line managed to perform slightly better during the pandemic year of 2020. Nevertheless Tallink was the more effective company to generate sales with its assets in and before the pandemic year. Also in terms of ROE, Tallink has been the better performing company to create profits in relation to the equity the last five years.

3.3.2 Liquidity

Companies' liquidity have been analysed with two ratios: current ratio and quick ratio.

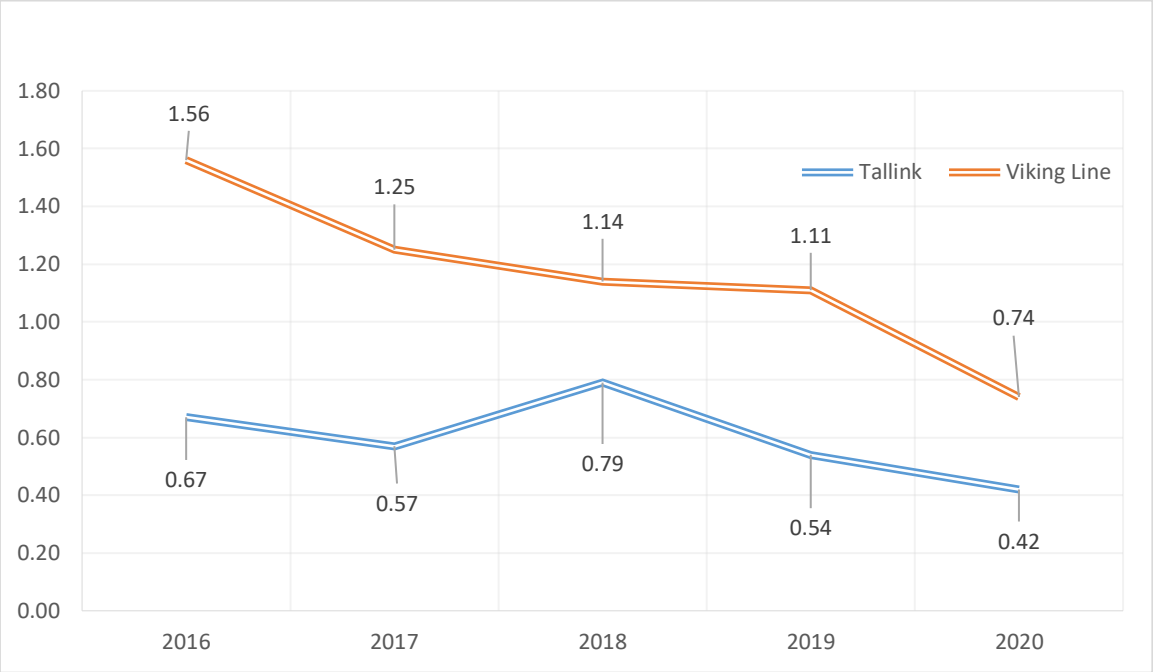

Figure 9. Current ratio of Tallink and Viking Line 2016-2020
Data source: Author's calculations

The graph about current ratio above showed some different results between the companies. Tallink surprisingly has had a current ratio clearly below 1.0, and that is not positive sign, as it means that the company is not able to handle its short-term obligations with its cash, cash equivalents or other current assets. During the last five years the ratios has been between 0.67 and 0.42, therefore the

0.42 ratio in 2020 pandemic time is not even exceptional. However this is not because the current liabilities are growing, but its current assets have been decreasing.

Viking Line in turn has managed to get relatively healthy current ratio. From 2016 to 2019 it remained over 1.0, which is important, as it is able to handle all the current liabilities with current assets. However the trend has been decreasing from 2016 and in 2020 it was as low as 0.74. The current liabilities has remained the same but its been losing its current assets annually.

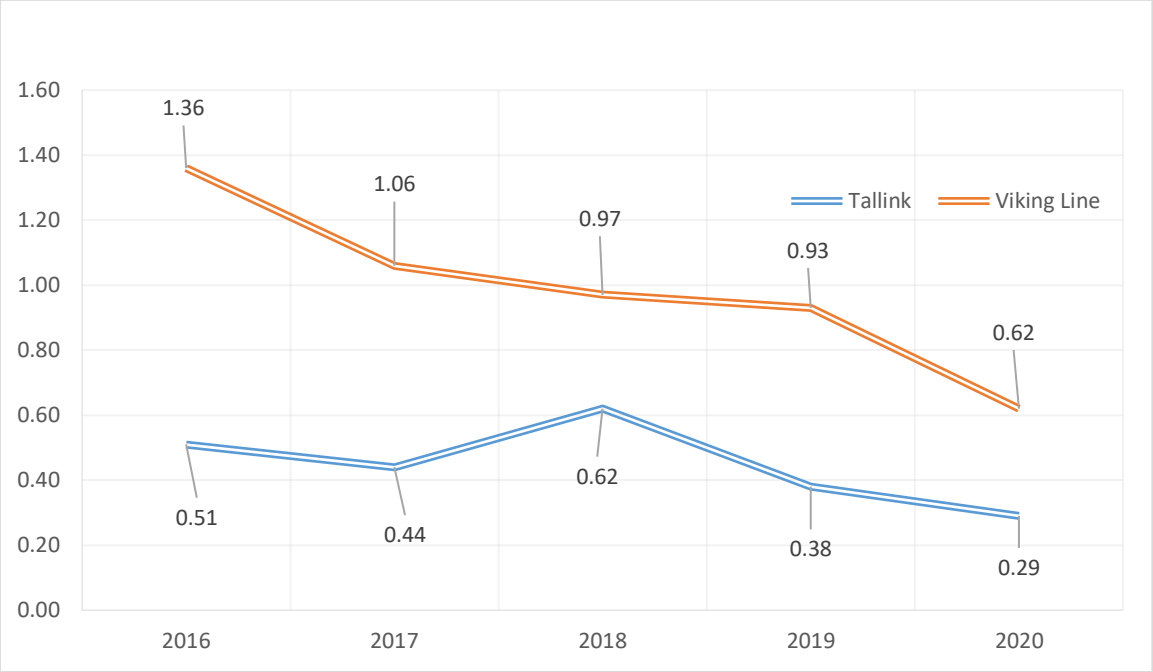

Figure 10. Quick Ratio of Tallink and Viking Line 2016-2020
Data source: Author's calculations

The quick ratio shows pretty much the same pattern as current ratio earlier. Quick ratio does not take into consideration for example inventory and other current assets that might require some more time to turn into cash. In other words, only liquid assets are taken into consideration. This ratio is showing even more alarming results for Tallink. Within the last five years, the highest point was in 2018, 0.62. It can be said, that Tallink is having a hard time to survive with its short term obligations.

