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COMPANY VALUATION OF A FINNISH SME COMPANY

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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.

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ABSTRACT

A company valuation is an important tool for business owners and investors. Company valuations can be done using multiple different approaches and are done for different purposes. The company type is an important factor in what type of valuation methods can be used. For example, is the company listed in the stock exchange, where market value-based methods could be used, and what industry does the company operate in. The motivation for the valuation is also an indicator of what types of methods should be used. For example, is the valuation done for taxation purposes or for a possible acquisition. The research task is to perform a company valuation of an unlisted SME company.

The research is based on academic literature, financial statements of the target company 2016-2019, and statistics from internet sources. Financial statement analysis shows that the company was not in a good shape in 2016 and early 2017, when their ratios could be considered mediocre or poor according to Finnish financial ratios guide and compared with industry averages. The poor state of the company was due to change in the capital structure, when the company transformed from a limited partnership to a limited liability company, and a huge investment in a new production hall. After these changes were fully implanted within the company, a shift could be seen where the ratios of profitability and liquidity has been on an upward trend. The DCF model gave a numeric value for the whole company, which amounted to 2,68 M€.

It can be concluded that based on the sensitivity analysis, the company should focus on their revenue growth through investments and other marketing operations. This is because change in revenue had a significantly larger impact than WACC would have on their cash flows, which would increase their value. The actual value of the company is impossible to state, as the real value of the company is ultimately the price a buyer is willing to pay for it.

Keywords: valuation, financial analysis, discounted free cash flow

INTRODUCTION

Company valuations are done for many different reasons and by different methods. It is important to distinguish the industry and type of company for the target of the valuation, so that a suitable approach can be chosen. The motivation for the valuation is also important because it can determine if for example, the minimum value is desired to be calculated for taxation purposes. The target company for this thesis is an unlisted SME company located in the western part of Finland. Their turnover currently is about 3 million Euros. The company operates in the textile industry, manufacturing cotton gloves, hats and balaclavas for people who are allergic to synthetic fibres. The company is one of the leading companies in Finland in this industry field. Over 70% of their production goes abroad (Russia, Norway, Iceland, and Baltic countries). This company was established already in 1975. The company's name is not mentioned in the thesis as per the owners' request.

The research problem is to examine how a company's value can be calculated and measured, and what methods are the best for the target company, and finally to perform a valuation of the company. The company has gone through generational shift from the founding owners to their children and have expanded their operations and also built their own production hall. Building their own production hall was a huge risk and a huge effort, which could have ended the company's story if it had failed. The company is not currently looking to sell, rather the valuation is being made purely because of interest of how the company has progressed after these new changes. This company is in good shape, compared to other companies that have not made a generational shift. The current owners and managers are involved strongly in their business, and they do have a solid strategy for the future. This study serves, and is useful, to the company for the future since it is fairly easy to update the figures and make their own conclusions in the future. This study gives a solid base for valuating this company's economic standpoint. The year 2020, the pandemic year, figures have been left out and have not been used in this data, since its impacts cannot be predicted if the pandemic will have long term effects, short term effects or none at all.

The study was done using quantitative research methods, which includes financial ratio analysis, the discounted free cash flow model valuation, and a sensitivity analysis of the valuation result. The main source of data were financial statements from the years 2016-2019, academic literature and statistics from internet sources. The CEO of the company was also interviewed several times about predictions of the company growth through email and personal meetings.

The thesis consists of an introduction, three main chapters and a conclusion. The first chapter consists of theoretical review of financial ratios analysis, company valuation methods and briefly discusses buyer's and seller's perspective on valuation. It discusses some of the most popular financial ratios for analysing profitability, liquidity and efficiency (Ross *et al.* 2008). Then it is reviewed what are some of the reasons company valuations are done and what are some of the most common and popular valuation methods, and specifically a focus on the discounted free cash flow model. The second chapter gives a brief overview of the target company and gives justification on the methods which were chosen for the financial ratios' analysis and the company valuation. The third chapter deals with the analysis of financial ratios, in which they are compared with the Finnish financial ratios guide and industry averages when available. The final part of the third chapter deals with the discounted free cash flow model valuation, where the whole company's value is calculated. Then a sensitivity analysis is done using a change in revenue and WACC. Sensitivity analysis can be used to determine which factors affect the outcome the most and which in turn have the least impact. This is used to estimate the uncertainty of a model result.

1. BACKGROUND INFORMATION FOR COMPANY VALUATION

1.1. Financial statement analysis

Financial statement analysis involves gaining an understanding of an organization's financial situation by reviewing its financial reports. The four main objectives of financial statement analysis are to analyse profitability and market performance, liquidity, efficiency, and capital structure. The goal of analysing an income statement is essentially to determine whether the story it tells is good, bad, or indifferent (Fridson *et al.* 2011, 45). Profitability and market performance analyses if a company is generating enough profits to provide adequate returns to investors and attract financial capital. Liquidity analyses if a company is going to meet its financial obligations on a timely manner. Efficiency analyses if the financial resources invested in a company are used efficiently. Capital structure analyses if a company's financial structure is providing a foundation for long-term growth and profitability (Mautz, Angell 2006, 27).

Financial statement analysis also involves creating ratios using multiple financial statement amounts. Ratios are used to calculate the relative size of one number in relation to another. For profitability, the gross profit margin indicates how successfully a company is transforming materials into saleable products, the net profit margin indicates the impact of interest and income tax expense and is considered the basic measure of a company's profitability. The three most common measures for liquidity are: working capital, current ratio and quick ratio. These three measures give indications whether a company can meet its short-term obligations in a timely manner. The four most popular measures for efficiency are: total asset turnover, inventory turnover, collection period and fixed-asset turnover. These four measures give indications of a company's success in using total assets, fixed assets and inventory, and in collecting receivables quickly (Mautz, Angell 2006, 30-33).

Financial statement analysis is an excellent tool for analysing the state of a company, but there are several issues that can interfere with the interpretations. Some of these issues are comparability between periods, comparability between companies, and operational information.

Comparability between periods means that some figures stated in a company's financial statements may have been changed in the accounts they are stated in, so some results may differ from period to period. For example, an expense may appear in marketing expenses in one period, and in another period, it may appear in administrative expenses (Bragg 2020).

Financial ratios are important to compare with similar companies of size and industry, to get a good understanding on how the target company compares with its competitors. Each company can however report their financial information differently, which could result in huge differences in the ratios, making it quite difficult to conclude comparisons. This issue is called: comparability between companies (Bragg 2020).

Lastly, financial analysis only presents a part of the total picture of state of a company. This is because only financial information is considered, leaving operational information out completely. For example, backlog order size is not reported in financial statements, thus it is not considered (Bragg 2020).

