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Financial ratio analysis of Siller Auto OÜ

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TABLE OF CONTENTS

ABSTRACT

Siller Auto OÜ is a car dealership located in Viljandi, Estonia. Since the company was founded in 1991 it has grown to be one of the largest car dealerships in Southern Estonia. Always seeking to increase their market share Siller Auto had decided to extend their business by opening a new enterprise in a more favorable part of the city.

This thesis seeks to analyse the financial health of Siller Auto OÜ during years 2015-2019 using financial statements. A new close competitor of Siller Auto, Rael Autokeskus OÜ, will be used as a benchmark for a better analysis of financial statements. The two companies will be compared by using different types of financial ratios. In addition to that a vertical and horizontal analysis will be conducted with the use companies' balance sheets and income statements.

The results of the analysis indicate that Siller Auto OÜ compared to its competitor Rael Autokeskus OÜ is a company with a relatively low risk capital structure, high profitability, very liquid with lots of current assets at hand and low efficiency in terms of utilizing assets. Rael on the other hand has a high risk capital, has relatively low profitability in relation to its main activities along with relatively low liquidity compared to Siller and good utilization of assets. During the years 2015-2019 Siller Auto did relatively well from a financial perspective. Siller Auto's net revenues had increased by a total of 53.48%. Total liabilities had doubled as a result although the company still managed to keep a relatively low debt ratio due to the rise in assets

INTRODUCTION

When it comes to investing, analyzing information of financial statements is one of the most important elements in the fundamental analysis process. The vast amount of numbers found in financial statements may have an intimidating effect on investors. However, it is possible to work with those numbers in an organized fashion by the use of financial ratio analysis which is a tool that helps identify problem areas and opportunities within a company (Lessambo, 2018).

The main reason for choosing Siller Auto OÜ as the company to conduct a research on is due to the fact that the CEO of Siller Auto is the author's father. Thanks to this, the author has a lot more information and data readily available. This kind of analysis has never been made for that company before and the results gained in this research can be used to improve the company or give light to problems that could occur, possibilities to capitalize on or show the strengths and weaknesses of the company in general.

The time period that will be researched is 2015-2019. Five years of data will be sufficient to acquire precise values to be analysed. Another reason for these exact years is that an important event happened to Siller Auto as it was decided to extend the company to another, more favorable part of the town, thus another workshop was opened in addition to the previous one. There are a total of four car dealerships in the region where Siller Auto moved in so Siller will have to be able to compete with them.

Research questions

1. How does Siller Auto compare to a competitor in the region in terms of liquidity, profitability and leverage?
2. What was the financial performance of Siller and Rael during years 2015-2019?

The primary goal of this thesis is to use the annual financial statements to evaluate the financial health of Siller Auto OÜ during years 2015-2019 by the use of financial ratios, vertical and horizontal analysis.

This thesis requires certain data to be collected before it is possible to take off. Financial statements of both companies throughout the years 2015-2019 will need to be collected from

the webpage called e-krediidiinfo.ee which is the database for all the financial statements in Estonia. Methodology will need to be researched thorouhgly as there is a lot of data that will need to be defined and explained with formulas. This includes: All the financial ratios, vertical analysis and horizontal analysis. Overview of the two companies is needed for a better understanding of where exactly the ratios come from. Vertical and horizontal analysis is to be conducted and after that all the financial ratios with illustrating graphs will be analysed and empirical part will end with a discussion that gives more light to finding answers to the research questions.

Financial ratios are the main tool in this thesis as they assess four important prospects of the company: Profitability, leverage, liquidity and efficiency. Profitability ratios are used to measure a business's ability to generate profits relative to its revenue. Profitability ratios used are: Return on assets, Return on equity, operating margin and gross profit margin. Leverage ratios show how a company is financing itself. Leverage ratios used are: Debt-to-assets and long-term debt-to-assets. Liquidity ratios reveal the company's ability to clear its debts without raising any external capital. Liquidity ratios used are: Current ratio, quick ratio and cash ratio. Efficiency ratio measures how well a company is able to use its assets in order to generate revenue. The efficiency ratio to be used is: Turnover ratio. In addition to financial ratios vertical and horizontal analysis will also be used to assess the balance sheet and income statement in order to draw comparisons with the other company or between different years of financial statement data.

The thesis will consist of two chapters: Financial ratio analysis and company overview and empirical study.