Viking Line in turn has had a lot better results. In 2016-2017, the quick ratio was over 1, which is admirable. Even when it decreased to 0.97 and 0.93 in 2018 and 2019, the situation was not that

bad. However, in 2020 Viking Line has been forced to use its current assets, resulting a ratio that is only 0.62.

The two liquidity ratios showed differences between Tallink and Viking Line, even though the current and quick ratio graphs of the companies were somewhat identical. Before the pandemic, Viking Line was able to handle all the short-term obligations with its liquid assets, whereas Tallink's ratio was far below 1.0 even before COVID-19. However, Viking Line has been performing better in terms of liquidity, in the last 5 years, and in 2020, both of the companies are having a hard time to handle the short-term obligations which can lead into serious troubles, if the pandemic continues.

3.3.3 Leverage

Companies' leverage is measured by interest coverage ratio and debt to equity ratio.

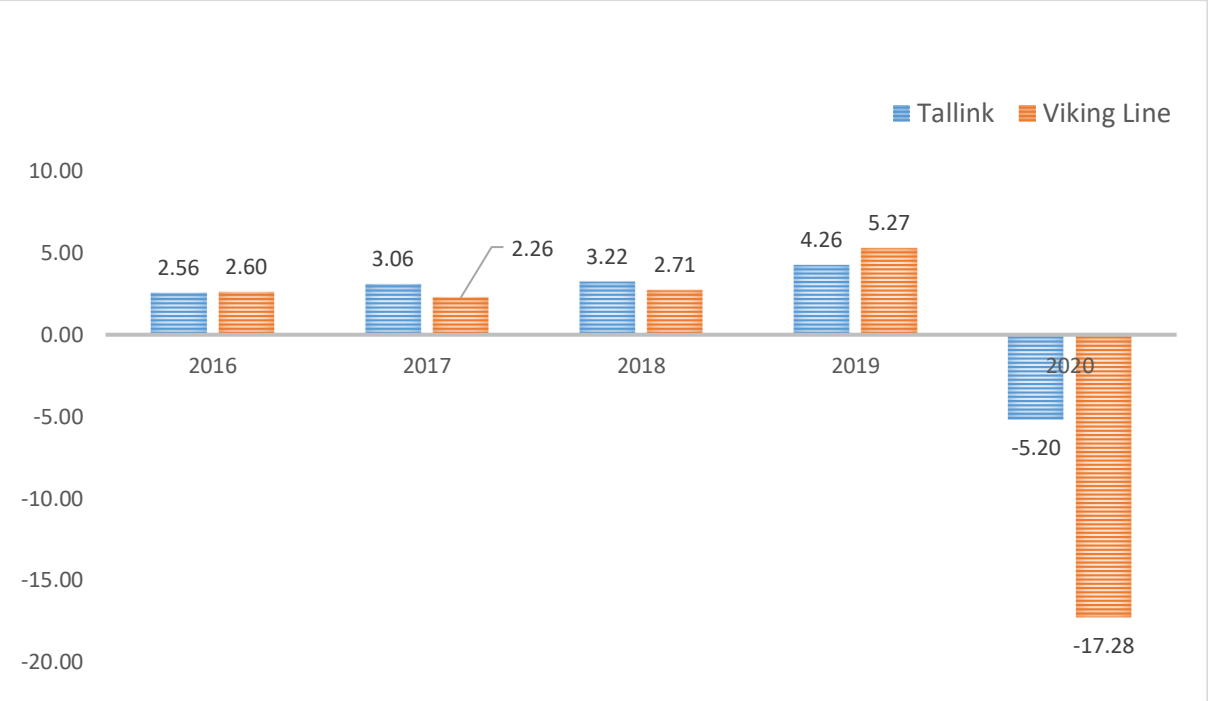

Figure 11. Interest coverage ratio of Tallink and Viking Line 2016-2020
Data source: Author's calculations

The figure11 above is showing clear results. In 2016 Tallink and Viking Line was almost in the exact same situation, with 0.04 being the difference. Next year Tallink was able to increase the ratio over 3 which is already desirable, but Viking Line experienced a little decrease, by 0.34. Year 2018 was quite good for Tallink and Viking Line, as they increased the ratio by 0.16 and 0.45 respectively, but 2019 was even better as the ratios increased to 4.26 and 5.27 respectively. This increase of interest coverage ratio between the 2016 and 2019 was caused by lower interest expenses and higher earnings before interest and taxes. Therefore in 2019 both of the companies had a ratio that is very good. However in the 2020 the ratio went negative as the companies has negative earnings caused by huge decrease in revenues.

