The Valuation of Company X as a Going Concern

Tuomas Ruotimo

Haaga-Helia University of Applied Sciences

Bachelor of Business Administration

Thesis

2022

Abstract

Author
Tuomas Ruotimo

Degree
Bachelor of Business Administration

Thesis Title
The Valuation of Company X as a Going Concern

Number of pages and appendix pages
32 + 8

This bachelor thesis presents a company's valuation as a going concern. Valuation is based on the market approach, where the comparable company method is used to calculate the enterprise value of the commissioning company. The commissioning company is referred to as Company X in this thesis. Company X is a Finnish-based digital service company operating widely in software engineering in the IT industry.

Data for the company valuation is collected from financial statements and interviews with the company management. In addition, comparable companies are chosen from the same industry to enable the use of comparable companies method.

Calculations are done to determine the enterprise value by using value multiples from comparable companies and forecast future growth. In order to do so, the companies' historical performance is presented and analysed. The analysis of historical performance includes the interpretation of financial statements, such as income statement and balance sheet over the past five years to deeply understand the commissioning company's financial situation. After that, the financial forecast can be done.

In order to enable comparable companies method, companies from the same geographical location and industry need to be selected and calculate their value multiples from their value drivers, such as revenue, EBITDA, EBIT, and enterprise value. This data is collected from the comparable companies financial statements, which are publicly available because these companies are listed on the stock exchange. The median of the comparable companies is used to finalize the valuation when calculating the commissioning company's enterprise value.

Key words
Company valuation, market approach, value multiples, mergers and acquisitions

Table of contents

1 Introduction

This is a project-based bachelor’s thesis for the Degree Programme in International business in the major financial management specialization at the Haaga-Helia University of Applied Sciences. The goal of this thesis is to conduct a company valuation of a non-listed company using the market approach method.

1.1 Background to the Topic

How to evaluate a company's value is an essential knowledge that every entrepreneur should know. There are many reasons why company valuation and the value development process are important. For starters, no other metric can accurately reflect a company's current state and future potential. Only through understanding the valuation can the company increase its worth with different operations. Creating strategies to maximize value that lack the necessary valuation expertise has a lower potential for value development. In addition, the growth of the company's worth is the most vital long-term indicator of how well the current management is performing. Lastly, in a company with numerous shareholders, the owners typically share at least one goal: to maximize the value of the shares. It is, therefore, critical that all stakeholders agree on how value is assessed and maximized. (Frykman & Tolleryd 2009, 2.) For that reason, I have chosen a company valuation process in my project-based thesis and have a commissioning company that I am using to do the company valuation.

The goal of the market approach is to conduct a valuation based on the valuation subject’s market price or the actual market prices of comparable companies or transactions that are similar to the valuation subject. The important criteria for assessing the applicability, reliability, and use of the market value-based approach as the primary approach for valuation are the availability of the market price, the functionality of the market, the temporal proximity of the market prices to the time of valuation, and the similarity of possible comparable companies to the company that is the subject of valuation. (Seppänen 2017, 112.)

Company valuation as a topic of this thesis is a perfect case for a project-based thesis and can be efficiently put into motion. There is a clear goal to achieve in the valuation process, and the result can be showcased with numerical data. So, the valuation’s results are unambiguous based on calculations.

I chose a non-listed company as the subject of my valuation because it will give additional value to me professionally in the future. I can use it to test myself on what I have learned in school and increase my knowledge in the finance field I am interested in. Also, it will give additional value to the commissioning company, as they get to see how their company is valued.

1.2 Project Objective

This thesis aims to perform a valuation of the commissioning company X as a going concern. It will perform a fundamental valuation of the company, using strategic and financial analyses. The project can be helpful for the company in possible events of additional financing or an acquisition. The company's industry – IT, has been growing and profitable in recent years due to rapid development and the need for technology due to the pandemic. Therefore, they are an attractive acquisition candidate for private investors. Furthermore, mergers with other companies within the same industry are also possible. In case of an acquisition or a merger, it could be helpful to Company X to have an estimate of its value. The target is that this project can be used as a supplement in such a situation for Company X.

The goal of the thesis is to find the company's value from the owner's perspective, and for that reason, the project objective will be to find out the value of company X for the owners as a going concern. To address this, it is important to find the value of the company's equity. It will be done by estimating the enterprise value. In addition, it will state what the value of the company as a “going concern " is, and therefore assess the further operation of the company after the valuation.

The international aspect required by the degree programme in international business is covered because the commissioning company is operating internationally and, as mentioned earlier, the market approach aims to determine the current value of the company, which affects to decision made by possible investors in firms or private individuals, such as acquiring the company or purchasing a part of ownership and being a partner. So, a company or private individual can be internationally based even though the company is located in Finland. Also, this project-based thesis is for everyone interested in company valuation, and this project can be used internationally, meaning it does not cover only Finland’s company valuation.

The project objective is to find out the value of company X as a going concern.

PT 1. Creating theoretical framework

PT 2. Collecting financial data on company X

PT 3. Conducting the Calculations

The overlay matrix presented in Table 1 explains all of the project tasks and their theoretical frameworks, the project management methods used in the project task, and the outcomes of each project task.

Table 1: Overlay matrix

Project Task	Theoretical Framework	Project Management Methods	Outcomes
PT 1. Creating theoretical framework	Introduction of the commissioning company and its industry. Discovering theoretical literature on financial methods and formulas	Literature review	Theory on financial methods and formulas
PT 2. Collecting financial data	Collecting data that is suitable for the theoretical framework	Creating analysis from data provided by the company	Analysis of the current state of the company
PT 3. Conducting the calculations	Calculating the valuation formulas from the theoretical literature	Calculation of the financial formulas	Finalizing the valuation analysis

1.3 Benefits

This thesis provides additional value to the commissioning company internally for company management and shareholders and externally for potential investors. This project-based thesis would be useful to company X to have an estimation of its fundamental business value. The company is an attractive acquisition candidate for private funding and also a possibility to have mergers with other companies within the same industry. In this situation, the stakeholders would benefit from company valuation.

My field of specialization is financial management, so this topic suits me perfectly, and I can showcase what I have learned in the field during my study years and even take it further with this project. This project also adds value to my future career as I have a concrete project to show that I am a professional in accounting.

1.4 Key Concepts

Company valuation means using several important factors, such as the financial value of the business or the economics of the industry, to determine the value of a company. It can be based on different methods, but all the methods are based on knowledge of the company's financial situation and the ability to define scenarios for the future of the company by projecting the financial figures to the future. (Corelli 2017, 1.)

The going concern approach assumes that the company delivers cash flows in perpetuity (De Luca 2018, 321). It is one of the most fundamental ideas in accounting and is thought to be directly related to historical cost valuation (Sterling 1968, 481).

The market approach is to establish the value of a company by comparing it to the prices at which other companies with comparable characteristics are traded on the stock market or through other company transactions. Therefore, the aim is to identify comparables with operations and a structure that are as equivalent to the company in consideration as possible, and then calculate the subject company's enterprise value using the value multiples. (Bernström 2014, 18-19.)

Enterprise value (EV) term is usually expressed when applying the market approach, the market value of operating, or invested capital. It refers to the market value of the company's operations as a whole, such as the overall capital structure, rather than just the market value of the equity, and as such, it is a comprehensive representation of the company's valuation. (Bernström 2014, 70.)

EBITDA is an acronym for earnings before interest, taxes, depreciation, and amortisation. The appropriate earnings or cash flow measure, such as EBITDA, should reflect the return available to all investors. As a result, the operating level before interest payments is chosen for the profit and cash flow measures, such as EBITDA, rather than the shareholder level. (Bernström 2014, 72-73.)

EV multiples list the company's market value, for instance, the enterprise value, in respect to a suitable base metric like sales, EBIT, EBITA, or EBITDA. (Bernström 2014, 71-72.)

1.5 Commissioning Company

Company X is a Finnish digital service company operating widely in software engineering. The company designs and builds custom-made digital solutions and utilizes long-term experience and exceptional know-how to solve customers' specific business problems. The company was founded in 2003, has headquarters in Helsinki and a branch office in Turku launched in 2017, and currently has around 80 employees. The company's services include service design, software development, cloud architecture, IAM solutions, IoT & Data platforms, coaching & training and analytics. The company has a broad customer base with well-known international customers with long-term partnerships. The company has developed strategically important financial, media, telecommunications and engineering services systems. The company is a small and medium-sized enterprise with a turnover between 5 to 10 million euros yearly.

1.6 Project Management Methods and Report Structure

The project management design (Figure 2.) will be presented in this chapter. It includes each project task and the data source, collection method and processing method for each task, as well as the task and project outcomes. The project tasks will be explained in detail and told what is included.