The first chapter will first answer what exactly financial ratios are, who uses them and why. After that 4 types of financial ratios, profitability, leverage, liquidity and turnover are defined and explained. Every one of the financial ratios in the prior categories will be brought up and a formula of the ratio will be given. The chapter will end with an explanation of vertical and horizontal analysis.

The second chapter starts with an overview of the companies that will be analyzed. After that a horizontal and vertical analysis of the financial statements will occur. Next, will be ratio

analysis where all ratio changes throughout the years are explained with graphs illustrating the results. The chapter will end with a discussion of the data.

1. FINANCIAL RATIO ANALYSIS

This section will provide an overview of all the methods used in the research. Chapter starts with Financial statement analysis and will include the definition of financial statement analysis, what it provides and which statements will be reviewed, what they include and the limitations of financial statement analysis. Then comes the ratio analysis describing what it is, who needs it, how to use it and then all the ratio categories will be introduced with a description of every single ratio need in this thesis. Lastly, vertical and horizontal analysis section will give a definition of each tool, explain how they work, what they provide and how to use them.

1.1 Financial statement analysis

Financial statement analysis consists of reviewing and analyzing financial statements of companies in order to define companies' strengths, weaknesses, opportunities and threats which will help make better financial decisions. The statements that are reviewed are: The income statement, balance sheet. Several techniques can be used to analyze financial statements. In this thesis financial ratio analysis, horizontal analysis and vertical analysis will be used in order to evaluate the given companies.

Balance sheet

Balance sheet is part of a company's annual report that shows what the company's financial worth is in terms of book value. Balance sheet consists typically of 3 sections which are assets, liabilities and shareholders equity. Assets are divided into two: Current assets and fixed assets. Current assets show highly liquid items such as cash, accounts receivable and inventory. Those assets can tell a lot about companies liquidity. Fixed assets on the other hand include tangible assets which are assets that one can touch. Liabilities is the second section of the balance sheet. This in turn is divided into two: Short-term liabilities and long-term liabilities. This reflects companies liabilities for example: Loans, debts and borrowings. The final section is the Shareholder's equity which is considered to be the book value of the company. It is a vital measurement since it increases and decreases in relation to financial activities of the company.

For example if the company had a profit during a financial year. Then equity will be credited with net profits during the period.

Income statement

The income statement shows the revenue of the company and all the expenses that occur along with it, providing with a profit or a loss in the end. Income statement typically has 3 parts. Net sales or revenue is always the uppermost number. From there on direct costs that are related to revenue will incur which will identify gross profit. Then comes operating profit which subtracts all the indirect expenses and after that ends with net profit that subtracts interest and taxes. Important values gained from the income statement in this thesis are: Gross profit margin and operating profit margin.

Financial statements while they have many benefits there are also a number of limitations that one should be aware of before conducting a financial statement analysis. If people were to take note of these limitations then it could lead to a decline in invested funds into businesses or it can be possible that other financial analysis measures will be taken into action. First of the limitations is financial statements dependance on historical cost (Ballwieser, 2004). Transactions in the company are first recorded at their cost. This indicates that the values in assets or liabilities may change over time . For example marketable securities are changed in order to match their market values although there are items such as fixed assets that do not change. Due to that limitation, the balance sheet can be misleading for users. Next limitation is intangible assets not being recorded. There are various intangible assets that are not recorded as assets. Any of its expenditure that are made to create them are recorded as expense. It will most likely underestimate the true value of the business. Next up is the time period. Its possible that a user can misunderstand or gain a false view of financial results in a business due to random events, seasonal effects etc.. Hence why it is also more beneficial to take more financial statements into consideration to get a better picture. Next limit is that the financial statements often enough do not have any theoretical discussions linked with them and is rather displayed exclusively in numbers although there could be external reasons as to why specific numbers have changed for example. Another one of the limitations is the lack an auditor. If the financial statement has been left unaudited then there is no guarantee that the data in the financial

statement is true. Possibility of fraud is another risk that financial statement users might face. The employees in the higher ranks of the company may deliberatley alter certain values of the financial statement which would again end up in inaccurate data. The last of the limitations is that all of the financial statements report purely historical values. A company could have excellent results in one year and poor results on the next year.