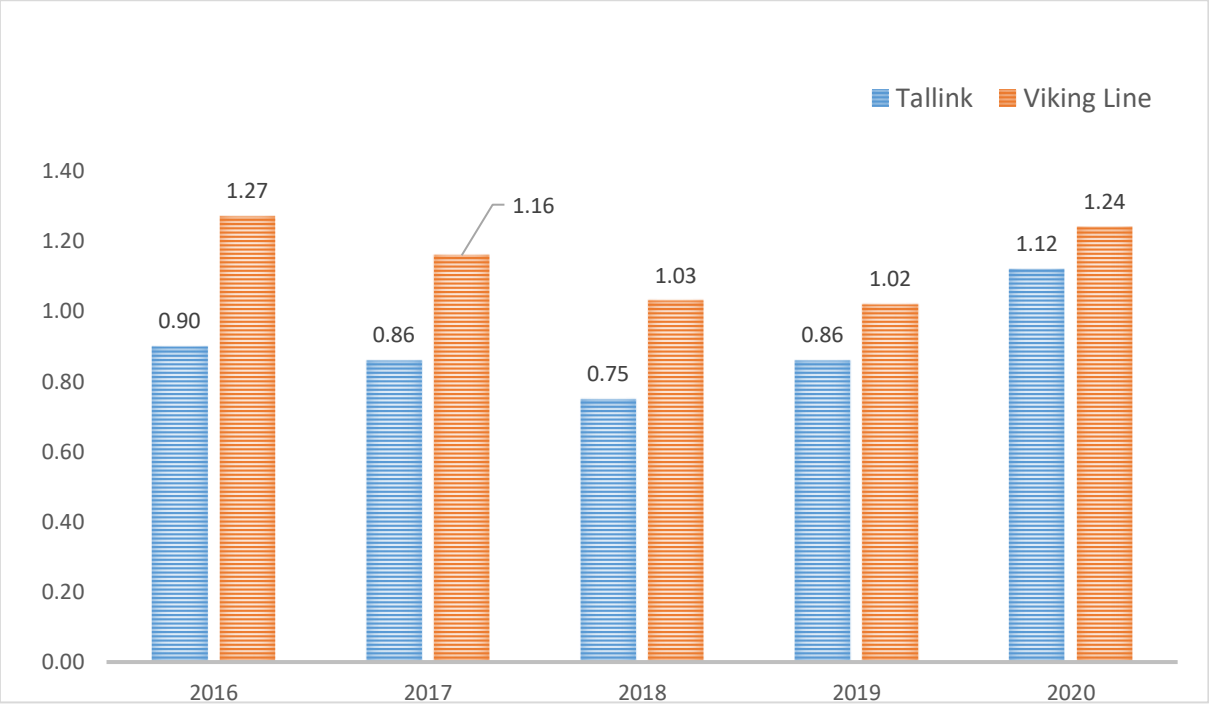

Figure 12. Debt to equity ratio of Tallink and Viking Line 2016-2020

Data source: Author's calculations

Debt to equity ratios above is telling important information whether the companies are financing their operations with debt or equity. Tallink has been operating financially very safely from year 2016 to 2019, having the ratio below 1.0. Therefore, it is using even less debt than share holders equity. In 2020 Tallink has been forced to use more debt, as the revenues have dropped dramatically, but usually debt ratio of 1.12 is not considered risky.

Viking Line has been operating more risky regarding debt to equity ratio, as it has been using last five years more debt than shareholders equity. However, the small majority towards debt is not

that big. Especially in 2018 and 2019 when the times were good financially, the ratio dropped near 1.0 which is very good. However Viking Line had to increase the usage of debt aswell as Tallink in 2020 as the revenues decreased dramatically.

Both of the companies are affected by huge lost in earnings, so that they are not able to cover their interest payments of debt with the earnings like they were used to, before COVID-19. Also both of the companies were forced to increase their total debt during the pandemic time in order to survive. At the moment Viking Line has slightly more debt in relation to equity than Tallink. During the four years before COVID-19, Tallink has been using debt notably less. However, the debt to equity ratio is not catasthophically high for either of the companies.

3.3.4 Activity

Ratio to measure asset utilisation is asset turnover.

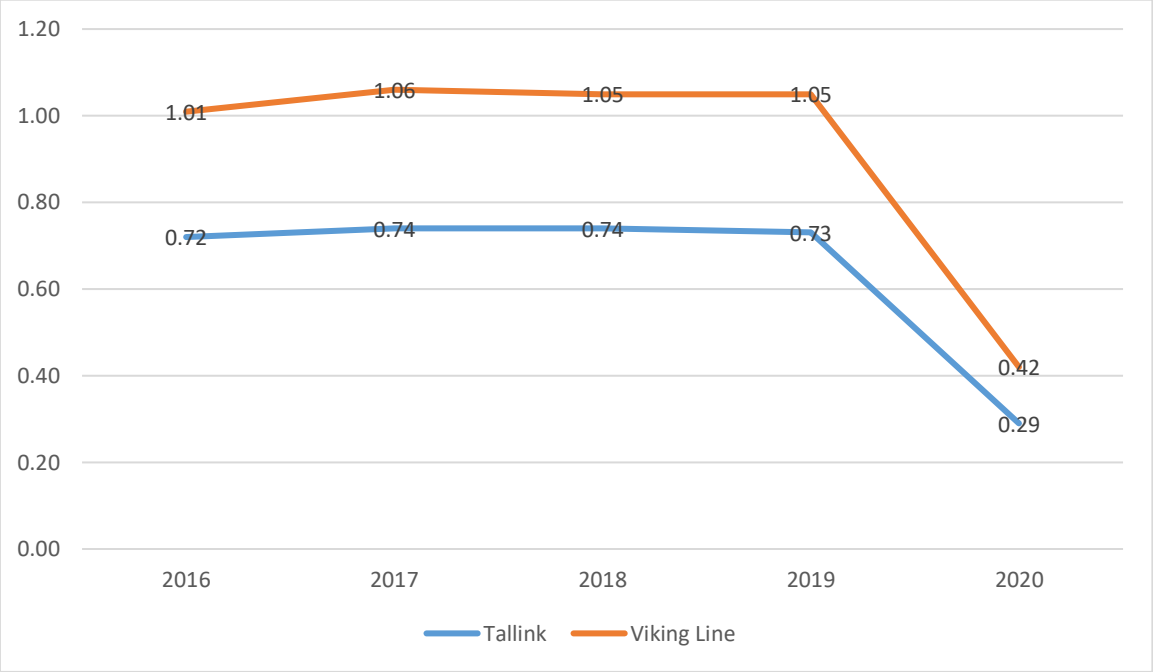

Figure 13. Asset turnover ratio of Tallink and Viking Line 2016-2020
Data source: Author's calculations