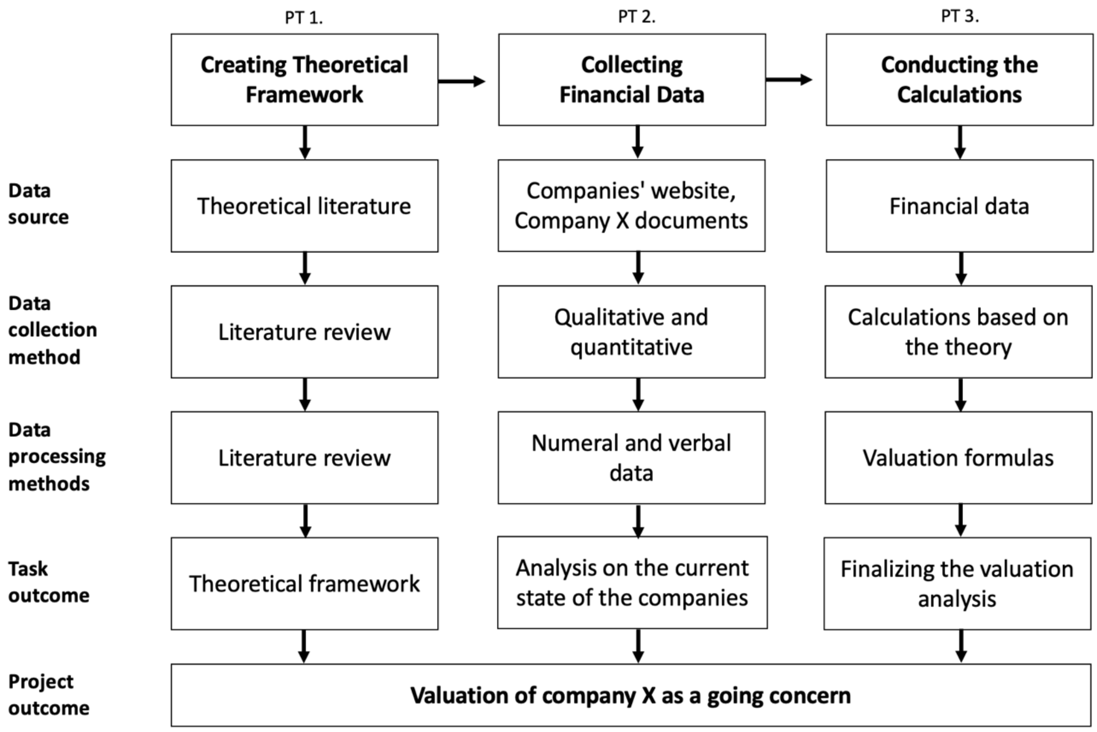

Figure 1. Project management design

The first project task is finding theoretical literature to create the theoretical framework. This means going through academic articles and literature to find reliable resources for the project. These will then form a theoretical framework for the company valuation process.

The second project task is collecting financial data of company X, and it includes the comprehensive collection of all data needed to complete this project. The data is collected from the company website, from the documents that will be received from the company, and from interviews with the company representatives. Also, the second project task includes selecting the comparable companies and collecting data from those companies' websites. Therefore, the data collection methods are the use of documents and records and interviews. (Cote 2021.)

The data received from the company is in both numerical and verbal form. Therefore, the research methods are both qualitative and quantitative. The qualitative method prioritizes data quality over volume and seeks thorough and applicable answers. On the other hand, when examining the relationship between two variables, the quantitative method utilizes the main objective of statistically analysing and representing that relationship. Since the data is numerical, a large sample size can be used to gather the data. (Badiru & Lamont 2021, chapter 2.)

The task outcome for the second project task is to analyse the data collected from the commissioning company and the comparable companies and find out Company X's current state and the enterprise value of the comparable companies. The analysis tools used in this project to achieve its goals are also introduced.

The third project task is to calculate the data using financial formulas covered in the theoretical literature. These calculations include, for example, calculating the company's enterprise value and the EV multiples; EV/sales, EV/EBITDA, and EV/EBIT. After the calculation, it is essential to analyse the calculations based on the theory and valuation and then finalize the valuation analysis as an outcome. The final project activity evaluates the project outcomes and the company's fundamental value as a going concern.

2 The Valuation Process of Using the Market Approach

In this chapter, it is explained what the theoretical framework `The Valuation process using Market Approach´ of this project-based thesis is. Figure 1 below is a conceptual figure of the theoretical framework.

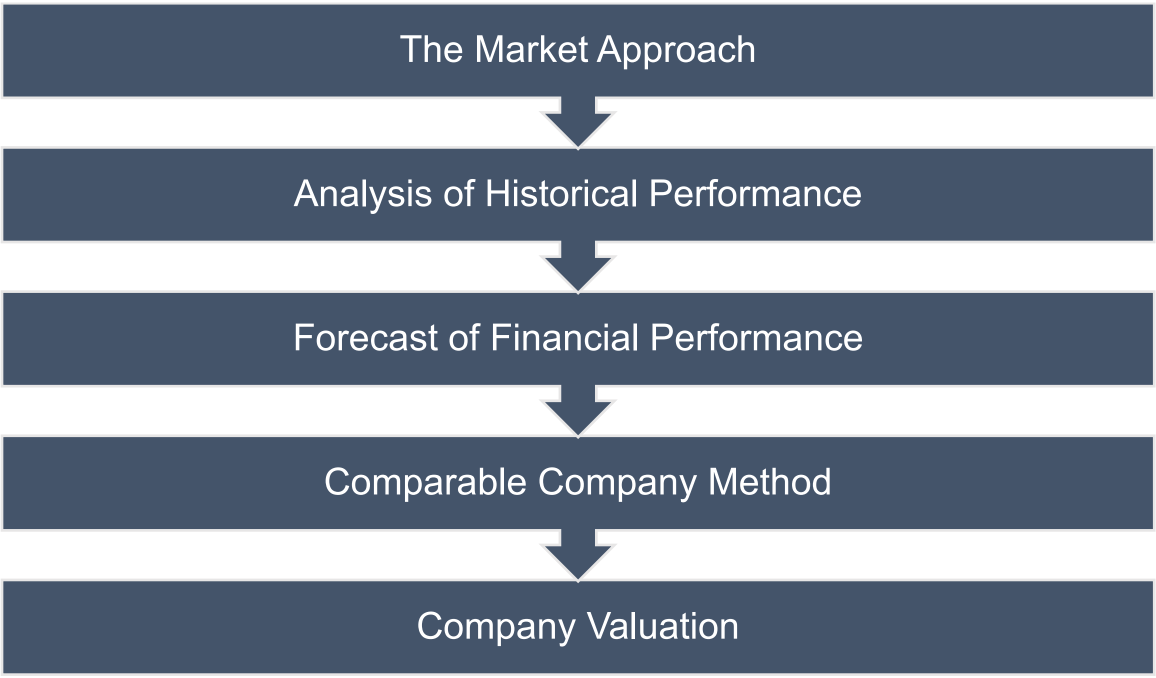

Figure 1. Theoretical Framework

The first step includes analysing the historical performance of the company in question, as understanding the company's past is necessary for estimating its future. Therefore, a detailed analysis of historical performance is an essential component of the valuation (Goedhart, Koller & Wessels 2015, 201.)

The second step is forecasting the financial performance of Company X. The financial statements offer the information required to calculate the forecast for the next three years of the value drivers, such as sales, EBITDA, and net income, using compounded annual growth rate. (Bernström 2014, 73-74.)

The comparable companies method requires that the analyst identifies companies that are substantially similar to the target company. Usually, a comparable company is one whose profitability, the potential growth rate in earnings or cash flows, and perceived risk are similar to the company to be valued. (DePamphilis 2012, 287.) Selecting the appropriate companies is one of the most important parts of the market approach valuation. The selected companies typically operate in the same geographical area or industry. The value multiples are used to calculate the enterprise value of a non-listed company by comparing the value multiples and value drivers from comparable companies listed in the stock exchange to the subject company, using the value multiples, which are EV/SALES, EV/EBITDA, EV/EBIT, and revenue growth. (Bernström 2014, 47-72.)

2.1 Analysis of Historical Performance

As a base for forecasting, the historical analysis seeks to provide and explain a company's historical operating and financial performance. Usually, three to five years is the most typical time frame for the analysis of historical data. The analysis period should correspond to the time series for which representative and appropriate data are available. For companies vulnerable to economic changes, growth, margin, and capital expenditure statistics should span an entire business cycle. In such instances, it may be justifiable to extend the term of analysis. On the other hand, if the sector or the company in question have recently had significant structural changes, it may be wiser to limit the analysis to the succeeding time. The goal is that the time in question represents the future growth and profits potential of the company in question. (Bernström 2014, 54.)

Sometimes changes might also be needed for factors that affect comparability. If the statistics of the topic of the valuation have fluctuated significantly in a particular year, it may be reasonable to eliminate these components from the analysis. However, this does not mean eliminating from the time series every single unfavorable year and every single year with a significant loss. Business operations are expected to suffer from unplanned costs and restructuring occasionally. Consistent exclusion of all historically terrible actions and temporary cost issues could lead to a major overstatement of the company's future growth and profitability potential. Whatever course of action is decided, the company must report the items identified and the course of action chosen. (Bernström 2014, 54-55.)

2.2 Forecast of Financial Performance

When valuing a company, the growth rate used to forecast future revenues and profitability is the most important factor, especially for fast-growing companies. Any company's future growth can be forecasted in three distinct ways. The first is to consider the company's growth by looking at historical earnings. The second one is to rely on the analysts who monitor the company to estimate the company's growth rate correctly and to apply that growth rate in valuation. The third method involves forecasting growth from the company's underlying fundamentals. (Damodaran 2012, chapter 11.)

The valuation method selected determines which input data is needed. The input data of valuation requires that assumptions and forecasts are made. As a starting point, the assumptions and forecasts are based on the analysis of the company's operative business and business environment (business analysis) as well as the analysis of its financial performance and position (financial statement analysis). These aim to analyse how the company's business environment and strategy have influenced the company's financial performance and position, for instance, profitability, growth, and risk in the past. In addition, based on the conclusions drawn on the basis of these analyses and combined with forecasts of the future development of the company's operational activities and business environment, forecasts are made of the company's future financial development, its future cash flows are forecasted, and its risk level is estimated. Valuation also requires analysing the functioning of the capital market of the target of the valuation and building an understanding of the market prices of the comparable companies similar to the target company. (Seppänen 2017, 27.)

It is common to begin by reviewing the company's history when assessing its forecasted growth, for example, how quickly its activities have grown in history, indicated by revenues or earnings. Forecasting financial performance begins with an examination of the measurement challenges that arise when estimating previous growth, followed by an examination of how past growth might be used to forecast. (Damodaran 2012, chapter 11.)