1.2 Ratios analysis

Financial ratio analysis is a tool used to gain analyze and interpret the health of a company (Mohana, 2011). The information to conduct this analysis comes from the company's financial statements, typically coming from the balance sheet and income statement. Using ratio analysis gives a better look into the company's liquidity, profitability, solvency and turnover. Liquidity gives information on how well a company is able to repay their short- and long-term obligations, turnover ratios give insight into how well the company is using their assets, profitability measures company's ability to generate profit as opposed to revenue, assets and costs, leverage is used to evaluate different debt levels of the company. All this information gives information on what changes to make in the company, helping to identify a company's weaknesses, strengths and trends in different areas.

Financial ratio analysis is used by investors, analysts and also managers. Overall, ratios together provide a good, easy to understand picture of the financial health of companies and due to easy access to financial statements of companies it does not take too much effort to calculate the ratios and analyze them.

Ratio analysis can be considered as benchmarking a company. That benchmark can be compared to similar companies, industry averages or data of different financial years (Palepu and Healy, 2020). Financial ratios are calculated in numerical values and more specifically in percentages. Percentage values give financial ratios ability to be compared directly with other companies financial ratios and industry averages.

To better be able to understand and evaluate the following ratios it is necessary to have a company for a benchmark. That company will be a competitor of Siller Auto - "Rael Autokeskus". The reason for picking this company as a benchmark is that it is very similar with Siller auto OÜ. It was established in the exact same year as Siller Auto in 1991. It is also located in Viljandi and is on the same street around one hundred meters apart. The services that those two companies provide are very similar and both are one of the largest car dealerships in the city. Whilst there are differences between those two dealerships, it will be suitable for comparing the financial ratios of these two companies.

1.1.1 Profitability Ratios

One of the highest priorities in any company is its ability to make profit, making profitability ratios one of the most important of all financial ratios (Salmi, 1990). In order to measure how profitable a company is, the company can conduct a profitability ratio analysis. Profitability ratios indicate the company's ability to make a profit as a return on the funds invested. Profitability ratios show the competitive side of the company as well as how well the company manages its assets (Robinson et al. 2015). Profitability ratios are valuable when compared to ratios of other companies or industry averages. In general, a high profitability ratio value in comparison to for example a competitor on industry median means that a company is using its assets efficiently. However low profitability ratio values can mean that the company has room for improvement on utilizing its assets. There are two profitability ratios that will be used in this thesis: Return on assets and net profit margin.

Return on assets (ROA)

Return on assets indicates how much profit is generated by each unit of assets (Petersen, 2008). This ratio is useful in determining how efficiently the company is using its assets in order to generate profit. It is best used as comparison to other similar companies or results of previous years. A good return on assets will typically vary between industries.

Return on assets can be calculated by dividing total profits with average assets. It is more accurate to use average assets instead of total assets due to the fact that a company's total assets

may vary over time because of for example buying land, vehicles, change of inventory and so forth. Average assets are calculated by calculating the average between base year and the previous year. Return on assets is computed by dividing net income with average assets.

Return on equity (ROE)

Return on equity is a valuable indicator of a company's earnings performance. It shows shareholders how efficiently their funds are being used. This ratio will reveal whether a company is a profit-creator or a profit-burner and how well management can earn profits. The higher the ratio the better management is at using capital of the investors. Growth in ROE can indicate that a company is able to raise profits without the need to add new equity into business. This would also lower the ownership share of existing shareholders (Kijewska, 2016). Return on equity is calculated by dividing net income with shareholder equity.

Operating profit margin (OPM)

Operating margin shows how well the management runs the business (Fridson, 2011). It measures how much profit company makes on a dollar after paying all variable costs but before paying interest or tax. It is calculated by dividing operating income with net sales. Operating margin is calculated by dividing operating income with net sales

Gross-profit margin (GPM)

Gross-profit margin measures how much gross profit the company has generated for each dollar of revenue (Robinson, 2020). In other words gross profit margin is an indicator of how much money remains from net sales after cost of goods sold is subtracted. If gross profit margin fluctuates a lot during the years then it often indicates bad management or perhaps a company produces worse products than that of their competitors. It is calculated by deducting cost of goods sold from net sales and dividing the result by net sales.