Tallink has been clearly a weaker company generating sales with its assets. The ratio between years 2016 and 2019 remained almost the same, varied by just 0.02. At the same time Viking Line generated more effectively sales, the ratio being over 1.0 for four years from 2016-2019. This is

indicating clearly that Viking Line is operating its fleet more effectively with less routes. Tallink in turn has much bigger fleet and more routes and apparently it is not so effective. For example in 2018, Tallink had gross property, plant and equipment worth of 1,7 billions when Viking Line had worth of 800 millions. The drop from 2019 to 2020 can be explained by the decrease of passengers, because of the travel restrictions.

3.3.5 Valuation

P/S ratio was used to measure valuation of Tallink and Viking Line.

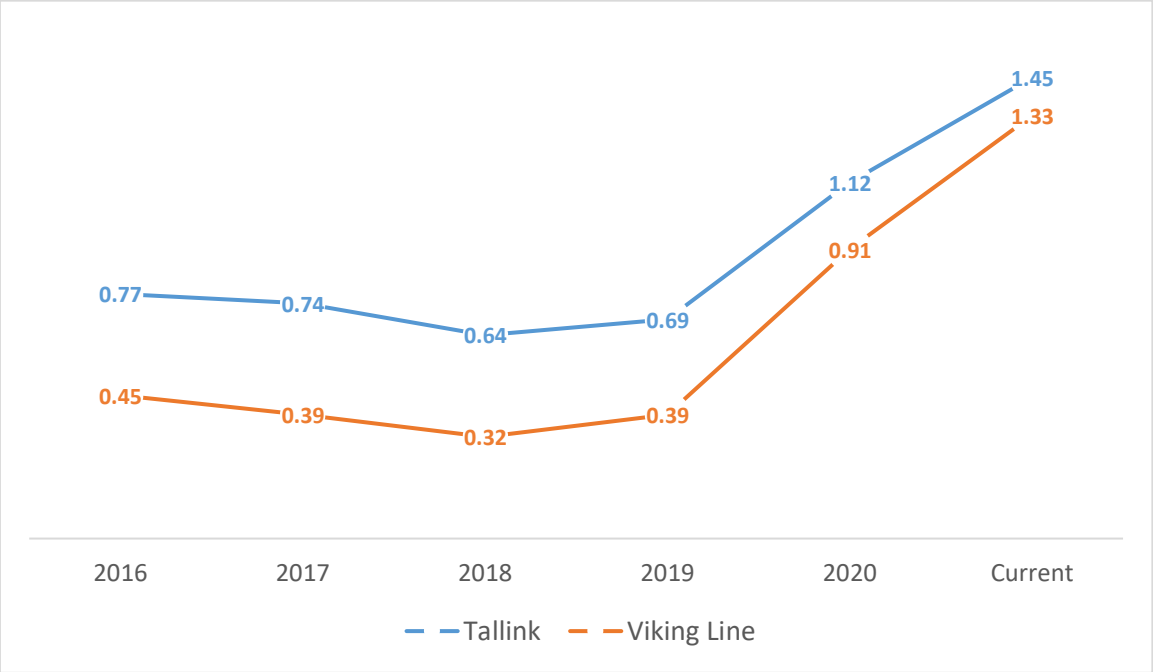

Figure 14. P/S Ratio Tallink and Viking Line 2016-2021
Data source: Author's calculations

Price to sales ratio showed interesting results about how the investors value the price of the shares in relation to total revenues of the companies. Within last five years, it is obvious that Tallink is higher valued. In 2016-2019 the ratio remained quite stabile between 0.69 and 0.77. In 2020 and today, even the revenues decreased about 50%, the ratio increased nearly 50%. At the moment, it is sure that Tallink is not under valued and the investors believes that the company will perform better in the future. Viking Line has the same pattern, every year a little bit lower ratio than Tallink. It can be concluded, that Tallink is a slightly more attractive investment.

3.3.6 Altman Z'' Score

The following table below is created to create an understanding about the risk of a bankrupt.

Table 3. Altman Z'' score

	2019	2020
Tallink	1.79	0.41
Viking Line	2.86	1.05

Source: Author's calculations

In 2019, Tallink received a score of 1.79 in Z'' model. Based on Altman's researches, that belongs to gray zone. Because of the high probability of misclassification, it can not be surely said that the company would go bankrupt. However, there is a chance that it will happen in the following couple years. However, in 2020 the result was more obvious. The score under 1.10 is indicating a distress zone, where the probability of bankrupt is high. And when the score of Tallink was as low as 0.41, the risk is obvious.

Viking Line in turn had a score of 2.86 in Z'' model in 2019. That is a healthy score, and it is classified as non-bankrupt firm. However, in 2020 all changed when the score decreased to 1.05. It is 0.05 below the border of being classified as a distress zone company. Therefore there is a high chance of bankrupt in the coming years.

It is obvious that both of the companies are in distress zone at the moment and that is only because of the COVID-19. Both of the companies have a huge fleet and high amount of employees so the expenses are high. They are still operating most of their normal routes, but with dramatically lower amount of passengers. That leads into a situation, where the revenues are simply not high enough to maintain the business for a long time. Fortunately COVID-19 may be a temporary period and if the transportation market recovers quickly, the companies are most likely able to survive. It seems like this might happen relatively soon, as the vaccinations of Europe's population is progressing and the travel restrictions might be removed. On the other hand, there is globally new mutations spreading that can sustain a situation far into the future. In that case, the companies have to change their operations in order to survive. Even though the companies have received state aid from governments, it is definitely not a permanent solution. What the companies could do, perhaps selling part of their fleet that is worth hundreds of millons in euros. Also reducing their operation frequency within their operating routes could reduce costs by increasing occupancy.