The arithmetic average and the geometric average both produce results that are potentially different from one another when it comes to the average growth rate. The arithmetic average is a straightforward calculation that provides an average of previous growth rates, whereas the geometric average takes into consideration the compounding that takes place from one period to the next.

$$\text{Aritmetic average} = \frac{\sum_{t=-n}^{t=-1} g_t}{n}$$

where g_t = Growth rate in the year t

Figure 2. Arithmetic average (adapted from Damodaran 2012, chapter 11)

$$\left(\frac{Earnings_{0}}{Earnings_{-n}}\right)^{(1/n)} -1$$

where Earnings_t = earnings in year t

Figure 3. Geometric average (adapted from Damodaran, 2012, chapter 11)

Typically, growth is measured by the annual growth rate of revenue. However, it is good to remember that the average growth percentages of revenue, EBITDA, operating profit and net profit or free cash flow are often not the same even when viewed over a period of 5 to 10 years, let alone over a period of one year. From the point of view of valuation, the essential growth is specifically the growth percentage of cash flows. In addition to annual growth percentages and these averages, growth can be measured with the average geometric annual growth percentage over a period of several years, for example, over a period of 3 to 10 years with a compound annual growth rate (CAGR). (Seppänen 2017, 144.)

Any conclusions regarding expected growth or margin can be drawn from both historical and potential data. What matters is that the result is representative of the most profitable future scenario, regardless of the data used. The value of any company will always equal its expected future returns discounted to a present value using a risk-adjusted rate of return that is under a going concern assumption. (Bernström 2014, 16.)

A key value driver is a company's growth direction. The analyst often considers historical and forecasted growth rates, as well as compound annual growth rates (CAGRs) for specific financial figures, while evaluating a company's growth profile. (Rosenbaum 2022, chapter 1.)

$$\text{CAGR} = \left(\left(\frac{Ending\ value}{Beginning\ value}\right)^{\frac{1}{n}} - 1\right) x\ 100$$

Figure 4 CAGR (adapted from Fernando 2022)

2.3 Comparable Companies Method

Selecting comparable companies is one of the most important elements in a market approach valuation. It is normal to seek peers in the same geographic region and sector or industry as the topic of the appraisal. However, before proceeding with a comparable company, there might be questions that need to be answered, such as: Which specific market do these companies function in? What is the service offering? What about vendors? How about the customers? What is the general competitiveness like? Which of the respective industries are susceptible to structural change? Regarding geography, in which countries does the company in question operate? (Bernström 2014 47-51.)

Additionally, it should be made clear that geography and business model do not need to be necessarily seen as significant selection criteria. It is up to the analyst to determine and justify relevant, adequate selection criteria, which can be practically anything, such as size and risk profile, type of clients, addressable market, maturity and so on, as long as the criteria are transparent and credible. (Bernström 2014, 52.)

In general, having more companies is preferable to having fewer. A group of 5–10 companies could be a useful starting point if good peers can be found. There is no minimum sample size, although the sample should not be too small. It is dangerous to base an analysis on only one or a few comparable companies, as company-specific features of the particular peers may have a disproportionate effect on the valuation target's calculated value. (Bernström 2014, 53.)

It is essential to recognize that any adjustments made to the valuation company should also be applied to the peers. Common adjustments include, for instance, adjusting for non-recurring items, non-operating items, and income or expense items that are not in line with market conditions. (Bernström 2014, 54-55.)

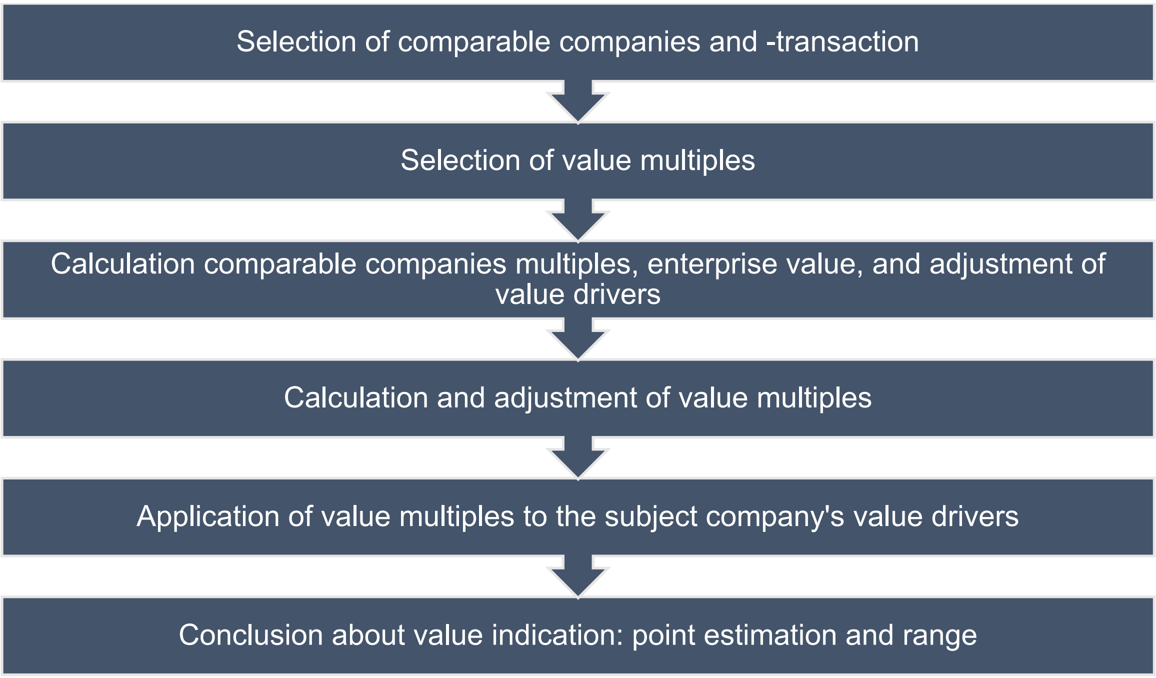

Figure 5. Process using the market approach: comparable company method (adapted from Seppänen 2017, 134)

2.3.1 Value Multiples

Value multiples involve two components: a numerator of a measure of revenues, earnings, or book worth and a denominator of an assessment of the value of a company or its operating assets. (Damodaran 2006, chapter 9.) Price quotations as of the relevant valuation date should be used to determine the value multiples of comparable companies. There are two options available when utilizing the market approach for valuation. Either calculating the market value of the business operations, that is, the market value of operating/invested capital, such as the enterprise value (EV), or calculating the market value of all outstanding shares, that is, the market value of equity, such as the price (P). (Bernström 2014, 70.)

Enterprise value multiple (EV multiple) calculates the market value of the business enterprise, for example, operating and invested capital, to the selected base metric in relation (Bernström 2014, 70).

$$\text{EV multiple} = \frac{\text{Comparable company's EV}}{\text{Comparable company's value driver}}$$

Figure 6. EV multiple formula (adapted from Seppänen 2017, 153)

In the formula presented in figure 6 of the EV multiple, the enterprise value of the comparable companies is based on the price quotations obtained from the market of the selected comparable companies or the trade prices obtained from transactions. Enterprise value (EV) represents the view of the market or the parties to the transaction on the company's ability to generate cash flow in the future and, thus, its profitability, growth, and risk. On the other hand, the comparable companies' value drivers are usually a measure of the companies' performance based on the financial statements key figures, such as revenue, EBITDA, profit for the financial year or cash flow. In some cases, it can also be a balance sheet-based measure of invested capital or some non-financial or non-monetary performance measure. Including a value driver in the EV multiple is based on the idea that it reflects the company's ability to generate cash flow in the future. (Seppänen 2017, 153.)

Enterprise value = EV multiple x Company's value driver

Figure 7. Enterprise value formula (adapted from Seppänen 2017, 153)

The average or median of the EV multiple is calculated from the value multiples of individual comparable companies. This value multiple can be used to mechanically calculate the target company's enterprise value indication by multiplying the estimated EV multiple by the value driver of the corresponding to the target company. (Seppänen 2017, 153.)

2.3.2 Value Drivers

One or more primary value drivers have an impact on all value multiples. Additionally, the value drivers of the corresponding multiples are distinct or singular, i.e., directly related to the particular variables that make up the relevant multiple. The straightforward statement "the higher the degree of value driver, the higher the level of value multiple" usually holds true. (Bernström 2014, 86.)

Sales:	revenue/turnover
EBITDA:	earnings before interest, taxes, depreciation, and amortization
EBITA:	earnings before interest, taxes, and amortization
EBIT:	earnings before interest and tax

Figure 8. Value drivers (adapted from Bernström 2014, 71-72)

Figure 8 presents the value drivers. Value drivers are factors that increase the worth of a business.

EV/SALES	expected operating margin (EBITDA%, EBITA%, EBITA%) and revenue growth
EV/EBITDA	expected growth in earnings before interest, taxes, depreciation, and amortization
EV/EBITA	expedted growth in earning before interest, taxes, and amortization
EV/EBIT	expected growth in earnings before interest and tax

Figure 9. Primary value drivers of the EV multiples (adapted from Bernström 2014, 86-87.)

EV as the numerator represents the whole market value of the capital structure, and the value drivers as the denominator represent all investor claims on the business, such as the market value of the capital structure as a whole. As long as there is a reasonable justification and all companies are treated equally, the variables relating to earnings and cash flow may be linked to EV for any time period. The budget from the previous fiscal year and the prediction for the following 12 months are common examples. All value multiples are impacted by one or more primary value drivers. Furthermore, the value drivers of the corresponding multiples are separate or unique and directly related to the specific variables that make up the corresponding multiple. The primary value drivers for the previously discussed value multiples are above in figure 7. (Bernström 2014, 72-73.)

Companies with a negative value of the value driver will also get a negative value for a value multiple, which is, in turn, insignificant because the value of a listed company cannot be negative, but even at the minimum it is zero. By normalizing the value of the value driver to correspond to the company's continuous and permanent cash flow generation capacity, the negative value of the value driver is eliminated. The assumption is that the negative result or cash flow is a temporary state, and the company's ability to generate cash flow is normalized to the adjusted level in the future. (Seppänen 2017, 161.)