1.1.2 Liquidity

Liquidity is one of the most vital aspects of a company. No company can survive without liquidity (Ehiedu, 2014). By definition, liquidity is an indicator of how much a company is able to turn its assets into cash. High liquidity in a company means that the company is more liquid and thus is able to cover short standing liabilities better. Liquidity management is an essential part of every business that tends to pay their current obligations of business. Those obligations

include operating and financial short term expenses. Liquidity ratios help measure a company's capability to meet its debts. It does so by comparing cash with payment obligations, more specifically the liquidity ratios can be calculated with current assets and current liabilities. Current assets mainly include available cash, receivables, inventory and raw materials whilst current liabilities are usually loans, borrowings, debts and prepayments that have a short due date. (Saleem & Rehman, 2011) While there are many liquidity ratios available for analysis, this research will use three ratios - cash ratio, current ratio and quick ratio.

Current ratio (CR)

Current ratio is linked between current assets and current liabilities. It shows us how readily available a company is to pay their current debts. Current ratio shows how many times it is possible to convert current assets into cash and cover the short term debts. Current assets are referred to as assets such as cash or its equivalents that can be converted into cash in a short time (for example within a year's time). Current liabilities are financial obligations that are repayable in a short time period. The higher the ratio the better (Babalola & Abiola, 2013).

If the current ratio is too high then it may be a sign that a company may not be using its current assets efficiently, on the other hand a low current ratio indicates that the company may not be able to cover its short-term liabilities. Current ratio is calculated by dividing all current assets with current liabilities with the following formula:

Quick ratio (QR)

Quick ratio shows the possibility to cover the company's liabilities with most readily available assets (Breuer et al., 2012). It is also known as an "acid test" due to its indication of a company's ability to pay their short-term debt at once. In contrast to the current ratio, quick ratio is very similar but with one big difference. Quick ratio does not include inventory and includes more readily available assets including cash and receivables. Inventory is excluded because it may not always be as readily available as cash or receivables due to the time it takes to sell inventory. Small quick ratio indicates low liquidity for the company(Davidson,2006). Quick ratio is calculated by dividing current assets without inventory to current liabilities which provides the following formula:

Cash ratio (CR)

Cash ratio is the most conservative of the three measures (White and Sondhi and Fried, 2002). Cash ratio focuses on how a company is able to pay its short term liabilities using only cash or cash equivalents. In contrast with the current ratio and quick ratio, the cash ratio does not include any inventory or receivables. In a scenario where a company has to immediately pay back all its current liabilities immediately, the cash ratio will display whether it is possible or not. If a company has a low cash ratio then it may not always be a serious case since it's possible a company can easily convert its other assets into cash to cover liabilities, however if the cash ratio is high then it might indicate that a company is not using its assets wisely. Cash ratio is calculated by dividing cash and its equivalents with current liabilities.

1.1.3 Solvency

Solvency, also known as leverage, is the company's ability to pay back the long-term liabilities. It depicts the financial structure of the company (Robinson et al., 2015). For instance it can also be used to evaluate long-term health of the company. Primarily it is used to see how much capital comes from debt in accordance to assets or equity for instance. Leverage ratios depict how much a company is relying on debt and equity to finance their operations. In this research two ratios that are best used will be implemented to evaluate the company: Debt-to-assets, debt-to-equity, long-term debt-to-assets and long-term debt-to-equity ratio.

Debt-to-assets ratio (D/A)

This ratio shows how much is the total amount of debt relative to all assets in the company. It is best used to compare this ratio to a similar company's ratio. It helps understand how financially stable a company is. The calculation of this ratio is including all liabilities that the company has. In general, debt-to-assets ratio measures how much of the company's assets is measured by debt in relation to equity. This formula is commonly used by creditors in order to look up the amount of debt the company already has and if the company is able to repay this debt. The higher the ratio, the greater financial risk the company has (Robinson et al., 2015). Debt-to-assets ratio can be calculated by summing up short-term-debt and long-term-debt and dividing the result by total assets.

Long-term debt-to-assets ratio (LTD/A)

The following ratio measures total long-term debts in relative to total assets (Gibson, 2012). This ratio is very similar to the previous debt-to-equity ratio. Only difference is that it does not include current liabilities. The higher this ratio, the more the company relies on external financing, in return increasing interests and declining profitability. It is calculated by dividing total long-term liabilities with total assets

1.1.4 Turnover ratios

Turnover ratios, also known as efficiency ratios, is not only used to maintain financial health of a company, but also widely used by people engaged in operational activities. Turnover ratios of the company measure how much cash is flowing from sales activities to receivable (Yadav et al., 2019). Thus it is useful in determining how efficiently the company is utilizing their assets. High asset turnover ratios are usually considered good due to the fact that it means the fixed assets are well utilized, there are no excessive current assets such as cash lying about. On the other hand a low turnover ratio would indicate that company is bad at using the assets that they have available or possibly the company is excessively liquid, meaning that there are liquid assets in the company with no purpose.