CONCLUSION

The purpose of this thesis was to compare and evaluate the financial performance of Tallink Grupp AS and Viking Line Abp. It has the aim to give through assesment about the financial performance of the companies during the last five years and compare the results to each other.

The thesis answers to three research questions regarding financial performance and status. The questions are answered by analysing the statisics and the important financial ratios are calculated to analyse the performance thoroughly. Because Tallink and Viking Line are the biggest operators in the Baltic sea, the results were compared to each other. The analysis showed following results:

The main trend within Tallink and Viking Line can be discovered in income statement and balance sheet. As a result of the COVID-19 and travel restrictions, the revenues have taken a significant hit. The revenues of both companies have decreased over 50%. Historically healthy and profitable companies weren't profitable in 2020 anymore. Also balance sheet was showing some logical numbers. Companies liquid assets shrinks and more and more operations are financed with debt.

The profitability ratios showed that Tallink has been the better company in this sector in years 2016-2020. It had the better net profit margin, it was more effective to generate sales with it's assets and making profits in relation to ROE. However, it can be mentioned, that during the COVID-19, Viking Line survived a little better, In terms of net profit margin, but the difference was very small, and also negative.

In terms of liquidity and leverage, the ratios showed that neither of the companies can comfortably handle the short-term debt. Both of the companies have been forced to grow the used amount of debt in relation to equity. The companies are also finding it impossible to handle the interest expenses with their earnings. However, Viking Line can be considered to be more liquid before and during the COVID-19.

Activity part shows that Viking Line, with lower assets and therefore with a lot smaller fleet, is way more effective than Tallink in terms of generating sales. However, their ratios dropped over 50% from 2019 to 2020 resulting that Viking Line stayed as better in activity part.

Overall, it can be conclused that Tallink was doing better in years 2016-2019. On the other hand Viking Line has survived the COVID-19 time little bit better in every aspect, but just a little bit. That is because Viking Line was slightly better in terms of profitability, leverage, liquidity, and activity.

The question regarding possible bankrupt was also researched. The Altman Z'' model shows that the companies were in grey zone in 2019. However, in 2020 both of the companies are classified as being in a distress zone, Tallink with a very low score, Viking Line by just a little bit under the border. The bankrupt is very likely in the coming years, if the current pandemic continues for years and the companies won't change their business model. It is impossible to continue the business for long with annual losses as high as in 2020. State aid has been served to both of the companies, and it has helped, but it is not a permanent solution. On the other hand, if the COVID-19 disappears, or the vaccinations results to remove the travel restrictions, it is likely that the companies would get back on track and be able to repair the damages. As the future is unknown, this opens a possibility to further studies regarding these companies. As the situation either continues or disappears, it would be important to do other research in the near future.

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APPENDICES

Appendix 1. Income statement of Tallink

Numbers in thousands	2016	2017	2018	2019	2020
Gross Profit	192,582	194,605	183,831	196,885	-43,454
Total Revenue	937,805	966,977	949,723	949,119	442,934
Business Revenue	906,483	936,820	920,288	920,672	432,065
Other Revenue	31,322	30,157	29,435	28,447	10,869
Cost of Revenue	-745,223	-772,372	-765,892	-752,234	-486,388
Cost of Goods and Services	-326,057	-332,559	-322,201	-324,608	-184,746
Purchased Fuel, Power and Gas	-74,250	-85,870	-102,473	-89,614	-56,341
Operation Maintenance and Repairs	-89,877	-79,723	-75,657	-72,698	-37,048
Staff Cost, Cost of Revenue	-152,446	-160,041	-160,608	-163,148	-116,818
Depreciation & Amortization, Cost of Revenue	-69,510	-78,169	-70,917	-82,710	-86,249
Other Cost of Revenue	-33,083	-36,010	-34,036	-19,456	-5,186
Operating Income/Expenses	-120,975	-121,987	-120,058	-121,789	-49,039
Selling, General and Administrative Expenses	-114,893	-116,149	-116,176	-110,743	-71,669
Staff Costs	-57,583	-55,121	-57,501	-60,360	-44,906
Other Staff Costs	-57,583	-55,121	-57,501	-60,360	-44,906
General and Administrative Expenses	-20,349	-24,227	-23,447	-16,238	-13,062
Selling and Marketing Expenses	-36,961	-36,801	-35,228	-34,145	-13,701
Depreciation, Amortization and Depletion	-8,348	-8,202	-8,362	-13,539	-14,411
Depreciation and Amortization	-8,348	-8,202	-8,362	-13,539	-14,411
Other Income/Expense, Operating	2,266	2,364	4,480	2,493	37,041
Other Income, Operating	2,450	2,873	4,633	2,599	37,339
Other Expenses, Operating	-184	-509	-153	-106	-298
Total Operating Profit/Loss	71,607	72,618	63,773	75,096	-92,493
Non-Operating Income/Expenses, Total	-26,762	-21,869	-19,189	-17,911	-18,128
Total Net Finance Income/Expense	-27,980	-23,744	-19,813	-17,645	-17,274

Net Interest Income/Expense	**-27,980**	**-23,744**	**-19,813**	**-17,645**	**-17,274**
Interest Expense Net of Capitalized Interest	**-27,990**	**-23,745**	**-19,813**	**-17,645**	**-17,274**
Interest Income	**10**	**1**			
Net Investment Income	**1,218**	**2,535**	**896**	**-38**	**-726**
Income from Associates, Joint Ventures and Other Participating Interests	**13**	**40**	**4**	**-4**	**-158**
Gain/Loss on Foreign Exchange	**-5,010**	**8,126**	**-4,170**	**76**	**-569**
Gain/Loss on Derivatives	**6,215**	**-5,631**	**5,055**	**-111**	**0**
Other Investment Income		**0**	**7**	**1**	**1**
Irregular Income/Expenses		**-660**	**-272**	**-228**	**-128**
Impairment/Write Off/Write Down of Other Assets		**-660**	**-272**	**-228**	**-128**
Disposal of Businesses					
Pretax Income	**44,845**	**50,749**	**44,584**	**57,185**	**-110,621**
Provision for Income Tax	**-741**	**-4,253**	**-4,535**	**-7,467**	**2,313**
Net Income from Continuing Operations	**44,104**	**46,496**	**40,049**	**49,718**	**-108,308**
Fiscal year ends in Dec 31 | EUR					