Companies that use substantial leasing contracts to acquire resources use the EV/EBITDA multiple as their key value multiple. Although EBITDA is not free cash flow from operations, it does not consider changes in working capital and investments, and it is nevertheless more stable than the EV/FCF ratio. (Seppänen, 2017. 164-165)

2.4 Discount for the Lack of Liquidity

In the valuation of a non-listed company, the question of how large the discount for the lack of liquidity should be for a non-listed company can come across. So, how much discount should an investor demand from a company whose shares are not liquid? In general, investors are willing to pay a higher price for a listed company, but there is still a debate about how liquidity is measured and how it should be included in the company's value. (Damodaran 2005, 2.)

According to empirical studies, discounts related to non-listed companies are a significant factor when evaluating the magnitude of the discount factor, especially when selling the entire company's share capital or a controlling portion of the share capital. In addition to the stock market, the discount for the lack of liquidity (DLL) has also been studied in the interest rate market and the real estate market. In the stock market, the investigation is divided into an investigation concerning the minority stake and the majority stake. The research on minority stake has compared returns between different stock markets and the valuation level of the same stock in different special situations. These special situations include restricted stock and IPOs. (Kerstin 2014, 67-71.)

In their research, Damodaran (2005, 34) examines the methods by which the DLL can be included in the company's value. The size of the DLL can be examined with three different approaches in connection with the valuation. In the first approach, the valuation of the company is done as if the company were liquid, and after that, the DLL is deducted from the company's value. In the second approach, the DLL is already taken into account as a higher discount rate, which lowers the company's value.

In the third approach, the company's value is based on comparable transaction with a similar liquidity level. The third approach is the market approach valuation. In practice, the valuations of listed and non-listed companies are based on the value multiples of the comparable companies. The simplest way to include a DLL in the company's value is to use comparable companies in the valuation that match the liquidity of the target company. Especially for non-listed companies, finding a suitable reference company can be a challenge because there are few peer companies and transactions take place relatively infrequently. And even if comparable transactions could be found on the market, the purchase price is not necessarily public, or other factors have influenced the purchase price. In addition, country- or company-specific differences in accounting may distort the value multiple. Using non-listed companies brings its own challenges to the company's valuation, as a result of which analysts use the value multiple of listed companies as comparison companies. When using the method in question, the DLL should be taken into account in the value multiple. However, this raises the question of what is the magnitude of this discount for the lack of liquidity. Here you can either use a fixed liquidity discount, which is the same for everyone or evaluate the company's fundamentals (size, growth and risk) and, based on these, estimate the size of the discount. (Damodaran 2005, 51-55.)

As stated, the discount for the lack of liquidity is a valid approach to the company valuation and should be taken into consideration if possible. In this project-based thesis, the DLL will not be used due to the lack of information and uncredible sources so that the DLL could be reliably applied in practice in the valuation of the target company.

3 The Data Collection

This chapter is the project-based thesis's project task 2. This chapter will be examined the financial data received from Company X and explain the meaning behind the data. In addition, the data has been collected from the comparable companies to perform comparable companies analysis and position Company X's valuation to the market approach. The information is based on the financial statements submitted by the company's management and interviews with the management.

The data includes Company X's income statement and balance sheet over the past five years, 2017-2021.

Income Statement (in thousands €)	2017	2018	2019	2020	2021
Net revenue	**5 895**	**7 240**	**8 067**	**7 223**	**9 040**
Manufacturing for enterprise's own use			141	636	
Other income	0	0	1	113	10
Raw materials and services					
Raw materials and consumables	0	-12			
Purchases			-77	0	
External services	-40	-7	-77	-320	-520
Personnel expenses					
Wages and salaries	-3 533	-4 927	-5 243	-4 987	-5 050
Pension expenses	-692	-945	-747	-865	-881
Social security expenses	-139	-152	-263	-257	-180
Other operating charges	-1 154	-1 834	-1 517	-1 506	-1 520
EBITDA	**337**	**-637**	**286**	**36**	**899**
EBITDA %	**5,7 %**	**-8,8 %**	**3,6 %**	**0,5 %**	**9,9 %**
Depreciation and reduction in value					
Depreciation according to plan	-8	-5	-37	-167	-175
EBIT	**329**	**-632**	**250**	**-130**	**723**
EBIT %	**5,6 %**	**-8,7 %**	**3,1 %**	**-1,8 %**	**8 %**
Financial Income and expenses					
Income from group undertakings				1	
Interest and financial income	0	2		0	2
Interest and financial expenses	-52	-25	-94	-195	-44
Profit before taxes	**279**	**-665**	**156**	**-325**	**682**
Income taxes	-67	0	0	1	-50
Other direct taxes	-10	-5			
Profit (loss) for the financial year	**201**	**-659**	**156**	**-323**	**631**
Profit (loss) for the financial year %	**3,4 %**	**-9,1 %**	**1,9 %**	**-4,5 %**	**7 %**

Figure 10. Company X's income statements 2017-2021

Figure 10 shows the income statements of Company X in the past five years. The company's revenue has grown by an average annual 11.2 % (CAGR: 2017-2021). The company's goal is to grow by 20 % annually. A revenue of € 10.8 million has been budgeted for the current fiscal year.

The company's EBITDA has fluctuated strongly. Within the completed fiscal year it was € 899 thousand, and an EBITDA of € 1.35 million has been budgeted for the current fiscal year.

Balance Sheet (in thousands €)	2017	2018	2019	2020	2021
Assets					
Non-current assets					
Intangible assets					
Development expenditure	0	0	113	594	438
Tangible Assets					
Machinery and equipment	18	14	26	34	60
Other tangible assets	2	2	2	2	2
Other shares and similiar rights of ownership	335	5	5	5	5
Total non-current assets	**355**	**21**	**146**	**634**	**505**
Current assets					
Long-term					
Other debtors	184	162	162	24	24
Trade debtors	1 446	1 893	1 785	1 567	1 818
Amounts owed by group undertakings	0	0	0	1	6
Loans receivable	518	548	336	216	283
Other debtors	3	2	2	76	10
Prepayments and accrued income	67	96	95	128	69
Investments					
Other shares and similiar rights of ownership				44	44
Cash in hand and at banks	50	214	388	323	392
Total current assets	**2 268**	**2 747**	**2 767**	**2 379**	**2 647**
Total assets	**2 624**	**2 768**	**2 913**	**3 014**	**3 152**

Figure 11. Company X's balance sheet, assets

Figure 11 presents the asset side of Company X's balance sheet. The company's total assets have grown every year on average 4.7 %. The asset side of the company's balance sheet mainly consists of activated development expenditure, trade receivables and cash. Most of the development expenditures have been activated in the 2020 fiscal year. In order to maintain its own equity positive, the company has activated various development expenditures; on the other hand, it is not recommended to activate expenditures too much because the result will go down due to excessive activations, which negatively affects EV. Cash in hand and at the bank has been € 392 thousand, which increases the value of the business when calculating the value of the equity.

Balance Sheet (in thousands €)	2017	2018	2019	2020	2021
Capital, reserves and liabilities					
Capital and reserves					
Subscribed capital	8	8	8	8	8
Retained earnings	791	793	252	338	-98
Profit (loss) for the financial year	201	-659	156	-323	631
Total capital and reserves	**1 000**	**141**	**416**	**23**	**542**
Creditors					
Short-term					
Liabilities to credit institutions	20	485	450	384	436
Advances received			6	6	
Trade creditors	204	619	158	114	186
Other creditors	418	444	997	1 400	945
Accruals and deferred income	981	1 078	887	1 087	1 044
Total creditors	**1 623**	**2 626**	**2 496**	**2 991**	**2 610**
Total capital, reserves and liabilities	**2 624**	**2 768**	**2 913**	**3 014**	**3 152**

Figure 12. Company X's balance sheet, capital, reserves and liabilities

In figure 12 presented above can be examined the capital reserves and liabilities of Company X’s balance sheet. As stated earlier, as Company X’s total assets have grown in the past five years, the total capital reserves and liabilities have also grown the same amount. At the end of the fiscal year 2021, the company had a short-term interest to creditors of € 436 thousand, which should be taken into account as a negative item when calculating the value of the company's share capital. On the other hand, it is most likely taxes and other official duties due to the nature of a financial statement, which is a glimpse of a certain day.

The financial statements of Company X provide valuable information to use in the market approach valuation. In order to conduct a complete valuation of Company X, it is necessary to have a comprehensive understanding of Company X’s current financial situation, which requires access to the company’s historical financial statements of at least over five years. In this case, the financial statements are from the financial years 2017-2021. Using the data to calculate the value drivers of comparable companies. The key figures of the financial data are revenue, EBITDA, EBIT, and revenue growth.

The verbal data was collected through interviews with the company’s management and the chairman of the board. From the interviews was received the company’s strategy deliverables and growth opportunities.

According to interviews with the company’s management, Company X has excellent customer relationships and satisfied customers, so the easiest way for the company to grow is through existing customer relationships. The current customer base has significant growth potential. Company X has also recognized that early service design expertise and demonstrations can catch up on projects at an early stage, thus increasing the speed of getting the whole project done. The company has invested in and hired a head of design and a whole design department to run that business. The company’s strategy deliverables will not directly bring additional value to this project, but it is crucial information to understand Company X’s business and, of course, to its potential investors.

3.1 Comparable Companies

The selection of comparable companies is one of the most important elements in a market approach valuation. In this project 11 companies have been selected for the comparable company analysis. The companies were chosen based on their geographic location, which is Finland for all of them. Another selection criterion was that the companies must operate in the IT industry and offer similar services and products as Company X.