Asset turnover ratio (ATO)

Asset turnover shows how much revenue a company is able to generate from its assets (Fairfield & Yohn, 2001). This ratio can help investors or managers understand how efficiently a company is able to utilize their assets. It is best used to compare the ratio with other similar firms rather than just the company's own ratios, because different industries usually have different values. Asset turnover is calculated by dividing total sales with average assets. The higher the value, the more efficient the company is in using its assets. The number gained in the calculation more specifically shows how much money a company generates per 1 euro invested in assets.

1.3 Horizontal analysis

Horizontal analysis is a tool used to analyze financial statements. More specifically, it shows changes in the financial statements throughout the years. It can be used to compare a company's balance sheets, income statements and also its financial ratios. It is typically shown as a percentage growth/decline of a single item during different financial years. Horizontal analysis makes it easier to spot trends and different growth in financial statements. There are two formulas for horizontal analysis: Value change as a number can be measured by deducting amount in base year from amount in comparison year. A value change as a percentage can be calculated by deducting the amount in base year from the amount in comparison year and dividing the result by the amount in base year.

Generally Accepted Accounting Principles (GAAP) states that every company should hold onto the basic structure of financial statements. This is made so in order for investors, companies to be able to compare their own financial statements with other companies.. This rule is called the consistency constraint
Comparability Constraint is another rule dictated by GAAP. It states that a company's financial statement or other documentation can not be declared down in a way that they can not be compared nor evaluated with other companies in the same industry.

Trend analysis is another way to conduct horizontal analysis. It work so that a base year is chosen. Usually it is the last year or the first year of the data that is analyzed.

1.4 Vertical analysis

Vertical analysis, also known as common size analysis, is the opposite of horizontal analysis. It shows each item in the financial statement as a percentage of a certain figure. It can be used in both the balance sheet and income statement. For example in the income statement each line item is expressed as percentage of net sales (Mautz and Angell, 2006). In the balance sheet all the items are stated as a percentage of total assets meaning that it is easily possible to compare these values with other companies financial data. Overall, vertical analysis helps understand the data better and make tables easier to look at. In order to make the mos out of vertical analysis is increasing the number of statements to be analysed since then it will be easier to

spot different patterns and changes. There are two ways to calculate vertical analysis results. On the income statement it is required to divide a specific income statement item with total sales and then multiply the result by 100. On the balance sheet a balance sheet item has to be divided by total assets and in turn multiplied by 100.

The main difference between vertical analysis as opposed to horizontal analysis is that vertical analysis shows the percentage of an item as a whole whereas horizontal analysis shows a certain line's changes throughout the years.

2. Company overview and empirical study

The empirical chapter will start off with an overview of both the analyzed companies, giving a description of what they are, what they do and their history throughout years. Following that will be vertical and financial ratio analysis that start comparing financial statements of both companies using annual comparisons and also comparison with companies. Furthermore, will be ratio analysis which describe different changes that have happened throughout the given years with graphs for each of the ratios. Lastly, will be discussion where author's findings are discussed ove

2.1 Overview of Siller Auto OÜ and Rael Autokeskus OÜ

2.1.1 Siller Auto OÜ

Siller Auto OÜ is a car service and sales company, which is located in Viljandi, Estonia. Siller auto is a multi-brand firm that represents several car brands such as: Seat, Hyundai, Citröen, Isuzu and Suzuki. The company's two main activities are selling cars and repair, maintenance of cars. According to Siller Auto's financial statement of 2019, the two main activities shared respectively 50.10% and 49.90% of total net sales. In addition to that Siller Auto OÜ is also authorized by road administration of Estonia to conduct roadworthiness tests to vehicles, other minor activities include car rental and car towing service. In the year 2019, Siller Auto had 43 employees. The main objective of the company in the past years till today has been to grow and maintain their market share in Southern Estonia.