Source: Morningstar

Appendix 2. Balance sheet of Tallink

Numbers is thousands	2016	2017	2018	2019	2020
Total Assets	1,539,009	1,558,597	1,500,904	1,532,963	1,516,201
Total Current Assets	164,183	181,487	167,851	120,610	89,220
Cash, Cash Equivalents and Short Term Investments	78,773	88,911	82,175	38,877	27,834
Cash and Cash Equivalents	78,773	88,911	82,175	38,877	27,834
Cash	77,012	88,048	82,175	38,877	27,834
Cash Equivalents	1,761	863			
Inventories	38,716	40,675	35,741	37,255	28,707
Raw Materials, Consumables and Supplies	2,790	3,502	3,615	3,382	4,506
Finished Goods and Merchandise	35,926	37,173	32,126	33,873	24,201
Trade and Other Receivables, Current	38,674	46,466	43,805	37,606	25,463
Trade/Accounts Receivable, Current	24,375	27,812	29,950	23,473	12,032
Gross Trade/Accounts Receivable, Current	25,060	28,510	30,386	24,067	12,571
Allowance/Adjustments for Trade/Accounts Receivable, Current	-685	-698	-436	-594	-539
Amount Due From Related Parties, Current		22	33	211	59
Other Receivables, Current	14,299	18,632	13,822	13,922	13,372
Prepayments and Deposits, Current	8,020	5,435	6,130	6,872	7,216
Derivative Investment and Hedging Assets, Current					
Total Non-Current Assets	1,374,826	1,377,110	1,333,053	1,412,353	1,426,981
Net Property, Plant and Equipment	1,304,897	1,308,441	1,267,928	1,347,093	1,363,485
Gross Property, Plant and Equipment	1,691,124	1,710,611	1,721,809	1,885,542	1,977,732
Properties	13,661	5,927	8,226	119,872	132,769
Land and Improvements	13,661	5,927	8,226	8,264	8,278
Buildings and Improvements			0	111,608	124,491

Machinery, Furniture and Equipment	1,628,591	1,700,113	1,706,932	1,748,689	1,766,740
Plant and Machinery	50,705	67,060	76,999	102,319	113,735
Flight, Fleet, Vehicle and Related Equipment	1,577,886	1,633,053	1,629,933	1,646,370	1,653,005
Construction in Progress and Advance Payments	48,872	4,571	6,651	16,981	78,223
Accumulated Depreciation and Impairment	-386,227	-402,170	-453,881	-538,449	-614,247
Investment Properties and Properties Held for Development	300	300	300	300	300
Net Intangible Assets	50,127	48,900	46,164	44,264	40,448
Gross Goodwill and Other Intangible Assets	101,894	99,597	102,610	107,445	110,258
Goodwill	11,066	11,066	11,066	11,066	11,066
Intangibles other than Goodwill	90,828	88,531	91,544	96,379	99,192
Trademarks and Patents	58,288	58,288	58,288	58,288	58,288
Research and Development	2,033	3,914	1,260	1,221	547
Other Intangible Assets	30,507	26,329	31,996	36,870	40,357
Accumulated Amortization and Impairment	-51,767	-50,697	-56,446	-63,181	-69,810
Total Long Term Investments	531	571	574	570	422
Long Term Equity Investments	363	403	407	403	245
Investments in Associates	363	403	407		
Investment in Financial Assets, Non-Current	168	168	167	167	177
Trade and Other Receivables, Non-Current	180	176	153	151	331
Other Receivables, Non-Current	180	176	153	151	331
Deferred Tax Assets, Non-Current	18,791	18,722	17,934	18,674	20,270
Total Liabilities	729,143	722,318	643,988	710,126	801,865
Total Current Liabilities	243,991	316,662	212,489	221,444	208,347
Payables and Accrued Expenses, Current	106,984	95,585	100,800	98,932	73,493

Financial Liabilities, Current	106,112	189,648	79,576	89,198	111,601
Current Debt and Capital Lease Obligation	106,112	159,938	78,658	89,198	111,601
Current Debt	40,110				15,736
Bank Overdraft, Current Debt	40,110				15,736
Current Portion of Long Term Debt and Capital Lease	66,002	159,938	78,658	89,198	95,865
Current Portion of Long Term Debt	65,910	159,854	78,581	74,951	81,231
Bank/Institutional Loans, Current Portion of LT Debt	65,910	68,566	78,581	74,951	81,231
Other Current Portion of LT Debt		91,288			
Capital Lease Obligations, Current	92	84	77	14,247	14,634
Derivative and Hedging Liabilities, Current		29,710	918		
Deferred Liabilities, Current	30,895	31,429	32,113	33,314	23,253
Deferred Income/Customer Advances/Billings in Excess of Cost, Current	30,895	31,429	32,113	33,314	23,253
Total Non-Current Liabilities	485,152	405,656	431,499	488,682	593,518
Financial Liabilities, Non-Current	485,152	405,656	431,477	488,682	593,518
Long Term Debt and Capital Lease Obligation	452,793	400,968	431,477	488,682	593,518
Long Term Debt	452,512	400,765	431,126	401,048	505,385
Bank/Institutional Loans, Non-Current	353,885	400,765	431,126	401,048	505,385
Bank/Credit Facilities, Non-Current					0
Notes Payables, Non-Current	98,627	0			
Capital Lease Obligations, Non-Current	281	203	351	87,634	88,133
Derivative and Hedging Liabilities, Non-Current	32,359	4,688			
Other Non-Current Liabilities		0	22		
Total Equity	809,866	836,279	856,916	822,837	714,336