1.1.1. Profitability

It is quite difficult to measure profitability because there is no obvious way to know when a company is profitable. When looking strictly from an accounting perspective, profit is the difference between revenue and costs. Many companies however sacrifice current profits for future profits; thus, it is important to try to predict future profits and take risk into consideration. In the economic sense, a company is only profitable if its profitability is greater than investors can create themselves in the capital market (Ross *et al.* 2008, 36-37). Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So, measuring current and past profitability and projecting future profitability is very important. This will guide the company's strategy to the future. Increasing profitability is one of the most important tasks of the business managers (Hofstrand, D. 2009, File C3-24, p.1).

Profit margins are calculated by dividing profits by total operating revenue, expressing profit as a percentage of total operating revenue. Net profit margin is calculated by dividing net income by total operating revenue.

$$\text{Net profit margin} = \frac{\text{Net profit}}{\text{Sales revenue}} \times 100 \quad (1)$$

(Cheng *et al.* 2020, 1-30.)

Gross profit margin is calculated by earnings before interest and taxes divided by total operating revenue. If a company's gross profit margin fluctuates considerably, this can indicate poor management practices and/or lower revenues. However, some fluctuation may be caused by changes in the company's business model and does not cause a need for alarm.

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Sales revenue}} \times 100 \quad (2)$$

(Stankeviciene 2012)

Profit margins alone are not sufficient enough to determine profitability, because they do not take into consideration the investments made in assets or the equity investors. Return on assets (ROA) is a common measure of managerial performance. Return on assets is calculated by dividing net income by total assets. ROA can be increased by increasing profit margins or asset turnover.

$$\text{ROA} = \frac{\text{Net profit}}{\text{Total assets}} \times 100 \quad (3)$$

(Stankeviciene 2012)

A basic rule for return on equity is to try to keep it equal or just above the industry average or comparable competition, and an extremely high ROE is often a result of a small equity account versus net income, indicating risk. ROE is calculated by dividing net income with average stockholder's equity.

$$\text{ROE} = \frac{\text{Net profit}}{\text{Equity}} \times 100 \quad (4)$$

(Stankeviciene 2012)

1.1.2. Liquidity

The liquidity is essential for company existence. It principally has an effect on financial costs reduction or growth, changes in the sales dynamic, as well as it influences on company risk level (Zygmunt, J., 2013, pp.38-49). The most popular methods to calculate liquidity in a company are the current ratio and quick ratio. Liquidity measures short-term solvency and is often related with working capital and is the difference between current assets and current liabilities. Short-term solvency measures the ability a company can meet repeating financial obligations. Current ratio is calculated by dividing total current assets with total current liabilities. A fall in the current ratio may be one of the first signs of financial trouble. In interpreting the key figure, the development of the figure in particular must be considered carefully.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \quad (8)$$

(Durrach *et al.* 2016)

Quick ratio, or also sometimes referred to as the Acid Test Ratio, is calculated by dividing quick assets by total current liabilities and is basically the same as current ratio excluding assets that are not quickly convertible into cash. Inventories are regarded as the least liquid assets and many financial analysts believe it is important to figure out a company's ability to meet its financial obligations without depending on the sale of inventories (Ross *et al.* 2008, 33). The quick ratio is a more rigorous measure of short-term solvency test than the current ratio because the numerator eliminates inventories that are deemed to be slightly illiquid and a possible source of loss.

$$\text{Quick ratio} = \frac{(\text{Current assets} - \text{Inventory})}{\text{Current liabilities}} \quad (9)$$

(Durrah *et al* 2016)

1.1.3. Efficiency

The efficiency of a company can be measured by ratios of activity. The total asset turnover ratio is calculated by dividing total operating revenues by the average of total assets. This ratio gives indications on how effectively a company is using all its assets, or in other words to measure how much sales will be generated from every euro of funds embedded in total assets. The higher the ratio, the more efficiently a company is presumably using its assets to generate sales (Ross *et al.* 2008, 34). It is important to take into consideration the industry the company is operating in, because certain industries might require more investments in fixed assets than other industries, thus lowering the ratio.

$$\text{Total asset turnover} = \frac{\text{Sales revenue}}{\text{Average total assets}} \quad (10)$$

(Robinson, Thomas R. 2020, 297)

Receivables turnover ratio is calculated by dividing total operating revenue by average receivables. The receivables turnover ratio measures the effectiveness with which a company collects its receivables or the credit it had granted to its customers.

$$\text{Receivables turnover} = \frac{\text{Sales revenue}}{\text{Average receivable}} \quad (11)$$

(Robinson, Thomas R. 2020, 297)

The average collection period is calculated by dividing days in period (1 year = 365 days) by receivables turnover. Companies calculate the average collection period to make sure they have enough cash on hand to meet their financial obligations.

$$\text{Average collection period} = \frac{\text{Days in period}}{\text{Receivables turnover}} \quad (12)$$

(Ross *et al.* 2008, 34)

The inventory turnover ratio is calculated by dividing cost of goods sold (COGS) by average inventory. This ratio gives indications on how quickly a company's inventory is produced and sold. Calculating inventory turnover can help businesses make better decisions on pricing, manufacturing, marketing and purchasing new inventory.

$$\text{Inventory turnover} = \frac{\text{COGS}}{\text{Average inventory}} \quad (13)$$

(Ponsian *et al.* 2014. 347-355.)

Days in inventory (DSI) is calculated by the following formula:

$$\text{Days in inventory} = \frac{\text{Days in period}}{\text{Inventory turnover}} \quad (14)$$

(Ross *et al.* 2008, 34)

It also shows that if the number of days of account receivables and inventories are diminished then the profitability increases (Ponsian *et al.* 2014. 347-355.). Generally, a lower day in inventory is preferred as it indicates a shorter duration to clear off the inventory, though the average days in inventory varies from one industry to another.

1.2. Company valuation methods

The valuation of a company is the process of determining the current worth of a company, using objective measures, and evaluating all aspects of the company. Valuation is also important for tax reporting. Some tax-related events such as sale, purchase, or gifting of shares of a company and generation shifting will be taxed depending on valuation. First of all, the company's value and price are completely different issues. Company's value is a mathematically defined value, and the price of the company is the price that the buyer and seller agree on. The valuation should be the basis for the company's price. There also might be companies that cannot be valued reliably, i.e., Start-Up companies, restaurant businesses, and so on. Also, the world's situation might affect the valuation, compare the current pandemic situation. World has been in lock down, material producers have seized down their production, transportation has been in difficulties operationally,

and many more unforeseeable problems. To keep these in mind, every valuation is its own case, where all these different variables has to be taken into closely consideration.

Secondly, the agreed sales price and valuation value might differ from buyer to buyer. The seller might consider different buyers differently. This can be result of buyer's goals (i.e., is the buyer merging this company to his own, is he just buying the competition out, or is he going to give "a good home" for the seller's company).