Next, the comparable companies and their key value drivers are introduced. All of the comparable companies are listed on the stock exchange, and the data is collected from their websites and financial statements.

Digia is a Finnish software and service company that assists its customers to renew themselves in a networked world. There are more than 1 300 employees in Digia. Digia's roots are in Finland, but it also has international customers. (Digia 2022a.) Digia's key figures are from the ended financial year 2021. The enterprise value was € 199 million, their revenue was € 155.9 million, their EBITDA was € 22 million, and their EBIT was € 14.7 million. (Digia 2022b.)

Gofore is a Finnish software and service company providing assistance to organizations to bring new technologies from ideas to use. (Gofore 2022a.) Gofore's key figures are from the ended financial year 2021. The EV was € 336 million, their revenue was € 104.5 million, EBITDA was € 17.1 million, and their EBIT was € 14.7 million. (Gofore 2022b.)

Tietoevry provides its customers with cloud services, IT services and systems, which it also develops and maintains. It also offers, for example, financial services. (Tietoevry 2022a) Tietoevry's key figures are from the ended financial year 2021. Their EV was € 3.9 billion, revenue was € 2.8 billion, EBITDA was € 549.2 million, and EBIT was € 382 million. (Tietoevry 2022b.)

Siili Solutions is a Finnish software and service company offering its customers digital services, such as software engineering, automation, data and intelligence, and experience design. (Siili Solutions 2022a.) Siili Solutions' key figures are from the ended financial year 2021. Their EV was € 115 million, revenue was € 99.3 million, EBITDA was € 12.2 million, and EBIT was € 7.6 million. (Siili Solutions 2022b.)

Bilot is a Finnish software and service company developing its customers' user and service interfaces. Its customers are mainly Finnish companies, such as Wärtsilä, Sanoma, Valio and YIT. (Bilot 2022a.) Bilot's key figures are from the financial year 2021 with EV € 23 million, revenue € 27.1 million, EBITDA € 0.6 million and EBIT € -0,6 million. (Bilot 2022b.)

Vincit is a Finnish software and service company offering digital services to different industries, for example, the wholesale and retail industries. It offers data-empowered digital commerce, and it provides accessible and intuitive public services for the public sector. (Vincit 2022a.) Vincit's key figures are from the financial year ended 2021, EV € 89 million, revenue € 61.5 million, EBITDA € 6.5 million and EBIT € 4.1 million. (Vincit 2022b.)

Innofactor is a Finnish software and service company providing digital solutions and services to its customers, for instance, cloud transformation and app and data modernization (Innofactor 2022a). Innofactor's key figures are from the financial year ended 2021, with EV € 63 million, revenue € 66.4 million, EBITDA € 10.5 million, and EBIT € 6.5 million. (Innofactor 2022b.)

Netum is a Finnish software and digital service company founded in 2000 that offers digital solutions and products. (Netum 2022a.) Netum's key figures are from the financial year ended 2021 with EV € 52 million, revenue € 22.4 million, EBITDA € 3 million and EBIT € 1.9 million (Netum 2022b).

Solteq is a Nordic software and service company specializing in digital business solutions and vertical software markets (Solteq 2022a). Solteq's key figures are from the financial year ended in 2021, EV € 117 million, revenue € 69.1 million, EBITDA € 12.5 million, and EBIT € 7.1 million. (Solteq 2022b).

Nixu is a Finnish-based cybersecurity company founded in 1988 (Nixu 2022a). Nixu's key figures are from the financial year ended in 2021 with EV of € 55 million, revenue of € 51.8 million, EBITDA of € 1.4 million and EBIT € -0.4 million (Nixu 2022b).

Loihde is a Finnish company that provides digital development and security solutions (Loihde 2022a). Loihde's key figures are from the financial year ended in 2021. Its EV was € 57 million, revenue € 107.2 million, EBITDA € 10 million and EBIT € -0.08 million. (Loihde 2022b.)

Company (in millions €)	EV	Sales	EBITDA	EBIT	Growth-%
Digia	199	156	22	15	12,2 %
Gofore	336	105	17	12	31,7 %
TietoEVRY	3900	2823	549	382	0,7 %
Siili Solutions	115	99	12	8	19,1 %
Bilot	23	27	1	1	48,4 %
Vincit	89	62	7	4	17,4 %
Innofactor	63	66	11	7	1,4 %
Netum	52	22	3	2	26,2 %
Solteq	117	69	13	7	15,1 %
Nixu	55	52	1		-0,3 %
Loihde	57	107	10	1	6,3 %
Median	89,0	69,1	10,5	6,5	15,1 %
Average	455,1	326,2	58,6	39,5	16,2 %
Minimum	23	22	1	1	-0,3 %
Maximum	3900	2823	549	382	48,40 %

Figure 13. Value multiples of comparable companies

In figure 13 is collected all of the comparable companies' key figures from the fiscal year ended in 2021. As we can see from Figure 13, their EVs differ from € 23 million to € 3.9 billion, the average of the EV is € 455,1 million, and the median is € 89 million.

3.2 Conclusion of the Data Collection

Company X provided information both in verbal and numeral data. The numeral data was provided as annual financial statements from years 2017 to 2021. All the information was consolidated into a single form, which gives all of the financial statements from different years of Company X together with an income statement and a balance sheet.

The interviews were conducted with members of the company's management team as well as the chairman of the board. During the course of the interviews, all of the essential ideas were captured, which included company strategy deliverables. This was done since the commissioning company is not publicly listed, and as a result, its website does not contain any of this information. This project follows the directions of the company's management on strategy deliverables and rephrases them more appealingly. The comparable companies' data was collected from their website and their annual reports ending the financial year 2021.

As a consequence of the second task of the project, the data collection gave an in-depth comprehension of the company's current financial circumstances, including its revenue rate. It made it possible to select and collect data from similar comparable companies as Company X and find the important value multiples that are needed to calculate the EV of Company X. This information is required in order to finish the calculations needed to conduct the market approach valuation that was presented in chapter 2. In the next chapter, the valuation of Company X as a going concern will be performed.

4 The Valuation of Company X

In this chapter, the information from the literature review and the financial data from chapter 3 are used to calculate the valuation of Company X as a going concern. This is project task 3.

Year	Revenues	% Change	EBITDA	% Change	EBIT	% Change	Net income	% Change
2017	5 895		337		329		201	
2018	7 240	22,8 %	-637	-289 %	-623	289,4 %	-659	-427,9 %
2019	8 067	11,4 %	286	144,9 %	250	140,1 %	156	123,7 %
2020	7 223	-10,5 %	36	-87,4 %	-130	152 %	-323	-307,1 %
2021	9 040	25,2 %	899	2397,2 %	723	656,2 %	631	295,4 %
Arithmetic average		12,2 %		541,4 %		309,4 %		-79,0 %
Geometric average		11,3 %		27,8 %		21,8 %		33,1 %
Standard deviation		16,3 %		1249,8 %		240,9 %		344,0 %

Figure 14. Company X's key value drivers

In figure 14 is presented Company X's historical key figures from the income statement and yearly change and calculated the arithmetic and geometric average, as well as the standard deviation of Company X's percentage change in the past five years. It explains the variations of the fiscal years within the company's lifecycle.

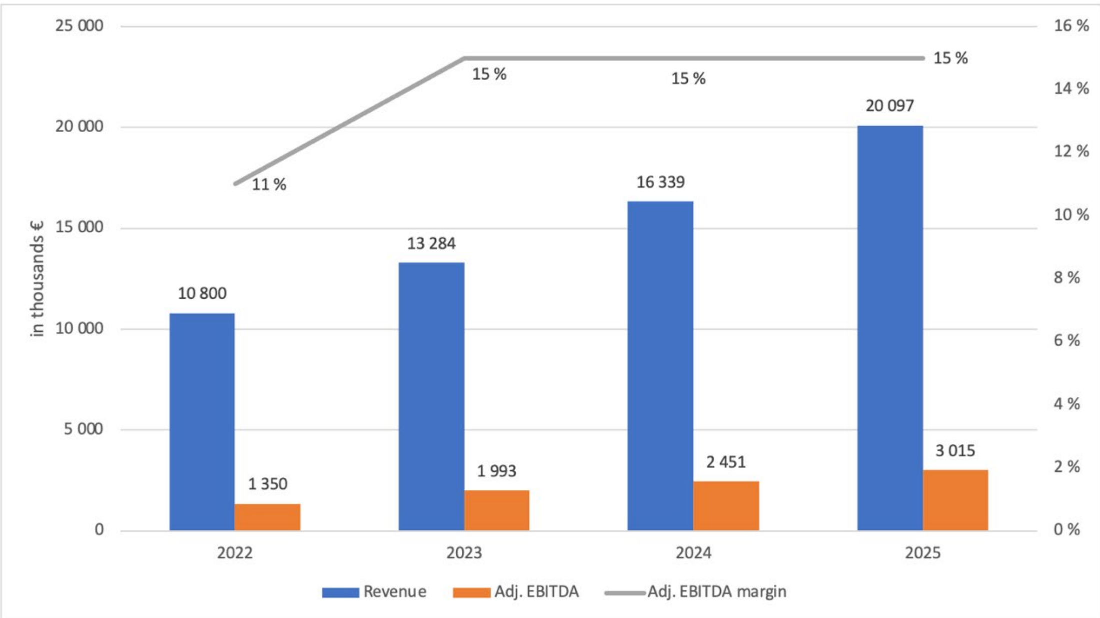

Figure 15. Company X's Forecast as a going concern

Figure 15 presents Company X's financial forecast. The forecast of revenue and adjusted EBITDA for the fiscal year ending 2022 is based on the company's own assumptions and the information that was received from the interview with the company. CAGR is 16.80 % for the upcoming years 2023 – 2025.

$$16{,}80\% = \left(\left(\frac{20\,097}{10\,800} \right)^{\frac{1}{4}} - 1 \right) x\,100$$

Figure 16. Company X's CAGR

4.1 Comparable Company Analysis

In this chapter, the comparable companies have been listed in figure 17, and their EV multiples have been calculated using the data collected from their financial statement 2021.