The company has 1 person in the managerial staff who is also CEO of the firm. Siller auto is a private limited company, which is what OÜ (in Estonian - osaühing) stands for. The 3 main features of a private limited company are: Shareholders are not responsible for any liabilities in the private limited company, minimum share capital is at least 2500 euros and private limited company is responsible for fulfilling its duties with all its assets.

Siller Auto was established in 1991 in Viljandi by Lembit-Ervin Juht, father of current owner of Siller Auto OÜ - Ervin Juht. The company was at first called just Siller since it was not a private limited company at the time. It was a limited company since it did not have sufficient

share capital. Later on due to changes in business law in Estonia Siller went on to be a private limited company and changed the name to Siller Auto OÜ as it is till this day. Siller started its journey in a small garage with 2 people repairing local cars in it. At some point the demand for repairing cars became larger and thus it was necessary to hire more personnel and purchase another garage. The company progressively got larger and larger by the month and in 2002 the construction of a larger car care center was completed. It provided a more comfortable and favorable service to the customers. At that point the company started to also sell cars which were at that time Suzuki and Seat. In addition to that Siller Auto received the authority to conduct roadworthiness tests from Transport Administration. In 2006 an extension of the current car care center had been completed and from that time two additional car brands were added to the pool, which were Hyundai and Isuzu. In 2008 Citroen was also added among the other car brands.

Recently in 2018 Siller Auto opened up a new agency in yet another location. The company is now renting space in another part of the town in Unistar Ärimaja (In English - Unistar business house) yet the old building is still up and active. This is the first time in history where Siller Auto OÜ has two active buildings operating in Viljandi. The reason the new location was established is because there are a lot more potential customers in that part of town as more people that may be needing car service pass by there. In conclusion, it is a more attractive place in terms of number of customers and should increase sales by a considerable amount. However the construction in the new location, moving on from one house to another, rental fees, new salaries all added up new costs. Analysing financial statements can give an overview as to whether this action will be profitable in the long run or not.

2.1.2 Rael Autokeskus OÜ

Rael Autokeskus is a car dealership located in Viljandi, Estonia. The company has grown throughout the years to become one of larger car dealerships in Viljandi. The company is the official representative of Peugeot, KIA, Renault and Dacia in Viljandi county. According to the latest released financial statement of Rael Autokeskus company's one main activity is selling cars which consists 66.51% of net sales. Other minor activities include: Selling car spare parts, repair & maintenance of cars and car rental. Rael Autokeskus has always emphasized repair and maintenance of cars regardless of what brand or age the car is. Employees are known

to be experienced in their field of expertise. The company has given special importance to having quality tools and devices which would result in a better working environment. Rael Autokeskus was established in 1991 as a joint stock company. The company's objective had since been to convert into a private limited company. In 2012 they finally met that objective and continued their business as a private limited company.

2.2 Horizontal and vertical analysis

Vertical analysis of two given companies reveal several details. On the assets side, Rael has a high percentage of current assets in relation to total assets. During 2015-2019 this percentage ranges from 83% to 95%. This in turn means fixed assets are relatively low. Judging from the financial statements of Rael the company's fixed assets are mostly machinery and tools. Siller Auto however is a lot more invested in fixed assets with an average 42% of fixed assets throughout years 2015-2019. Siller's tangible assets include land, buildings, transport, computers, machinery, tools and other tangible assets.

Liabilities vertical analysis further provides large differences between the two companies. Rael in comparison with Siller is very reliant on its debts as it has an average of 74.4% total liabilities in relation to total shareholders equity and liabilities. The value has been growing throughout the years and has peaked in 2019 with 87%. Rael's short-term liabilities have outweighed its long-term liabilities by a lot. The company's Short-term liabilities are debts to suppliers, debts to contractors and tax debts. Debts to suppliers is significantly higher than the other two and is the main reason liabilities are so high. Siller Auto on the other hand is in an opposite situation with a relatively low total liabilities and high equity instead. Equity is high due to Siller having accumulated a lot of undistributed profits, which in turn is also likely the reason for Siller's current assets being high.

On the income statement both companies have a high cost of goods sold value margin relative to net sales which is one of the characteristics of the industry they belong in. More specifically what makes COGS so high is the goods bought for resale. Maintenance and repairing of cars requires a substantial amount of spare parts to be ordered every day. One car could potentially require up to thousands of euros worth of spare parts.