Third, the valuation can be used for taxation purposes, or generation change purposes. In these cases, the valuation value usually is driven to the low-end value. According to instructions from Finnish Tax Administration the valuation should be done by using real value of the company (VerohallintL. 2§ 2). This can be done by using the Net Asset Value method, which is very subjective method, and the Return Value method. In the simplest form, the Return Value method gives a snapshot from the future and it does not base to any past case (Vilkkumaa M, 2010, 122).

The four main groups most widely used in company valuations are: net asset value, return on investment value, discounted cash flow method and the mixed method. The only method that is conceptually "correct" are the methods based on cash flow discounting. The other methods are conceptually "incorrect", even though they are frequently in continues use. The cash flow discounting-based methods view the company as a cash flow generator and the value of the company is generated by estimating the cash flows the company will generate in the future and discounting them using a suitable discount rate (Fernández 2007, 1). The balance sheet-based methods are traditionally used methods that estimate the company's value by the estimated value of its assets. The income statement-based methods determine the company's value through the size of its earnings, sales, or other indicators. The mixed method, or also known as goodwill-based method takes into consideration the value a company has above its book value, is the most commonly used method.

The net asset value method calculates the company's value by considering company's assets and liabilities as it states in the balance sheet. The assets and liabilities will be counted as real values (adjusted book value) (Rantanen 2012, 87-89). This method combines the Book Value and Adjusted Book Value methods.

Under the return value method, the value of a company is determined as the present value of the annual returns likely to be received in the future (Kallunki, Niemelä 2012, 211-223.).

The discounted cash flow method values the whole company by discounting the expected vacancies of the whole company by weighted average cost of capital, (WACC). The entire company's free cash flow is obtained from operating expenses and after taxes, but before debt payments. Cash flow does not consider financing costs, as they are considered in the discount factor used in the WACC. (Kallunki, Niemelä 2012, 224-229.)

1.2.1. Cash flows

The first step to determine cash flows of a company is to determine the cash flows from operations. Operating cash flow is the cash flow generated by business activities. Operating cash flow can be obtained from the income statement by calculating earnings before interest and taxes (EBIT), then adding depreciation and subtracting taxes (Ross *et al.* 2008, 40). Forecasting cash flows for future years is carried out by estimating future cash flows development of net profit (Katramo *et al.* 2013, p.133-134).

The discounted cash flow model is the most used method in estimating a value of a company in scientific literature (Stankeviciene 2012, 1290). It is also the only conceptually correct valuation method, because this method views a company as a cash flow generator. This method estimates the cash flows a company will generate in the future and calculating them to their present values using a suitable discount rate.

The free cash flow model is a suitable cash flow model to be used when valuing a company (Stankeviciene 2012, 1290). Free cash flow of a company can be calculated by firstly adding depreciation to operating income after tax, then subtracting long-term debt and change in working capital (operating income after tax + depreciation expense – long-term investment – change in working capital). It is the money that would be available in a company after fixed asset investments and working capital requirements, assuming there are no financial expenses. The suitable discount rate for free cash flow is the weighted average cost of capital (WACC). When calculating future free cash flows, forecasts of future cash received and paid must be calculated for each period. This uses the same approach as used when determining cash budgets, but when applying it for company valuations, it is required to do forecasts much further than is necessary for cash budgets. This method is suitable for forecasting how much cash can be extracted from a company without causing issues to its operations.

The primary limitation of the discounted free cash flow model is that it requires numerous assumptions. For example, an investor should accurately estimate future cash flows of an

investment or a project. Future cash flows would depend on a variety of factors, such as market demand, the state of the economy, and unanticipated obstacles. The choice of a discount rate for the model is also an assumption and would need to be properly estimated for the model to be valid. This model requires very accurate predictions in order to get any useful data out of it. This means that this analysis model is very sensitive to changes in prediction changes. The interest rate used to calculate the present value of cash flows also has a large effect on the final value. In high-risk industries, such as IT Start-Ups, it may be justified to use a very high interest rate (up to 25%). Similarly, in low-risk sectors, such as the real estate business, where rental income on a large mass of real estate is fairly constant, interest rates can be very low (5-10%).

The formula for valuating a company with the discounted free cash flow model is:

$$V = \sum_{t=1}^T \frac{FCFF_t}{(1+WACC)^t} + \frac{TV}{(1+WACC)^T} \quad (15)$$

Where,

FCFF_t – Free cash flow in period t

WACC – Weighted average cost of capital

T – The last forecasted year

TV – Terminal value

(Stankeviciene 2012, 1292)

The formula for calculating WACC is:

$$WACC = \left(\frac{E}{V} \times Re \right) + \left(\frac{D}{V} \times Rd \times (1 - Tc) \right) \quad (16)$$

Where,

E – Value of equity

D – Value of debt

V – E+D

Re – Cost of equity

Rd – Cost of debt

Tc- Corporate tax rate

1.2.2. Seller's vs. buyer's perspective

The price of a company is quite difficult to determine before any negotiations between the parties involved has happened. It is important not to confuse a valuation of a company with the price of a company, because there are multiple different ways to perform a valuation on a single company. When speaking directly about the price of a company, it is ultimately an agreed-on price between the seller and buyer. The price does not necessarily have to have anything to do with the valuations of the company, but usually the price lies somewhere between the maximum value of the company and the minimum value of the company. The buyer's aim would be to figure out the maximum value it should be prepared to pay for the company. The seller's aim would be to figure out the minimum value it should be prepared to sell the company for (Fernández 2007, 3). Valuation is a very important tool for both buyers and sellers. The problem with using valuations in determining a price for a company is that valuation is not an exact science. Valuations are based on a combination of objective facts, subjective beliefs, and assumptions about future performances of the company. The value of a company is ultimately the price a buyer is willing to pay for it (Nelson 2018, 24).

Company valuation from the perspective of the seller depends a lot on what the seller values in a company and in which industry the company is operating in. For example, some companies have expensive equipment and machinery, thus valuating the company's assets would be logical (substance value). Some companies have a greater value associated with their brand, thus valuating the company's goodwill would be logical. There is no single theoretically correct way of valuating a company from a seller's perspective because there are so many variables involved and ultimately every company is different. The most commonly used valuation method for this kind of situation is a mixed valuation method.

The differences between seller and buyer are very variable, starting from value vs. price, assets value vs. real value, the ultimate goal of the seller vs. buyer's desire to maintain the company's status quo, and many others. These are some of the obstacles that prevent the sale from happening. In this study, none of these reasons has not been studied, since the objective is to find out the company's real value.

2. DATA AND METHODOLOGY

2.1. Company overview

The company I am doing the valuation about, is a limited liability company located in Tampere, Finland. The company was founded in 1975 and they started manufacturing cotton gloves for people with allergies to synthetic fibres. The company was founded, because the company's founder son has a severe allergy towards synthetic fibres and got very harsh reactions from them. At the time there were no companies that produced gloves, hats, nor balaclavas from cotton. There was a clear niche for this kind of company. At that time there were plenty of corner stoner shops for children's clothes in Finland, so there were plenty of markets. What was needed was a company which produces them. The company is one of the leading companies in Finland in this field. Over 70% of their production goes abroad, mostly over to Russia, Norway, Iceland, and Baltic countries. The company is still to this day family-run business and they have expanded their production to overalls, beanies and balaclavas (Company's homepage 2020).