Equity Attributable to Parent Stockholders	809,866	836,279	856,916	822,837	714,336
Paid in Capital	362,375	362,375	362,381	315,507	315,507
Capital Stock	362,375	362,375	362,398	315,507	315,507
Common Stock	361,736	361,736	361,736	314,844	314,844
Additional Paid in Capital/Share Premium	639	639	662	663	663
Treasury Stock			-17		
Retained Earnings/Accumulated Deficit	378,717	404,958	425,044	437,722	328,975
Reserves/Accumulated Comprehensive Income/Losses	68,774	68,946	69,491	69,608	69,854
Fixed Assets Revaluation Reserve			41,552	39,505	37,458
Other Reserves/Accum. Comp. Inc			27,670	29,673	32,159
Cumulative Foreign Exchange Translation Reserves/Accum. Comp. Inc			269	430	237

Fiscal year ends in Dec 31 | EUR

Source: Morningstar

Appendix 3. Income statement of Viking Line

Numbers in thousands	2016	2017	2018	2019	2020
Gross Profit	120,900	154,300	168,500	172,500	15,600
Total Revenue	519,500	513,600	497,900	496,400	188,800
Business Revenue	519,500	513,600	497,900	496,400	188,800
Cost of Revenue	-398,600	-359,300	-329,400	-323,900	-173,200
Cost of Goods and Services	-151,700	-140,900	-135,800	-133,100	-50,800
Purchased Fuel, Power and Gas	-39,500	-46,700	-50,800	-47,000	-32,800
Operation Maintenance and Repairs	-16,900	-17,100	-14,400	-14,200	-9,800
Staff Cost, Cost of Revenue	-122,300	-87,600	-87,500	-88,700	-54,600
Other Cost of Revenue	-40,200	-41,800	-40,900	-40,900	-25,200
Depreciation & Amortization, Cost of Revenue	-28,000	-25,200			
Operating Income/Expenses	-109,200	-145,500	-159,300	-155,100	-65,700
Selling, General and Administrative Expenses	-32,200	-64,200	-60,000	-57,000	-28,000
Staff Costs		-33,100	-29,900	-28,400	-18,300
Pension and Other Employee Benefits Costs		-17,700	-16,000	-15,200	-8,600
Other Staff Costs		-15,400	-13,900	-13,200	-9,700
Selling and Marketing Expenses	-32,200	-31,100	-30,100	-28,600	-9,700
Depreciation, Amortization and Depletion			-23,800	-24,500	-24,800
Depreciation and Amortization			-23,800	-24,500	-24,800
Depreciation			-23,600	-24,200	-24,500
Amortization			-200	-300	-300
Other Income/Expense, Operating	-77,000	-81,300	-75,500	-73,600	-12,900
Income from Grants Received, Operating					25,900
Other Income, Operating	300	400	100	200	100
Other Expenses, Operating	-77,300	-81,700	-75,600	-73,800	-38,900
Total Operating Profit/Loss	11,700	8,800	9,200	17,400	-50,100
Non-Operating Income/Expenses, Total	-2,400	-2,200	-2,500	-3,600	-2,600
Total Net Finance Income/Expense	-4,900	-4,600	-3,900	-3,700	-4,000
Net Interest Income/Expense	-4,500	-3,900	-3,400	-3,300	-2,900
Interest Expense Net of Capitalized Interest	-4,500	-3,900	-3,400	-3,300	-2,900
Interest Income	0	0	0	0	0

Other Finance Income/Expenses	**-400**	**-700**	**-500**	**-400**	**-1,100**
Other Finance Income	**200**	**100**	**100**	**100**	**0**
Other Finance Expenses	**-600**	**-800**	**-600**	**-500**	**-1,100**
Net Investment Income	**800**	**1,100**	**1,100**	**-100**	**400**
Dividend and Investment Income	**2,400**	**2,000**	**2,300**	**400**	**0**
Gain/Loss on Foreign Exchange	**-1,600**	**-900**	**-1,200**	**-500**	**400**
Realized Gain/Loss on Foreign Exchange	**-1,600**	**-900**	**-1,200**	**-500**	**400**
Gain/Loss on Investments and Other Financial Instruments					
Rental Income	**200**	**200**	**200**	**200**	**100**
Irregular Income/Expenses	**1,500**	**1,100**	**100**	**0**	**900**
Asset Disposals	**1,500**	**1,100**	**100**	**0**	**0**
Other Irregular Income/Expenses					**900**
Pretax Income	**9,600**	**6,600**	**6,500**	**13,600**	**-52,900**
Provision for Income Tax	**-1,500**	**-1,300**	**-1,000**	**-2,700**	**10,500**
Net Income from Continuing Operations	**8,000**	**5,300**	**5,500**	**10,800**	**-42,300**
Fiscal year ends in Dec 31 | EUR					