Horizontal analysis allows for a better look at the exact values companies are dealing with. Looking at companies' liquidities Siller seems to be more stable. Both companies tend to have more receivables as opposed to cash. Both companies have a growth in Trend analysis shows that 2015 as a base year Rael at the end of 2017 had merely 5.16% cash and 295. Material assets in Siller have remained relatively stable with only minor changes whereas Rael had gotten rid of half their tangible assets during years 2015-2018 by 55.95% although in 2018-2019 the company's tangible assets had 377.76% increase. The tangible asset that was added to the financial statement of 2019 is stated as unfinished project/prepayment. Total assets have steadily doubled since 2015, which is further explained in the next paragraph.

Rael's total liabilities throughout the years has grown with each year and has tripled throughout 2015-2019. Short-term debts have doubled since 2015. As mentioned in the vertical analysis the company's highest debt, that has also been consistently growing, is its debt to the suppliers however in 2019 Rael also took a fair bit of loans. This is reflected in both short-term and long-term liabilities. Before 2019 the company had maintained low short-term loans although it increased by 874.62% in 2019. Long-term loans and borrowings in 2018 and 2019 went up by 320% and 346.21% respectively, which has amplified assets in 2018 and 2019. It can be linked to the increase in tangible assets mentioned in the last paragraph and also a large growth in inventory that went up 120% in 2018 and by 45% in 2019. Siller also has similarities with Rael in terms of liabilities. Short-term liabilities have steadily grown by a total of 178% from 2015 to 2019. As opposed to Rael, Siller had no long-term liabilities nor short-term loans before 2017. During the transition of expanding the company in 2017 Siller took short-term loan of 22 082 and long-term loan of 87 918 which similarly to Rael also boosted total assets by 34%.

On the income statement it is seen that both companies net sales have gradually risen throughout the years. Net sales of Siller has increased by 53.48% during 2015-2019 and Rael respectively had 35.08% growth in net sales. With increasing demand and companies getting larger several costs also have also gone up. Cost of goods sold and operating costs have grown in both companies due to increase in net sales. It is best shown when Siller expanded their business, their net sales went up by 23% in the same year. Along with it COGS and operating costs also went up by 40% and 55%. To further show net sales link with COGS and operating costs, in 2016 the net sales dropped by 5.94% and with it COGS and operating costs also dropped by 2.73% and 2.49% respectively. In the case of Rael the rise in net sales does not impact the company as much. While the given costs have risen along with net sales throughout

the years, the company's net sales consist of 66.50% selling cars which does not influence COGS or operating costs as much.

2.3 Ratio analysis

Profitability ratios

Return on assets

In terms of profitability between Siller and Rael the results vary. Rael shows meagre results during these years having negative return on assets during 2015 and 2019 and barely positive in the other years. This however is a lot more stable result than what Siller Auto has to offer. It is important to here to restate the fact that in 2017-2018 Siller made a large investment into a new building, staff, equipment and so forth. It reflects well on the graph with a -16.06% decline in ROA. The years 2015 and 2017 were periods in which Siller had earned its highest profits and as seen on the graph the utilization of ROA has also increased respectively. The peak of ROA is in 2017 where Siller had a ratio of 19.63%. This would mean that roughly for every 5 euros invested in the assets the company made a 1 euro profit.