The company prioritises high quality and natural materials as their basis for their products. They outsource their raw materials from long-term suppliers in Europe. The company really emphasizes the fact that their products are locally produced, and the high quality of their products. The company had 21 employees in 2019. Number of employees has been quite steady over the years.

The company can be classified as an SME company, because it has had an annual turnover at around 2-3 million euros in 2016-2019. The company also has had a balance sheet total of around 1,9-2 million euros in 2016-2019. These figures have also been quite steady for the study period. An SME company has less than 250 employees, an annual turnover rate of maximum 50 million and balance sheet total of maximum 43 million (Tilastokeskus, Small and medium sized enterprises).

The company went through a huge change in 2016-2017, when they went through a generational shift from the founding owners to their children and the company transformed from limited partners to a limited liability company. The company also made huge investments in buying a new production hall (CEO 2020). The motivation for the valuation is in the owner's pure interest in how the company has progressed after the implication of these changes and is useful for the company's future, as these figures can be updated quite easily.

2.2. Applied methods

The main research task was to perform a company valuation of an SME company located in the western part of Finland. The primary source of data I used, were financial statements from the years 2016-2019, see Appendix 1. The financial statements included balance sheets and income statements and they were provided to me by the CEO of the target company. The time frame of the financial statements is sufficient enough to be able to get an overall picture of the expected growth of the company and a yearly comparison of figures can be made.

For financial statement analysis, I have analysed the company's profitability, liquidity and efficiency. All financial ratios are calculated by data from Appendix 1. It is important to compare the results of the ratios to similar companies or industry averages when available. I have compared the results with a financial ratios guide, provided by a website that is created by Alma Talent Oy. Alma Talent Oy is one of Finland's leading information service suppliers (Alma Talent 2020). I have also compared the results with international industry averages because Finland's industry averages are not available.

For profitability analysis I have chosen to use the net profit margin, return on assets and return on equity. Net profit margin is the most important profit margin (Ross *et al.* 2008, 36) and it gives indications on how efficiently the company is creating accounting profit. Return on assets give indication on how efficiently the company's managers are using assets to generate revenue. Return on equity is another ratio measuring the efficiency of how managers use assets to create profit. The difference between return on assets and return on equity is determined by financial leverage (Ross *et al.* 2008, 37).

For liquidity analysis I have used the quick ratio and current ratio. They are the two most common measurements for short-term solvency. Short-term solvency is an important indicator for long-term profitability, because companies need to be able to meet their short-term financial obligations to pursue their goals in long-term profitability. Large companies usually enjoy larger ratios in liquidity than smaller companies, because they have a better access to capital and money markets (Mautz, Angell 2006, 32). The difference between quick and current ratio is with inventory. Current ratio does not take inventory into consideration and many financial analysts believe it is important to figure out a company's ability to meet their financial obligations without the need to sell inventory (Ross *et al.* 2008, 33).

For efficiency analysis I have used ratios of activity. The total asset turnover ratio calculates how effectively a company is using its assets. The higher the ratio, the better the company is using its assets. With this ratio, it is important to take into consideration the industry the company is operating in, because the amount invested in fixed assets has an impact on the ratio (Ross *et al.* 2008, 34). Receivables turnover ratio and average collection period give indications on how successfully a company is managing its investments in accounts receivables and they reflect the company's credit policy. The inventory turnover ratios give indications on how quickly inventory is produced and sold.

For the actual company valuation methods, I have chosen to use the discounted free cash flow method. Discounted cash flow methods are the most common valuating methods in scientific literature. One of the discounted cash flow methods is the discounted free cash flow method and it is a suitable valuation method for companies that don't pay dividends (Stankeviciene 2012, 1290), making it a suitable valuation method for my target company. Predicting future cash flows is essential in this method and I have used predictions given by the CEO of the company for the next five years. The suitable discount rate used with cash flow discounting is the weighted average cost of capital.

3. EMPIRICAL STUDY

There are multiple different methods for company valuation and analysing financial statements. The financial statements have been analysed on profitability, liquidity and efficiency. The most popular and widely used ratios have been applied to them. The results are compared with the Finnish financial ratios guide and compared with industry averages when available. These values will give indications on the state of the company and will further help with the full analysis of the company.

The four main groups most widely used in company valuations are: net asset value, return on investment value, discounted cash flow method and the mixed method. Many of these methods are based on market value or stock price valuation and since my target company is an unlisted SME company, those methods have been disregarded. The discounted free cash flow model is chosen as the method for the target company's valuation, with the weighted average cost of capital as the suitable discount rate. This is because it is one of the only methods that can be applied to an unlisted company, and it is one of the most popular valuation methods in general. The discounted free cash flow method will provide an actual numeric value for the company.

In the final part of this chapter, a sensitivity analysis is done using change in turnover and change in WACC.

3.1. Financial statement analysis

I have calculated different financial ratios to represent my target company's profitability, liquidity, and efficiency. I have used income statements and balance sheets from 2016-2019, see Appendix 1, and calculated ratios for each year and an average of each ratio. The results have then been compared each year to each other and the averages have been compared with Finnish financial statement analysis guidelines and industry averages when available.

3.1.1. Profitability

Profitability is quite difficult to measure in a company because there is no obvious way to determine when a company is profitable (Ross *et al.* 2008, 36). On a strictly accounting perspective the net profit margin calculated by formula (1) in chapter 1.1.1. gives a percentage of net profit to

operating revenue. The target company has had a positive net profit margin in 2016-2019. The minimum being 0,10% in 2016, the maximum being 11,80% in 2017 and the average is 5,73%. There is a huge difference in the net profit margin in 2016-2017, which is caused by a transformation in the company from a limited partnership to a limited company and a huge investment in building a new production hall (CEO 2020). In 2016 the company made a loss in operating profit, but appropriations created a positive net profit for the year. Comparing the target company's 2019 net profit margin with the international industry average for the same year, the target company was 0,57 percentage points above the industry average (Ready Ratios, table textile mill products...)

Return on assets is a common managerial performance measurement (Ross *et al.* 2008, 37). It is calculated by formula (3) in chapter 1.1.1. and it gives a percentage of net profits to total assets. The target company had a minimum ROA of 0,12% in 2016, a maximum of 19,09% in 2017 and an average of 9,10%. The Finnish financial ratios guide determines the average ROA of the target company as satisfactory. According to the guide a weak ROA is >5%, satisfactory ROA is 5%-10% and a good ROA is <10% (Alma Talent 2020). The target company's 2019 return on assets was 2,68 percentage points below the international industry average in the same year.