Company (in millions €)	EV/SALES	EV/EBITDA	EV/EBIT
Digia	1,3x	9,0x	13,5x
Gofore	3,2x	19,6x	27,5x
TietoEVRY	1,4x	7,1x	10,2x
Siili Solutions	1,2x	9,4x	15,1x
Bilot	0,8x	38,3x	23x
Vincit	1,4x	13,7x	21,7x
Innofactor	0,9x	6,0x	9,7x
Netum	2,3x	17,3x	27,4x
Solteq	1,7x	9,4x	16,5x
Nixu	1,1x	39,3x	-
Loihde	0,5x	5,7x	57x
Median	1,3x	9,4x	19,1x
Average	1,4x	15,9x	22,2x
Minimum	0,5x	5,7x	9,7x
Maximum	3,2x	39,3x	57x

Figure 17. Comparable companies' multiples

Figure 17 shows the selected comparable companies. Their multiples have been calculated by dividing their enterprise value by the key value drivers, Sales, EBITDA, and EBIT. As can be seen from figure 15, the multiples vary a lot. The comparable companies are valued at EV/Sales multiples in the range of 0.5x to 3.2x, meaning that the companies invested in the capital on median and average are market valued at 1.3x and 1.4x.

Company X value multiples	EV/SALES	EV/EBITDA	EV/EBIT
The median of the comparable companies	1,3x	9,4x	19,1x
x Company X's value driver (in millions €)	9	0,9	0,7
= Enterprise value (EV)	11,7	8,5	13,4

Figure 18. Calculation of Enterprise value of Company X

Figure 18 shows the calculations of enterprise value using the median of the comparable companies, which is presented in figure 17. Figure 18 shows that enterprise value is subject to change depending on what EV multiple is in question. As stated earlier, the company should use EV/EBITDA multiple as the factor if it has leasing agreements. Company X has leasing agreements, which are presented as leasing liabilities in figure 19 below.

Valuation	2017A	2018A	2019A	2020A	2021A
Net revenue	5 895	7 240	8 067	7 723	9 040
EBITDA	337	-637	286	36	899
EBITDA %	5,7 %	-8,8 %	3,6 %	0,5 %	9,9 %
Adjustments					
Strategy and brand work					65
VTT SEED -partnership					5
The costs of terminating employment contracts					31
Owner salary adjustment					162
Adjusted EBITDA					**1 162**
Adjusted EBITDA %					**12,9 %**
x EBITDA					9,4X
Enterprise value (EV)					**10 922**
Cash in hand and at banks (+)					392
Financial securities (+)					44
Loans receivable (+)					283
Properties (+)					0
Short-term interest to creditors (-)					436
Long-term interest to creditors (-)					0
Leasing responsibilities (-)					286
Adjusted operating working net capital (+/-)					n/a
Market value of equity					**10 919**

Figure 19. Company X’s valuation

The adjusted EBITDA of Company X for the fiscal year 2021 was € 1.162 million. The largest adjustment consists of the company's main owner's salary of € 162 thousand, which has been adjusted to match the salary level of a senior salesperson. In the potential target state of Company X, the principal owner might not be continuing in the company after a potential acquisition, in which case the adjustment is well justified. In addition, the adjustments include one-off brand and strategy work costs of € 64.72 thousand, as well as the costs of terminating employment contracts, which was € 31 thousand and the VTT SEED partnership of € 5 thousand. The large amount of short-term interest to creditors can be explained by the fact that the financial statement describes the figures from a certain day, which might not accurately represent the number of short-term interests on average. However, the leasing responsibilities of € 286 thousand are reasonably high in relation to company revenue, as was discussed in the interview with Company X’s manager.

In Company X’s valuation, a 9.4x EBITDA value multiple has been applied, which is based on the value multiple EV/EBITDA median of the comparable companies in figure 17. Calculating the enterprise value, the adjusted EBITDA of the fiscal year ended 2021 has been used, which was € 1.162 million. Company X's EV is then € 10.922 million. The Company X market value equity is € 10.919 million. The EV/SALES multiple would then be 1.2x. It is calculated by dividing Company X's EV by its sales in 2021.

Company X's EV = € 10.922 million
Company X's sales in 2021 = € 9.040 million
EV/SALES = € 10.922 / € 9.040 = 1.2

The EV/SALES multiple is reasonably well in line with the multiples of the comparable companies. According to the calculation presented, the value of the company's equity is € 10.919 million, which serves as a target valuation in the thesis and with the company's own predictions.

4.2 Interpret of the Results

The value of equity at Company X is estimated to be € 10.919 million, while the value of EV is € 10.922 million. This optimistic estimation provides prospective investors and the management of the company with a favorable impression regarding the success of the company as a going concern.

Company X's cost structure is heavy compared to revenue because personnel expenses, that is wages and pension expenses, are so high. It may affect the interest of investors because personnel expenses are difficult to decrease, especially when this is a people-intensive business.

The EV of Company X is smaller than any of the comparable companies' EVs. This can be explained by the fact that Company X is smaller in terms of sales. However, this does not mean that Company X is a less eligible acquisition candidate or an investment opportunity.

Company X's EV/Sales multiple was 1.2x, which is in line with the comparable companies. So, as Hayes (2021) states, Company X might be more appealing to investors if its EV/sales multiple is low since it may be relatively undervalued. In this case, the company's historical and future forecasts were combined to receive the goal of this thesis, which was the valuation of Company X as a going concern. As a result, we can conclude that Company X's valuation was successful.

5 Conclusion

The aim of this project was to provide an estimation of Company X's value as a going concern. As Frykman & Tolleryd (2009) mention, company valuation is vital for an entrepreneur to understand, as it reflects the current state and future potential of the company and therefore enables the company to increase its value. This was the basis when planning and writing this thesis: providing Company X with an estimation of its value so that the company could better understand their current situation, as well as prepare for future events, such as potential mergers or acquisitions.

As Company X is a non-listed company, the valuation was done using the market approach method, which meant using comparable companies to calculate the Company X enterprise value. When using the market approach valuation, one of the most crucial parts is selecting suitable comparable companies (Bernström 2014, 47), which is why a key task was finding the right companies for the analysis. After collecting a list of comparable companies, it was possible to conduct the valuation of Company X.

5.1 Key Findings

This project was implemented by collecting and receiving data from Company X through financial statements and interviews.

The first project task was to create a theoretical framework and use that as a base to build the foundation for this project and answer the question of what is theoretically the process of a privately held company valuation. This part also introduced the company and its industry.

The second project task was collecting financial and relevant data from the commissioning company relevant to the project. The collection of financial data included collecting the necessary historical financial statements from the past five years, such as income statements and balance sheets. Other relevant information from the commissioning company was collected by conducting interviews with the company. It also included finding and selecting the comparable companies and collecting financial data from them. All the information for this project task was collected from reliable sources, from e-books and companies' own financial statements. The project's key components, such as market approach valuation, comparable company analysis, and value multiples were presented in further detail. The outcome of the second task was having all the necessary data to start the process of a company valuation.

The third project task was to calculate the company valuation. For that, the calculation formulas from the theoretical literature and the data collected from the company were used. First, the company's financial situation in the past was presented by providing income statements and balance sheets from 2017 to 2021. From the historical performance, forecasts were made for five years, where a 16.80 % compound annual growth rate was examined. After that, the market approach valuation process, including comparable companies method, was applied to assess the company. Following several calculations, the median value multiples for comparable companies were determined, and Company X's enterprise value (EV) and market value of equity were valued at € 10.922 million and € 10.919 million, respectively. The following valuation advises the company to reduce short-term interest and leading responsibilities in order to improve its financial status.

5.2 Recommendations

A recommendation for Company X's management team is to make a careful analysis of their historical financial statement and see what liabilities and costs could be reduced in order to increase their financial situation. A further recommendation, if the company is pursuing or intends to launch IPO or find investors, is to perhaps conduct another valuation using the different valuation method to give perspective to their actual company value.

All in all, it would be recommended for the company to use this project as an indicator of their enterprise value and set targets for the company's future growth to be more successful and competitive. The company should check their additional costs, such as leasing costs, and see if they are too high and if those could be repaired to increase the EV.

5.3 Evaluation of Project Management and Outcomes

The quality and success of project management in this project-based thesis were relatively successful. All project tasks were achieved, and valid outcomes were presented to them. In order to improve the process, the theoretical framework could be broader, and perhaps use another company valuation approach as well, to receive more in-depth results of the valuation and give variation than using only one method. This should be remembered in the future when planning projects like this to ensure that the theoretical framework is carefully designed for the research problem and objectives. When asked for feedback from the commissioning company, they said that they find the results useful and agreed with the recommendations.

5.4 Further Research and Projects

The valuation study of privately held companies can be used in a variety of different ways in initial public offerings (IPOs) or in the case of mergers and acquisitions. This project could be continued to calculate Company X's terminal value of discounted cash flow. One could deep dive into investigating what Company X's primary assets are and how they differ from competitors and focus on the competitive advantage of the competitors in order to win the markets.

5.5 Reflection

Through the process of researching literature and conducting calculations in this project, I have learned how to execute a non-listed company valuation. It has been interesting to be able to apply things I have learned into practice and familiarize myself with real-life company valuation. Working with a commissioning company has been an excellent opportunity for this thesis project and for my own interests in working in the finance field in the future. Especially interviews with the company management were really inspiring. Even though this project taught me a lot, it also motivated me to learn even more about finance and motivated me to continue studying the subject.

In addition, writing this thesis has taught me for example time management and process planning. During the writing process, I have had to ensure that I am using my time efficiently and focusing on the right aspects in each phase of the process. As this was my first time doing work such as this alone, it has been rewarding to see that I am able to execute a project that requires long-term planning and focus. All in all, I am sure that this process has taught me many skills that will be useful in the future, both in school and work life.