Source: Morningstar

Appendix 4. Balance sheet of Viking Line

Numbers in thousands	2016	2017	2018	2019	2020
Total Assets	506,000	484,600	467,200	474,000	425,600
Total Current Assets	150,800	121,100	109,200	108,100	68,800
Cash, Cash Equivalents and Short Term Investments	94,900	68,000	61,800	62,800	29,700
Cash and Cash Equivalents	94,900	68,000	61,800	62,800	29,700
Cash	89,900	68,000	61,800	62,800	29,700
Cash Equivalents	5,000	0			
Inventories	18,100	17,300	16,300	17,000	11,000
Raw Materials, Consumables and Supplies	1,500	1,300	1,300	1,500	1,200
Finished Goods and Merchandise	16,600	16,000	15,000	15,500	9,800
Trade and Other Receivables, Current	37,800	36,000	31,000	28,300	28,300
Trade/Accounts Receivable, Current	10,400	11,800	11,200	10,500	3,700
Gross Trade/Accounts Receivable, Current			11,300	10,600	3,900
Allowance/Adjustments for Trade/Accounts Receivable, Current			-100	-100	-200
Taxes Receivable, Current	1,700	1,600	400	400	100
Accrued Income/Unbilled Revenue/Cost in Excess of Billings, Current	24,400	21,500	17,100	15,400	23,000
Other Receivables, Current	1,300	1,100	2,300	2,000	1,500
Total Non-Current Assets	355,200	363,600	358,000	366,100	356,800
Net Property, Plant and Equipment	326,200	333,200	322,900	334,700	324,900
Gross Property, Plant and Equipment	834,200	860,000	862,600	893,000	900,100
Properties	24,400	24,500	22,700	27,600	27,900
Land and Improvements	600	600	600	1,200	1,500
Buildings and Improvements	23,800	23,900	22,100	26,400	26,400
Machinery, Furniture and Equipment	798,500	802,200	802,300	804,100	806,200
Plant and Machinery	15,000	15,500	15,300	16,300	16,100
Flight, Fleet, Vehicle and Related Equipment	783,500	786,700	787,000	787,800	790,100
Construction in Progress and Advance Payments	0	21,600	25,900	49,500	54,200

Other Property, Plant and Equipment	11,300	11,700	11,700	11,800	11,800
Accumulated Depreciation and Impairment	-508,000	-526,800	-539,700	-558,300	-575,200
Accumulated Depreciation of Machinery, Furniture and Equipment	-484,400	-502,500	-516,100	-533,400	-548,100
Accumulated Depreciation of Other Property, Plant and Equipment	-9,000	-9,000	-9,200	-9,600	-10,000
Net Intangible Assets	1,900	2,500	3,100	3,300	3,300
Gross Goodwill and Other Intangible Assets	5,100	5,800	5,900	6,400	6,600
Intangibles other than Goodwill	5,100	5,800	5,900	6,400	6,600
Accumulated Amortization and Impairment	-3,200	-3,300	-2,800	-3,100	-3,300
Accumulated Amortization of Intangible Assets	-3,200	-3,300	-2,800	-3,100	-3,300
Accumulated Amortization of Intangibles other than Goodwill	-3,200	-3,300	-2,800	-3,100	-3,300
Total Long Term Investments	27,100	27,900	32,000	28,100	28,600
Total Liabilities	283,100	260,500	236,500	238,900	231,400
Total Current Liabilities	96,600	96,500	95,500	97,600	93,100
Payables and Accrued Expenses, Current	73,000	38,500	36,700	35,300	19,600
Financial Liabilities, Current	23,600	23,500	23,500	25,200	40,400
Other Financial Liabilities, Current					2,000
Provisions, Current		26,100	25,700	27,100	26,300
Provision for Employee Entitlements, Current		26,100	25,700	27,100	26,300
Other Employee-Related Liabilities, Current		26,100	25,700	27,100	26,300
Deferred Liabilities, Current		8,500	9,500	10,100	6,800
Deferred Income/Customer Advances/Billings in Excess of Cost, Current		8,500	9,500	10,100	6,800
Total Non-Current Liabilities	186,500	164,000	141,000	141,300	138,300
Financial Liabilities, Non-Current	150,600	127,000	103,500	103,600	111,200
Long Term Debt and Capital Lease Obligation	150,600	127,000	103,500	103,600	93,200
Other Financial Liabilities, Non-Current					18,000
Tax Liabilities, Non-Current	35,900	37,000	37,500	37,700	27,100

Deferred Tax Liabilities, Non-Current	**35,900**	**37,000**	**37,500**	**37,700**	**27,100**
Total Equity	**222,900**	**224,100**	**230,700**	**235,100**	**194,200**
Equity Attributable to Parent Stockholders	**222,900**	**224,100**	**230,700**	**235,100**	**194,200**
Paid in Capital	**1,800**	**1,800**	**1,800**	**1,800**	**1,800**
Capital Stock	**1,800**	**1,800**	**1,800**	**1,800**	**1,800**
Common Stock	**1,800**	**1,800**	**1,800**	**1,800**	**1,800**
Retained Earnings/Accumulated Deficit	**221,400**	**222,200**	**225,300**	**233,900**	**191,800**
Reserves/Accumulated Comprehensive Income/Losses	**-300**	**0**	**3,500**	**-600**	**700**
Fiscal year ends in Dec 31 | EUR					

Source: Morningstar

Appendix 5. Formulas

$$Gross\ profit\ margin = \frac{Total\ revenue - COGS}{Total\ revenue}$$

$$Net\ profit\ margin = \frac{Net\ income}{Sales\ revenue}$$

$$Return\ on\ assets = \frac{Net\ income}{Total\ assets}$$

$$Return\ on\ equity = \frac{Net\ income}{Share\ holders'\ equity}$$

$$Current\ ratio = \frac{Current\ assets}{Current\ liabilities}$$

$$Quick\ ratio = \frac{Current\ assets - Inventory}{Current\ liabilities}$$

$$Interest\ coverage\ ratio = \frac{EBIT}{Interest\ expense}$$

$$\frac{D}{E}\ ratio = \frac{Total\ liabilities}{Total\ shareholders' equity}$$

$$Asset\ turnover = \frac{Net\ sales}{Average\ total\ assets}$$

$$\frac{P}{S}\ ratio = \frac{Market\ capitalization}{Annual\ sales}$$

$$(DuPont\ Model)\ ROE = Net\ profit\ margin \times Asset\ turnover\ \times Equity\ multiplier. \quad (1)$$

$$Altman\ Z\ score = 0.012 \times X1 + 0.014 \times X2 + 0.033 \times X3 + 0.006 \times X4 + 0.999 \times X5, \quad (2)$$

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