Return on equity is calculated by formula (4) in chapter 1.1.1. and it gives a percentage of net profit to the average shareholder's equity. The target company had a negative shareholders equity in 2016, because the company was still a limited partner company and the shareholders equity was considered as private equity, and at the same time huge amounts of investment debt drove the equity to be negative (CEO 2020). This causes the company to have huge fluctuations in return on equity in 2017-2018. For this reason, the average ROE between 2017-2019 is an unreliable indicator of profitability.

Table 1. Profitability ratios of target company 2016-2019

<u>Profitability</u>	2016	2017	2018	2019	Average
Net profit margin	0,10 %	11,80 %	6,93 %	4,07 %	5,72 %
ROA	0,12 %	19,09 %	11,22 %	5,98 %	9,10 %
ROE	-	-206,43 %	189,47 %	43,84 %	77,77 %

Source: author's calculations based on Appendix 1.

3.1.2. Liquidity

Short-term solvency is an important indicator for long-term profitability (Mautz, Angell 2006, 32). Short-term solvency can be calculated by liquidity ratios. The two most used ratios of liquidity are the current ratio and the quick ratio. The difference between the two is inventory. Current ratio is calculated by formula (8) in chapter 1.1.2. and it shows how many times can the company pay its current liabilities with its current assets. The target company had a minimum current ratio of 0,55 in 2016, a maximum of 1,34 in 2019 and an average of 0,98. According to the Finnish financial ratio guide, the target company's average current ratio can be classified as weak, because a weak current ratio is determined to be >1 . The target company's current ratio in 2019 compared with the international industry average in 2019 is 1,06 points below the industry average.

Quick ratio is the same as current ratio excluding inventory. Many financial analysts believe it is important to figure out a company's ability to meet their financial obligations without the need to sell inventory (Ross *et al.* 2008, 33). Quick ratio is calculated by formula (9) in chapter 1.2.2. and it shows how many times a company can pay its current liabilities by its quick assets. The target company had a minimum of 0,22 in 2016, a maximum of 0,64 in 2019 and an average of 0,44. According to the Finnish financial ratio guide, the target company's average quick ratio can be classified as mediocre, as the requirements for a mediocre quick ratio is 0,3-0,5. The target company's quick ratio in 2019 compared with the international industry average in 2019 is 0,48 points below the industry average.

Table 2. Liquidity ratios of target company 2016-2019

Liquidity	2016	2017	2018	2019	Average
Quick ratio	0,22	0,42	0,46	0,64	0,44
Current ratio	0,55	0,94	1,08	1,34	0,98

Source: author's calculations based on Appendix 1.

The target company's liquidity ratios are below industry averages and compared with the Finnish financial ratios guide, they can be classified as mediocre and weak. This means that the company has difficulties converting their assets into cash quickly or it is not able to buy and sell assets without affecting its price. The company has had quite poor results in both quick and current ratios, but the company has now had an upwards trend in both ratios. The company seemed to be in quite a poor state in 2016, which drove the average down. When looking strictly at 2019 ratios, the company seems to be in a mediocre position overall in liquidity, compared with the Finnish

financial ratios guide. There are indications that the year 2020 will be better despite the pandemic, or because of it.

3.1.3. Efficiency

Efficiency of a company can be measured by ratios of activity. Activity ratios measure how effectively a company is managing its assets (Ross *et al.* 2008, 34). The total asset turnover ratio is calculated by formula (10) in chapter 1.1.3. and it measures how effectively a company is using all its assets. The target company had a minimum of 1,50 in 2019, a maximum of 1,65 in 2017 and an average of 1,58. The total asset turnover ratio has been slightly declining which is a not a positive sign, since the higher the ratio the better. However, the ratio has not declined a huge amount, so it is not too worrying. The textile industry average for this ratio was not available, so I have compared it with the apparel, footwear and accessories industry average. The target company's 2019 ratio is 0,29 points above the industry average (CSIMarket.com, table apparel, footwear & accessories...)

The receivables turnover and the average collection period reflect the company's credit policy and how efficiently they manage their receivables (Ross *et al.* 2008, 34). The receivables turnover is calculated by formula (11) in chapter 1.1.3. and measure how many times does the company turn their receivables into cash in a specific period. The target company had a minimum of 8,02 in 2019, a maximum of 11,60 in 2017 and an average of 9,47. The apparel, footwear and accessories industry average in 2019 is 9,13, meaning the target company was 1,11 points below the industry average. The average collection period is calculated by formula (12) in chapter 1.1.3. and measures in days how often on average is receivables collected. The target company had a minimum of 31,5 days in 2017, a maximum of 45,5 days in 2019 and an average of 49,5 days. There is no industry average available for the average collection period, but the target company's collection period has gradually increased over the years. It is a sign that they have loosened their credit policy, or they have had issues collecting their receivables.

The inventory turnover is calculated by formula (13) in chapter 1.1.3. and measures how quickly the company is selling its inventory. The target company had a minimum of 2,21 in 2019, a maximum of 2,41 in 2017 and an average of 2,31. The apparel, footwear and accessories industry average in 2019 is 4,47, meaning the target company was 2,26 points below the average.

Table 3. Efficiency ratios of target company 2016-2019

<u>Efficiency</u>	2017	2018	2019	Average
Total asset turnover ratio	1,65	1,58	1,50	1,58
Receivables turnover	11,60	8,78	8,02	9,47
average collection	31,5	41,6	45,5	39,5
inventory turnover	2,41	2,30	2,21	2,31

Source: author's calculations based on Appendix 1.

3.2. Company valuation

Company valuation is usually done to determine the precise value of one company in a certain period of time. One of the reasons why companies assess their value is because of the requirement from impending investors and/or the investor do the valuation by themselves or in order to maximize the company's value and estimating the effects of various alternative strategies. These strategies might include the sale of the company, different taxation issues, generation shift issues, and so on. The company valuation is done using the Discounted Free Cash Flow Model (DCF), because this is the most suitable method for this kind of company. Discounted cash flow valuation estimates the value of any asset by discounting the expected cash flow on that asset at the rate that reflects their riskiness (Damodaran, 2011). In the free cash flow model, it is necessary to predict future cash flows in order to value a company that presumably continues operations in the foreseeable future. The CEO has predicted a 2-3% growth in revenue for the next five years, a 1-2% growth in salaries and a 5-10% decrease in long-term debt. For the expected costs of goods sold, I have used the average COGS to revenue from 2016-2019. The tax rate is presumably the same, which is 20%. The financial statements predictions of the target company are presented in Appendix 2.

The typical forecast period for businesses is 3-5 years. After 5 years the forecasting starts to become unreliable and cannot be considered useful in company valuations. Therefore, the terminal value is calculated, which when using the perpetual growth terminal value, assumes the company will generate a steady stream of free cash flow at a normalized state forever. This is what generates the lump sum of the company value in the discounted free cash flow model. A company valuation can include an analysis of the company's management. In this study, this management valuation is

not performed. It is more commonly used in the Due Diligence process (Bäck *et al.* 2009, 108-112.).