Sources

Badiru, A. B. & Lamont, G. 2021. Innovation Fundamentals: Quantitative and Qualitative Techniques. CRC Press. Oxon. E-book. Accessed: 22 October 2022.

Bernström, S. 2014. Valuation: The Market Approach. John Wiley & Sons Ltd. Chichester. E-book. Accessed: 15 October 2022.

Bilot. 2022a. About Us. URL: https://bilot.group/about-us/. Accessed: 19 October 2022.

Bilot. 2022b. Key figures. URL: https://bilot.group/investors/key-figures/. Accessed: 19 October 2022.

Corelli, A. 2017. Inside Company Valuation. Springer Cham International Publishing. E-book. Accessed: 21 March 2022.

Cote, C. 2021. Data Collection Methods in Business Analytics. Harvard Business School Online. URL: https://online.hbs.edu/blog/post/data-collection-methods. Accessed: 26 March 2022.

Damodaran, A. 2005. Marketability and Value: Measuring the Illiquidity Discount. Stern School of Business. URL: https://pages.stern.nyu.edu/~adamodar/pdfiles/papers/liquidity.pdf. Accessed: 24 October 2022.

Damodaran, A. 2006. Damodaran on Valuation. John Wiley & Sons, Inc. Hoboken. E-book. Accessed: 18 October 2022.

Damodaran, A. 2012. Investment Valuation: Tools and Techniques for Determining the Value of Any Asset. 3rd ed. John Wiley & Sons, Inc. Hoboken. E-book. Accessed: 19 October 2022.

De Luca, P. 2018. Analytical Corporate Valuation Fundamental Analysis, Asset Pricing, and Company Valuation. Springer Cham International Publishing. E-book. Accessed: 20 October 2022.

DePamphilis, D. 2012. Mergers, Acquisitions, and Other Restructuring Activities. 6th ed. Elsevier Inc. Oxford. E-book: Accessed: 17 October 2022.

Digia. 2022a. Yritys. URL: https://digia.com/yritys/. Accessed: 19 October 2022.

Digia. 2022b. Financial Statement Bulletin 2021. URL: https://digia.com/globalassets/sijoit-tajat/raportit-ja-presentaatiot/2022/digia_financial-statement-bulletin_2021.pdf. Accessed: 19 October 2022.

Fernando, J. 2022. Compound annual growth rate (CAGR) Formula and calculation. Investopedia. https://www.investopedia.com/terms/c/cagr.asp. Accessed: 21 October 2022.

Frykman, D. & Tolleryd, J. 2009. The Financial Times Guide to Corporate Valuation. Pearson Business. Edinburgh Gate. E-book. Accessed: 20 March 2022.

Goedhart, M. H., Koller, T. & Wessels, D. 2015. Valuation: Measuring and Managing the Value of Companies. 6th edition. John Wiley & Sons, Inc. Hoboken. E-book. Accessed: 1 April 2022.

Gofore. 2022a. About Us. URL: https://gofore.com/en/. Accessed: 19 October 2022.

Gofore. 2022b. Gofore Annual Report 2021. URL: https://gofore.com/wp-content/uploads/sites/2/2022/02/gofore-plc-annual-report-2021-1.pdf. Accessed: 19 October 2022.

Innofactor. 2022a. What We Do. URL: https://www.innofactor.com. Accessed: 22 October 2022.

Innofactor. 2022b. Annual Report 2021. URL: https://www.innofactor.com/globalassets/documents/investor-page-documents/annual-reports/innofactor-plc-annual-report-2021.pdf. Accessed: 22 October 2022.

Kerstin, D. 2014. Private Firm Valuation and M&A: Calculating Value and Estimating Discounts in the New Market Environment. John Wiley & Sons, Ltd. Croydon. E-book. Accessed: 27 October 2022.

Loihde. 2022a. About Us. URL: https://www.loihde.com/en/about-us/. Accessed: 19 October 2022.

Loihde. 2022b. Annual Report 2021. URL: https://www.loihde.com/wp-content/uploads/sites/2/2022/03/Loihde_Annual-Report-2021.pdf. Accessed: 19 October 2022.

Netum. 2022a. URL: https://www.netum.fi/en/. Accessed: 19 October 2022.

Netum. 2022b. Annual Report 2021. URL: https://www.netum.fi/wp-content/uploads/2022/04/NETUM-Annual-Report-2021.pdf. Accessed: 19 October 2022.

Nixu. 2022a. About. URL: https://www.nixu.com/about. Accessed 19 October 2022.

Nixu. 2022b. Annual Report 2021. URL: https://www.nixu.com/sites/default/files/releases/files/Nixu_Annual_Report_2021.pdf. Accessed: 19 October 2022.

Rosenbaum, J. 2022. Investment Banking: Valuation, LBOs, M&A, and IPOs (Book + Valuation Models). John Wiley & Sons, Incorporated. E-book. Newark. Accessed: 02 November 2022.

Seppänen, H. 2017. Yrityksen arvonmääritys. Alma Talent. Helsinki. E-book. Accessed: 26 October 2022.

Siili Solutions. 2022a. What we do. URL: https://www.siili.com/services. Accessed: 19. October 2022.

Siili Solutions. 2022b. Taloudelliset tiedotteet ja vuosikertomukset. URL: https://sijoittajille.siili.com/taloudelliset-tiedotteet-vuosikertomukset. Accessed: 19 October 2022.

Solteq. 2022a. Company. URL: https://www.solteq.com/en/company. Accessed 19 October 2022.

Solteq. 2022b. Annual Report 2021. URL: https://484933.fs1.hubspotusercontent-na1.net/hubfs/484933/solteqcom/Global/Financial%20Reports/Financial%20Reports%202021/2021-EN-Solteq-Annual-Report.pdf. Accessed: 19 October 2022.

Sterling, R. 1968. The Going Concern: An Examination. The Accounting Review. American Accounting Association, pp. 481-502.

Tietoevry. 2022a. Meistä. URL: https://www.tietoevry.com/fi/meista/tietoevry-lyhyesti/. Accessed: 19 October 2022.

Tietoevry. 2022b. Financial Review 2021. URL: https://www.tietoevry.com/en/SysSiteAssets/files/sustainability/tietoevry2021_financial_review.pdf. Accessed: 19 October 2022.

Vincit. 2022a. Offering. URL: https://www.vincit.com. Accessed 19 October 2022.

Vincit .2022b. Toimintakertomus ja tilinpäätös 2021. URL: https://inderes-ir-pages-dev-assets.storage.googleapis.com/vincit/documents/Toimintakertomus-ja-tilinpaatos-2021.pdf. Accessed: 19 October 2022.

Appendices

Appendix 1. Income statement 2018

TULOSLASKELMA	1.1.2018-31.12.2018	1.1.2017-31.12.2017
LIIKEVAIHTO	7 240 355,83	5 895 464,74
Liiketoiminnan muut tuotot	0,00	0,00
Materiaalit ja palvelut		
Aineet, tarvikkeet ja tavarat	-12 221,90	0,00
Ulkopuoliset palvelut	-6 700,00	-40 298,32
Yhteensä	-18 921,90	-40 298,32
Henkilöstökulut		
Palkat ja palkkiot	-4 927 228,01	-3 532 627,56
Henkilösivukulut		
Eläkekulut	-945 446,92	-691 610,90
Muut henkilösivukulut	-151 904,05	-138 884,86
Yhteensä	-6 024 578,98	-4 363 123,32
Poistot ja arvonalentumiset		
Suunnitelman mukaiset poistot	-5 093,71	-7 556,20
Yhteensä	-5 093,71	-7 556,20
Liiketoiminnan muut kulut	-1 834 024,32	-1 154 120,33
LIIKEVOITTO / -TAPPIO	-642 263,08	330 366,57
Rahoitustuotot ja -kulut		
Muut korko- ja rahoitustuotot		
Muilta	2 177,73	0,00
Yhteensä	2 177,73	0,00
Korkokulut ja muut rahoituskulut		
Muille	-24 780,13	-51 813,87
Yhteensä	-24 780,13	-51 813,87
Rahoitustuotot ja -kulut yhteensä	-22 602,40	-51 813,87
VOITTO / TAPPIO ENNEN TILINPÄÄTÖSSIIRTOJA JA VEROJA	-664 865,48	278 552,70
Tuloverot		
Tilikauden verot	0,00	-66 913,43
Aikaisempien tilikausien verot	5 481,45	-9 718,24
TILIKAUDEN VOITTO / TAPPIO	**-659 384,03**	**201 921,03**

Appendix 2. Balance sheet 2018

TASE	31.12.2018	31.12.2017
VASTATTAVAA		
OMA PÄÄOMA		
Osakepääoma	8 000,00	8 000,00
Edellisten tilikausien voitto (-tappio)	792 755,67	790 834,64
Tilikauden voitto (-tappio)	-659 384,03	201 921,03
OMA PÄÄOMA YHTEENSÄ	141 371,64	1 000 755,67
VIERAS PÄÄOMA		
Lyhytaikainen		
Lainat rahoituslaitoksilta	485 054,87	19 706,27
Ostovelat	619 231,73	204 364,95
Muut velat	443 581,54	418 111,70
Siirtovelat	1 078 339,50	980 630,32
Yhteensä	2 626 207,64	1 622 813,24
VIERAS PÄÄOMA YHTEENSÄ	2 626 207,64	1 622 813,24
VASTATTAVAA YHTEENSÄ	**2 767 579,28**	**2 623 568,91**