Enterprise Value (EV) is the measure of a company's total value. It looks at the entire market value rather than just the equity value, so all ownership interests and asset claims from both debt and equity are included. EV can be thought of as the effective cost of buying a company or the theoretical price of a target company. The target company's equity value is presented in table 4.

Table 4. Equity value

-	3 years	4 years	5 years
Enterprise Value, EV	702	948	1204
Cash and account receivables	44	44	44
Interest bearing liabilities	889	889	889
Share capital value	-371	-125	131

Source: author's calculations based on data from Appendix 2.

The WACC used as the discount rate for the discounted free cash flow model was calculated by formula (16) in chapter 1.2.1. using data from financial statement predictions found in appendix 2.

$$\text{WACC} = ((361/1848) \times 0,3687) + ((1487/1848) \times (0,05 \times (1 - 0,20))) = 0,1042 = 10,42\%$$

The discounted free cash flow was calculated by formula (15) in chapter 1.2.1 which can be seen in appendix 3, and the results can be seen in table 5.

Table 5. Discounted free cash flow and terminal value of target company

Forecast x 1000€	2020	2021	2022	2023	2024	Total	TV
Free cash flow	235	230	237	246	256	1170	2925
Discounted, WACC 10,42%	213	189	176	165	156	899	1782
Company value=							
2681							

Source: author's calculations based on data from Appendix 3.

The operating profit has been in constant and steady growth, which is also controllable. This is good considering that the investments are also controllable, and they do not threaten the cash flow. The investments will be steady (17K€/year) for the forecasted period, since the heaviest

investments had been done when the company was still limited partner company (CEO 2020). This is also a good indication for the possible buyers considering that there will not necessarily be any heavy investments in the near future. The buyers value steadily growing cash flow. Total value of the company according to DCF model would be 2,68 M€.

This indicates that the seller sees their company value proximate at 2,68M€. This is probably the highest amount that can be discussed with the buyer. Also, as the EV value shows, the amount the buyer would pay is quite different, about half the price that the seller wants. Here comes the dilemma between parties. There is no right price that can be calculated mathematically. The only right price is the result of negotiations between buyer and seller. The meaningfulness of these results lies in the value this information provides for the owners. They are not currently looking to sell their company, so the value is useful in a sense of how their company has progressed after the changes in their capital structure and new investments.

The value is presented always in currency (€, USD, etc.), and it cannot be calculated as an absolute value. Instead it is calculated as a value variable (e.g. 100 M€ +/- 5%). This does not mean that the final transaction to be paid is what the valuation value indicates. As in all business transactions, this is dictated by the demand and supply (Seppänen H. 2017, 25.).

The EV / EBITDA figure shows how many years a company would make an amount of EBITDA equal to its debt-free value if the EBITDA remained unchanged (Alma Talent 2021). The target company's EV / EBITDA can be seen in table 6.

Table 6. EV/EBIDTA ratio 2020-2024

EV/EBITDA						
Year	2020	2021	2022	2023	2024	Avg.
EV/EBITDA	1,31	1,37	1,38	1,36	1,35	1,35

Source: author's calculations based on data from Appendix 2.

3.2.1. Sensitivity analysis

Sensitivity analysis is a common tool in companies. Why is that? Uncertainty arising from business planning or investment evaluation is reduced through sensitivity analysis. In sensitivity analysis, the values of investment calculations are amended to determine the sensitivity of the return on investment those starting values, as well as those occurring during their definition errors of assessment. The sensitivity analysis examines how the profitability of an investment will change if one or more factors are changed. Sensitivity analyses are mostly used for the what if situations.

After each change, the impact on the cash flow is examined. The most important thing is to investigate and find the most unfavourable valuation errors, after which the profitability of the investment can be most critically assessed. The sensitivity analysis is done using both change in WACC and change in turnover. Firstly, the sensitivity analysis was done using a +/- 10% change in turnover, where the affects can be seen on figure 1.

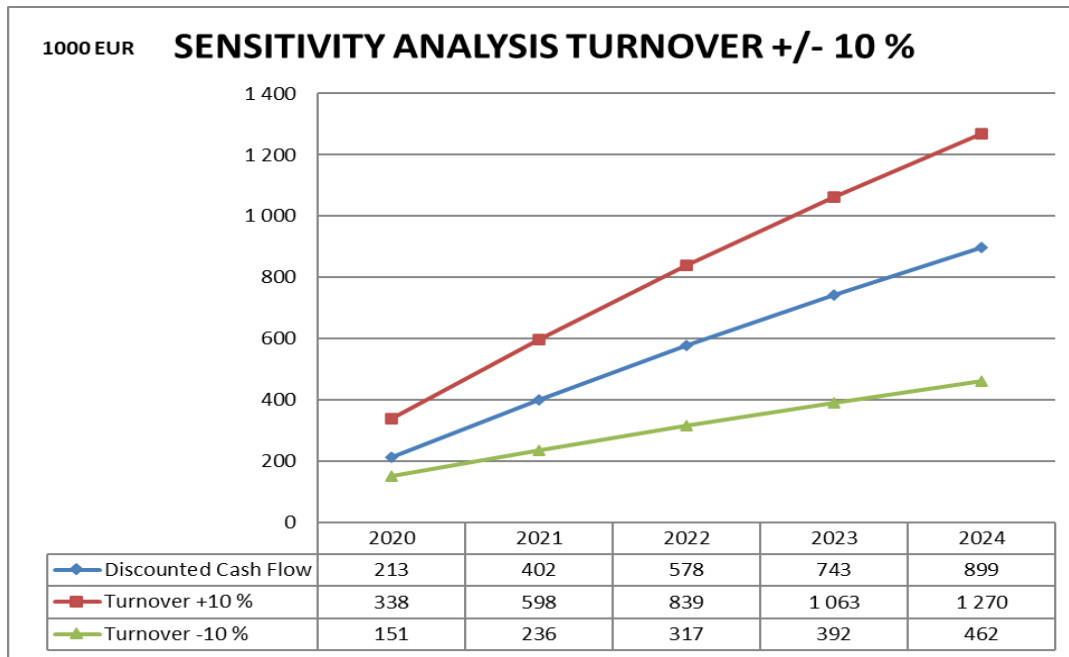


Figure 1. Sensitivity analysis change in turnover

Source: author's calculation

The same analysis has also been performed using a +/-2% change in WACC, and the affects can be seen on figure 2.

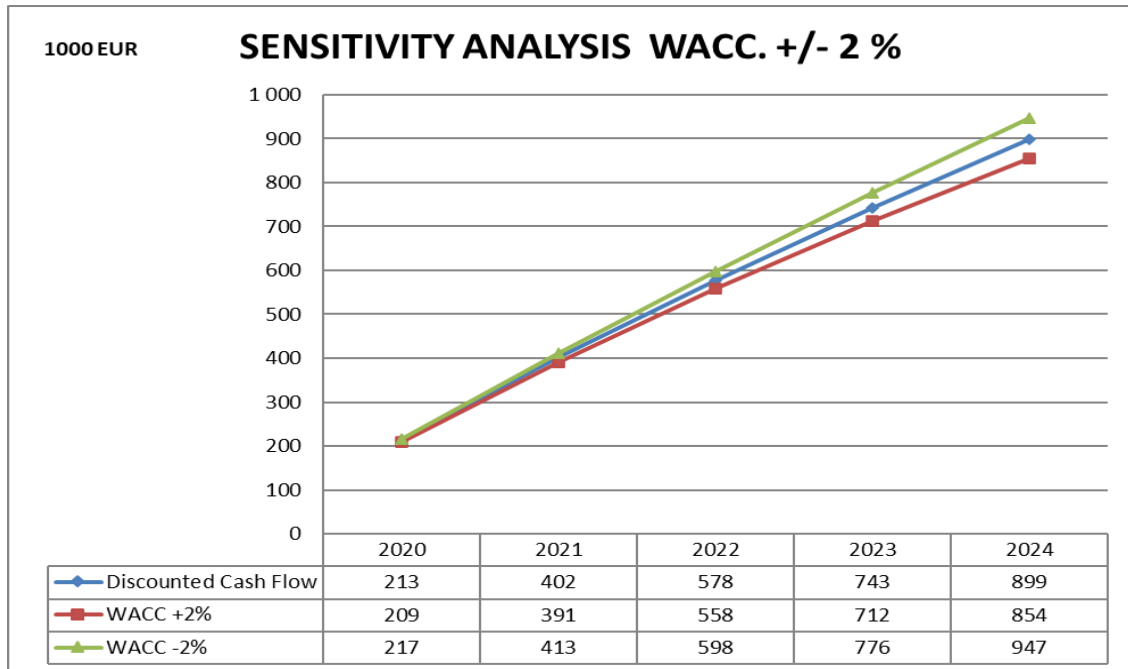


Figure 2. Sensitivity analysis change in WACC

Source: author's calculation

The change in turnover has a significantly larger impact to cash flow than change in WACC. This indicates that this company should make more investments and other marketing operations in order to increase their turnover. This increases the company's value more than change (decrease) in capital cost would have had at the same period of investment cycle.

CONCLUSION

The research objective of this thesis was to perform a company valuation for an unlisted SME company located in Finland or the use of the owners in order to see how the company's value has been performed. Also, this serves as a tool for their strategy development for the future.

The objective was completed using the discounted free cash model using the WACC as a suitable discount rate. The company's free cash flows were predicted for the years 2020, 2021, 2022, 2023 and 2024. Five years were chosen, because it is the maximum amount of years that predictions can be considered reliable and the CEO of the target company had given a prediction of revenue growth for the next five years as well. Usually the forecasting period is in between three and five years. The terminal value of the company was calculated using the perpetual growth terminal value, in which it is assumed that the company would generate a steady stream of free cash flow at a normalized state forever. The total value of the company amounts to 2,68 M€ using the discounted free cash flow formula. The financial ratios analysis shows that the target company has had quite big difficulties in profitability, liquidity and efficiency in 2016 and early 2017. This was caused by the fact that the company was going through huge changes, when the company went through a generational shift from the founding owners to their children and the company transformed from a limited partnership to a limited liability company. The company also built a new production hall at that time, which drove their equity to be negative in 2016, due to huge investment debt. This investment has proved to be very profitable. The demand, especially under this pandemic year, shows increase. Now they have their production resources ready. The EBIT% has been rising when at the same time the number of the employees has decreased, that is: the productivity has gone up. We still have to keep in mind that the situation might change dramatically in a very short time, also to a negative direction.

The sensitivity analysis was performed using changes in turnover and WACC, this showed that the change in turnover had a significantly more impact in cash flow than change in capital cost would have. The sensitivity analysis can be used to evaluate numerical (quantitative) or qualitative dependencies. Quantitative values have been used for this. On its best, the investment calculations are just estimates. Sensitivity analysis is often used in connection with economic calculations such as cost-benefit analysis. The results have been compared with the turnover and WACC as a variable. The charts show that the turnover ends at a better end value than WACC for the same period of time. This indicates that the company should focus on making more investments and

other marketing operations to increase their turnover, which would increase their company value overall which in turn increases their net profit. This chain of events increases the cash flow. Cash Flow raises the valuation of the company.

The financial ratios indicate that the shape of the company is quite mediocre or even slightly poor in some cases, which would in turn indicate that the value provided by the discounted free cash flow model would be quite an unlikely sum anyone would be prepared to pay for the company. It is impossible to state that what the real value of this unlisted SME company would be, as the real value of a company is ultimately a price a buyer is willing to pay for it. The company's financial statements for the year 2020 have not been used in this thesis, because the current state of the world, due to the pandemic, is unprecedented and the government has placed regulations. Therefore, the impacts cannot be predicted if they have long term, short term, or no effect at all. The conclusion is that this company will have a lot of hard work ahead of them to get their financial base to the solid ground. This will require a hard discipline in every business sector, especially in financing. My analysis indicates that taken all the variables into account, this company will have a bright future in front of them.