TASE	31.12.2018	31.12.2017
VASTAAVAA		
PYSYVÄT VASTAAVAT		
Aineettomat hyödykkeet		
Liikearvo	0,00	416,63
Yhteensä	0,00	416,63
Aineelliset hyödykkeet		
Koneet ja kalusto	14 031,23	17 668,51
Muut aineelliset hyödykkeet	1 900,00	1 900,00
Yhteensä	15 931,23	19 568,51
Sijoitukset		
Muut osakkeet ja osuudet	4 900,00	335 277,62
Yhteensä	4 900,00	335 277,62
PYSYVÄT VASTAAVAT YHTEENSÄ	20 831,23	355 262,76
VAIHTUVAT VASTAAVAT		
Saamiset		
Pitkäaikaiset		
Lainasaamiset	156 399,44	174 669,44
Muut saamiset	5 200,00	9 055,00
Yhteensä	161 599,44	183 724,44
Lyhytaikaiset		
Myyntisaamiset	1 724 786,67	1 446 480,48
Lainasaamiset	548 055,84	518 141,15
Muut saamiset	2 100,00	2 600,00
Siirtosaamiset	96 155,50	67 765,04
Yhteensä	2 371 098,01	2 034 986,67
Rahat ja pankkisaamiset	214 050,60	49 595,04
VAIHTUVAT VASTAAVAT YHTEENSÄ	2 746 748,05	2 268 306,15
VASTAAVAA YHTEENSA	**2 767 579,28**	**2 623 568,91**

Appendix 3. Income statement 2019

Rahayksikkö EURO	1.1.2019 - 31.12.2019	1.1.2018 - 31.12.2018
LIIKEVAIHTO	**8 067 316,30**	**7 375 783,85**
Valmiiden ja keskeneräisten tuotteiden		
Valmistus omaan käyttöön (+)	141 238,87	0,00
Liiketoiminnan muut tuotot	1 300,00	0,00
Materiaalit ja palvelut		
Aineet, tarvikkeet ja tavarat		
Ostot tilikauden aikana	-77 139,77	-12 221,90
Ulkopuoliset palvelut	-76 682,06	-6 700,00
Materiaalit ja palvelut yhteensä	-153 821,83	-18 921,90
Henkilöstökulut		
Palkat ja palkkiot	-5 242 518,99	-4 927 228,01
Henkilösivukulut		
Eläkekulut	-747 332,39	-945 446,92
Muut henkilösivukulut	-262 561,41	-151 904,05
Henkilöstökulut yhteensä	-6 252 412,79	-6 024 578,98
Poistot ja arvonalentumiset		
Suunnitelman mukaiset poistot	-36 897,55	-5 093,71
Liiketoiminnan muut kulut	-1 517 178,91	-1 834 024,32
LIIKEVOITTO (-TAPPIO)	**249 544,09**	**-506 835,06**
Rahoitustuotot ja -kulut		
Muut korko- ja rahoitustuotot		
Muilta	0,09	2 177,73
Korkokulut ja muut rahoituskulut		
Muille	-93 675,16	-24 780,13
Rahoitustuotot ja -kulut yhteensä	-93 675,07	-22 602,40
VOITTO (TAPPIO) ENNEN TILINPÄÄTÖS-SIIRTOJA JA VEROJA	**155 869,02**	**-529 437,46**
Tuloverot		
Tilikauden verot	0,00	5 481,45
Tuloverot yhteensä	0,00	5 481,45
TILIKAUDEN VOITTO (TAPPIO)	**155 869,02**	**-523 956,01**

Appendix 4. Balance sheet 2019

Rahayksikkö EURO	31.12.2019	31.12.2018
VASTAAVAA		
PYSYVÄT VASTAAVAT		
Aineettomat hyödykkeet		
Kehittämismenot	112 991,10	0,00
Aineettomat hyödykkeet yhteensä	112 991,10	0,00
Aineelliset hyödykkeet		
Koneet ja kalusto	25 949,34	14 031,23
Muut aineelliset hyödykkeet	1 900,00	1 900,00
Aineelliset hyödykkeet yhteensä	27 849,34	15 931,23
Sijoitukset		
Muut osakkeet ja osuudet	4 900,00	4 900,00
Sijoitukset yhteensä	4 900,00	4 900,00
PYSYVÄT VASTAAVAT YHTEENSÄ	**145 740,44**	**20 831,23**
VAIHTUVAT VASTAAVAT		
Saamiset		
Pitkäaikaiset		
Muut saamiset	161 599,44	161 599,44
Pitkäaikaiset yhteensä	161 599,44	161 599,44
Lyhytaikaiset		
Myyntisaamiset	1 785 080,73	1 892 717,36
Lainasaamiset	335 713,48	548 055,84
Muut saamiset	2 106,20	2 100,00
Siirtosaamiset	94 783,15	96 155,50
Lyhytaikaiset yhteensä	2 217 683,56	2 539 028,70
Rahat ja pankkisaamiset	387 518,88	214 050,60
VAIHTUVAT VASTAAVAT YHTEENSÄ	**2 766 801,88**	**2 914 678,74**
VASTAAVAA YHTEENSÄ	**2 912 542,32**	**2 935 509,97**

Appendix 5. Income statement 2021

	1.1.2021 - 31.12.2021	1.1.2020 - 31.12.2020
LIIKEVAIHTO	9 039 741,57	7 222 942,61
Valmistus omaan käyttöön	0,00	635 970,16
Liiketoiminnan muut tuotot	10 415,45	112 589,65
Materiaalit ja palvelut		
Aineet, tarvikkeet ja tavarat		
Ostot tilikauden aikana	0,00	-459,69
Ulkopuoliset palvelut	-561 223,82	-320 241,51
Materiaalit ja palvelut yhteensä	-561 223,82	-320 701,20
Henkilöstökulut		
Palkat ja palkkiot	-5 049 425,04	-4 986 727,65
Henkilösivukulut		
Eläkekulut	-880 965,29	-864 774,69
Muut henkilösivukulut	-180 469,36	-257 405,03
Henkilöstökulut yhteensä	-6 110 859,69	-6 108 907,37
Poistot ja arvonalentumiset		
Suunnitelman mukaiset poistot	-175 414,76	-166 664,90
Poistot ja arvonalentumiset yhteensä	-175 414,76	-166 664,90
Liiketoiminnan muut kulut	-1 528 199,11	-1 505 518,92
LIIKEVOITTO(-TAPPIO)	674 459,64	-130 289,97
Rahoitustuotot ja -kulut		
Tuotot muista pysyvien vastaavien sijoituksista		
Muilta	1 966,39	584,72
Muut korko-ja rahoitustuotot		
Muilta	5,48	304,83
Korkokulut ja muut rahoituskulut		
Muille	-43 540,39	-194 656,77
Rahoitustuotot ja -kulut yhteensä	-41 568,52	-193 767,22
VOITTO(TAPPIO) ENNEN TILINPÄÄTÖSSIIRTOJA JA VEROJA	632 891,12	-324 057,19
Tuloverot	-40 593,39	1 450,11
TILIKAUDEN VOITTO(TAPPIO)	592 297,73	-322 607,08

Appendix 6. Balance sheet 2021

	31.12.2021	31.12.2020
VASTATTAVAA		
OMA PÄÄOMA		
Osakepääoma		
Osakepääoma	8 000,00	8 000,00
Osakepääoma yhteensä	8 000,00	8 000,00
Edellisten tilikausien voitto (tappio)	-97 546,37	337 560,71
Tilikauden voitto (tappio)	592 297,73	-322 607,08
OMA PÄÄOMA YHTEENSÄ	502 751,36	22 953,63
VIERAS PÄÄOMA		
Lyhytaikainen		
Lainat rahoituslaitoksilta	436 233,27	383 754,41
Saadut ennakot	0,00	5 955,08
Ostovelat	229 278,56	114 386,66
Muut velat	941 506,91	1 400 122,94
Siirtovelat	1 034 148,15	1 087 064,35
Lyhytaikainen yhteensä	2 641 166,89	2 991 283,44
VIERAS PÄÄOMA YHTEENSÄ	2 641 166,89	2 991 283,44
VASTATTAVAA YHTEENSÄ	3 143 918,25	3 014 237,07

	31.12.2021	31.12.2020
VASTAAVAA		
PYSYVÄT VASTAAVAT		
Aineettomat hyödykkeet		
Kehittämismenot	438 077,70	593 519,46
Aineettomat hyödykkeet yhteensä	438 077,70	593 519,46
Aineelliset hyödykkeet		
Koneet ja kalusto	59 919,04	33 669,32
Muut aineelliset hyödykkeet	1 900,00	1 900,00
Aineelliset hyödykkeet yhteensä	61 819,04	35 569,32
Sijoitukset		
Muut osakkeet ja osuudet	5 175,00	5 175,00
Sijoitukset yhteensä	5 175,00	5 175,00
PYSYVÄT VASTAAVAT YHTEENSÄ	505 071,74	634 263,78
VAIHTUVAT VASTAAVAT		
Saamiset		
Pitkäaikaiset saamiset		
Muut saamiset	24 300,00	24 300,00
Pitkäaikaiset saamiset yhteensä	24 300,00	24 300,00
Lyhytaikaiset saamiset		
Myyntisaamiset	1 817 928,47	1 566 709,95
Saamiset saman konsernin yrityksiltä	6 000,00	1 000,00
Lainasaamiset	283 021,60	216 174,82
Muut saamiset	2 106,20	76 935,20
Siirtosaamiset	68 770,15	127 628,37
Lyhytaikaiset saamiset yhteensä	2 177 826,42	1 988 448,34
Saamiset yhteensä	2 202 126,42	2 012 748,34
Rahoitusarvopaperit		
Muut osakkeet ja osuudet	44 472,35	44 472,35
Rahoitusarvopaperit yhteensä	44 472,35	44 472,35
Rahat ja pankkisaamiset	392 247,74	322 752,60
VAIHTUVAT VASTAAVAT YHTEENSÄ	2 638 846,51	2 379 973,29
VASTAAVAA YHTEENSÄ	3 143 918,25	3 014 237,07