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APPENDICES

Appendix 1. Financial statements 2016-2019

INCOME STATEMENT	07/19	%	07/18	%	07/17	%	07/16	%
	KEur		KEur					
Turnover	2 905	100,0 %	3 077	100,0 %	3 227	100,0 %	2 287	100,0 %
Non-fixed expenses	1 287	44,3 %	1 304	42,4 %	1 273	39,4 %	1 087	47,5 %
Purchases	628	21,6 %	634	20,6 %	619	19,2 %	494	21,6 %
Outsourced services	659	22,7 %	670	21,8 %	654	20,3 %	593	25,9 %
Personnel expenses								
Other non-fixed expenses								
Gross profit	1 618	55,7 %	1 773	57,6 %	1 954	60,6 %	1 200	52,5 %
Fixed expenses	1 356	46,7 %	1 388	45,1 %	1 343	41,6 %	1 157	50,6 %
Personnel expenses	735	25,3 %	786	25,5 %	726	22,5 %	612	26,7 %
Other fixed expenses	621	21,4 %	602	19,6 %	617	19,1 %	545	23,8 %
Operating profit	262	9,0 %	385	12,5 %	611	18,9 %	44	1,9 %
Depreciation	89	3,1 %	90	2,9 %	105	3,3 %	152	6,6 %
Profit of business operations	174	6,0 %	295	9,6 %	506	15,7 %	-108	-4,7 %
Financial income and expenses	26	0,9 %	27	0,9 %	29	0,9 %	27	1,2 %
Profit before extraordinary items	148	5,1 %	268	8,7 %	477	14,8 %	-135	-5,9 %
Extraordinary income and expenses								
Profit before reserves and taxes	148	5,1 %	268	8,7 %	477	14,8 %	-135	-5,9 %
Change in depreciation								
Change in untaxed reserves							-137	-6,0 %
Direct taxes	30	1,0 %	53	1,7 %	95	2,9 %		
Minority share of TK's profit								
Profit (loss) for the financial year	118	4,1 %	215	7,0 %	382	11,8 %	2	0,1 %
BALANCE SHEET								
Fixed assets	847	42,8 %	893	47,0 %	983	49,3 %	1 079	56,5 %
Inventory	589	29,8 %	579	30,5 %	556	27,9 %	500	26,2 %
Raw materials and consumables	148	7,5 %	156	8,2 %	136	6,8 %	160	8,4 %
Work in progress								
Advance payments								
Finished products	440	22,3 %	423	22,3 %	420	21,1 %	340	17,8 %
Current assets	542	27,4 %	429	22,6 %	453	22,7 %	331	17,3 %
Accounts receivables	377	19,1 %	347	18,3 %	353	17,7 %	203	10,6 %
Other receivables	121	6,1 %	55	2,9 %	66	3,3 %	74	3,9 %
Investments								
Cash in hand and at banks	44	2,2 %	27	1,4 %	34	1,7 %	53	2,8 %
Assets	1 977	100,0 %	1 901	100,0 %	1 992	100,0 %	1 910	100,0 %
Capital and reserves	320	16,2 %	219	11,5 %	7	0,4 %	-375	-19,6 %
Subscribed capital	3	0,1 %	3	0,2 %	3	0,2 %		
Other capital and reserves								
Retained earnings	199	10,1 %	3	0,2 %	-377	-18,9 %	-377	-19,7 %
Profit (loss) for the financial year	118	6,0 %	213	11,2 %	381	19,1 %	2	0,1 %
Minority share								
Reserves								
Accrued depreciation reserve								
Untaxed reserves								
Provision/valuation items								
Creditors	1 657	83,8 %	1 682	88,5 %	1 988	99,8 %	2 285	119,6 %
Long-term	814	41,1 %	746	39,2 %	915	45,9 %	788	41,2 %
Short-term	75	3,8 %	75	3,9 %	19	1,0 %	338	17,7 %
Advances received	12	0,6 %	42	2,2 %	1	0,1 %	4	0,2 %
Accounts payable	629	31,8 %	688	36,2 %	819	41,1 %	972	50,9 %
Others	128	6,5 %	131	6,9 %	234	11,7 %	183	9,6 %
Liabilities	1 977	100,0 %	1 901	100,0 %	1 995	100,2 %	1 910	100,0 %

Source: CEO (2020)

Appendix 2. Financial statement predictions 2020-2024

FORECAST INCOME STATEMENT	Actual		Forecast		Forecast		Forecast		Forecast		Forecast	
	07/19	%	7/20	%	7/21	%	7/22	%	7/23	%	7/24	%
Turnover	2 905	100,0 %	2 992	100,0 %	3 082	100,0 %	3 174	100,0 %	3 269	100,0 %	3 368	100,0 %
Purchases	1 287	44,3 %	1 288	43,1 %	1 327	43,1 %	1 367	43,1 %	1 408	43,1 %	1 450	43,1 %
Gross profit	1 618	55,7 %	1 704	56,9 %	1 755	56,9 %	1 807	56,9 %	1 862	56,9 %	1 917	56,9 %
Fixed expenses	1 356	46,7 %	1 397	46,7 %	1 439	46,7 %	1 482	46,7 %	1 526	46,7 %	1 572	46,7 %
Salaries	735	25,3 %	757	25,3 %	779	25,3 %	803	25,3 %	827	25,3 %	852	25,3 %
Other fixed expenses	621	21,4 %	640	21,4 %	659	21,4 %	679	21,4 %	699	21,4 %	720	21,4 %
Operating profit	262	9,0 %	307	10,3 %	316	10,3 %	326	10,3 %	335	10,3 %	345	10,3 %
Depreciationm fixed assets	89	3,1 %	212	7,1 %	163	5,3 %	127	4,0 %	99	3,0 %	79	2,3 %
Profit of business operations	174	6,0 %	95	3,2 %	153	5,0 %	199	6,3 %	236	7,2 %	267	7,9 %
Financial expenses	26	0,9 %	44	1,5 %	36	1,2 %	27	0,9 %	19	0,6 %	10	0,3 %
Profit before taxes	148	5,1 %	51	1,7 %	117	3,8 %	171	5,4 %	217	6,6 %	256	7,6 %
Taxes	30	1,0 %	10	0,3 %	23	0,8 %	34	1,1 %	43	1,3 %	51	1,5 %
Net profit	118	4,1 %	41	1,4 %	94	3,0 %	137	4,3 %	174	5,3 %	205	6,1 %
BALANCE SHEET												
Fixed assets	847		653		507		397		315		254	
Inventory	589		589		606		624		643		662	
Accounts receivable	377		377		388		400		412		424	
Other receivables	121		121		124		128		132		136	
Cash in hand and at banks	44		109		169		235		311		397	
Total assets	1 977		1 848		1 794		1 785		1 813		1 873	
Subscribed capital	3		3		3		3		3		3	
Retained earnings	199		318		358		452		589		763	
Result for the financial year	118		41		94		137		174		205	
Long-term loan	814		651		488		325		163		0	
Short-term loam	75		68		60		53		45		38	
Advances received	12		12		12		13		13		14	
Accounts payable	629		629		648		667		687		708	
Others	128		128		132		135		140		144	
Total liabilities	1 977		1 848		1 794		1 785		1 813		1 873	
Equity	320	16,2 %	361	19,5 %	454	25,3 %	591	33,1 %	765	42,2 %	970	51,8 %

Source: author's calculations

Appendix 3. Free cash flow calculations

Table 7. Free cash flow calculations

Company	Actual	Forecast	Forecast	Forecast	Forecast	Forecast		
FORECAST x 1000€	07/19	07/20	07/21	07/22	07/23	07/24	TOTAL	TV
CASH FLOW CALCULATION	07/19	7/20	7/21	7/22	7/23	7/24		
Operating profit	262	307	316	326	335	345		
-Interest	-26	-44	-36	-27	-19	-10		
-Taxes	-30	-10	-23	-34	-43	-51		
Cash flow 1	207	252	257	264	273	284		
+change in working capital	198	0	10	10	10	10		
Cash flow 2	9	252	247	254	263	273		
-Investments	43	17	17	17	17	17		
Free cash flow	-34	235	230	237	246	256	1 170	2925
Discounted values		213	189	176	165	156	899	1782

Source: author's calculations by data from appendix 2.

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