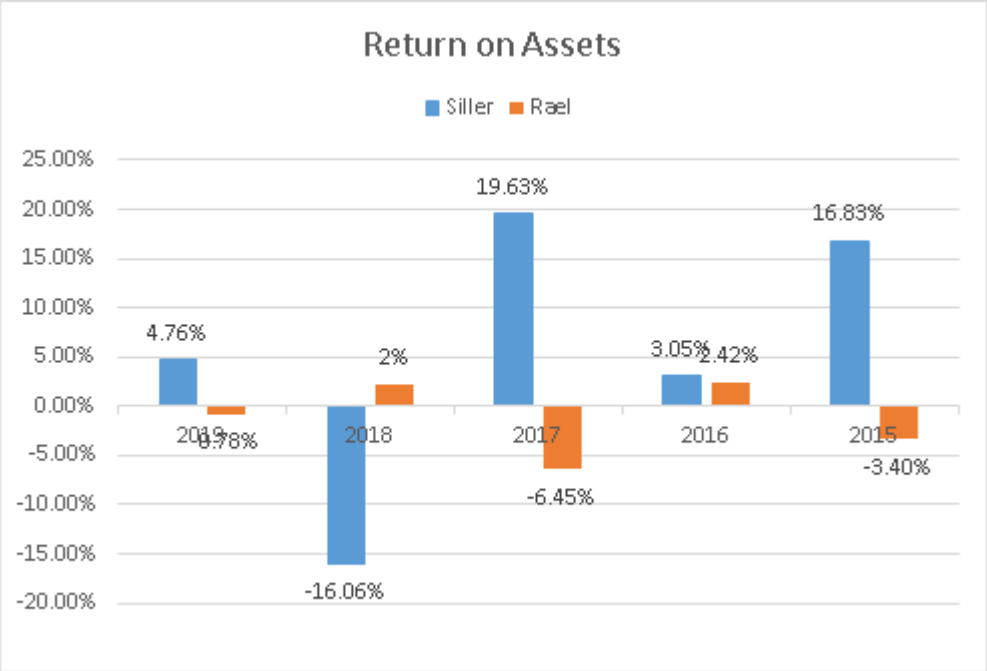

Figure 1. Return on Assets throughout 2015-2019

Source: Appendix 3, Appendix 6

Return on equity

Return on equity results are similar to ROA due to both ratios calculated in terms of net sales. Results of Siller have increased slightly whereas Rael's ROE values have been amplified by a lot due to the fact that Rael's equity values throughout the years are significantly lower due to the company financing its assets largely with debt rather than shareholders equity. Hence why Siller, a company financing its assets more with its equity rather than debts, has more similar values as in the last graph.

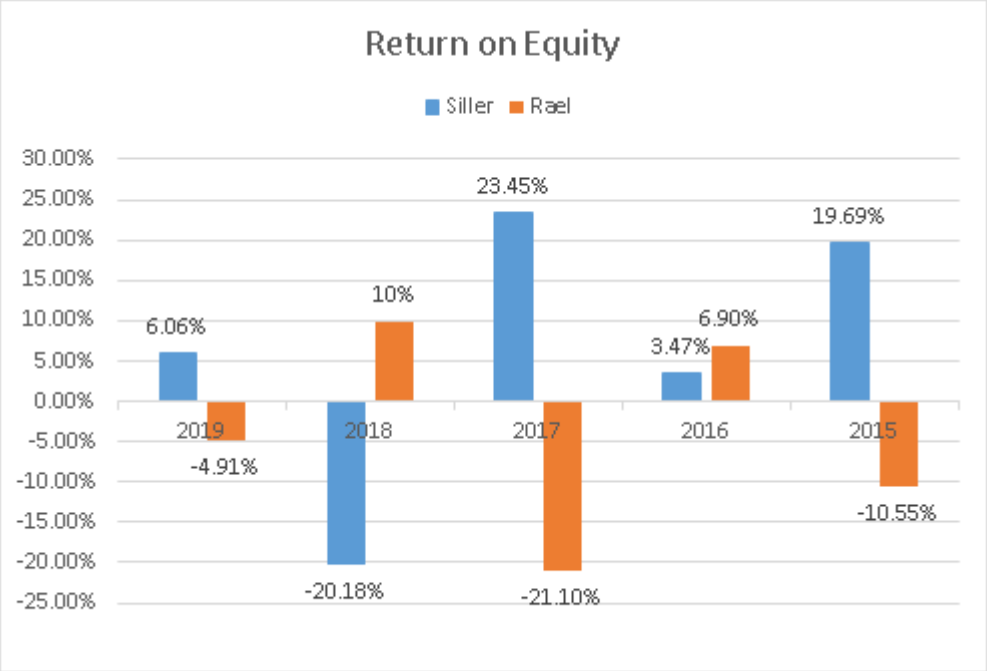

Figure 2. Return on Equity throughout 2015-2019

Source: Appendix 3, Appendix 6

Gross profit margin

Gross-profit margin shows relatively stable results from both companies. A good profit-margin value varies by industry although what is important to check is to see if there are any fluctuations throughout the years. Both companies have a relatively stable GPM throughout the years with the exception of Siller's GPM in 2017 although this can be overlooked due to the fact that the company went through many operational changes. Siller does however have a higher GPM than Rael throughout all the years with an average of 25.15% GPM throughout years 2015-2019. Rael has respectively 17.98% GPM.

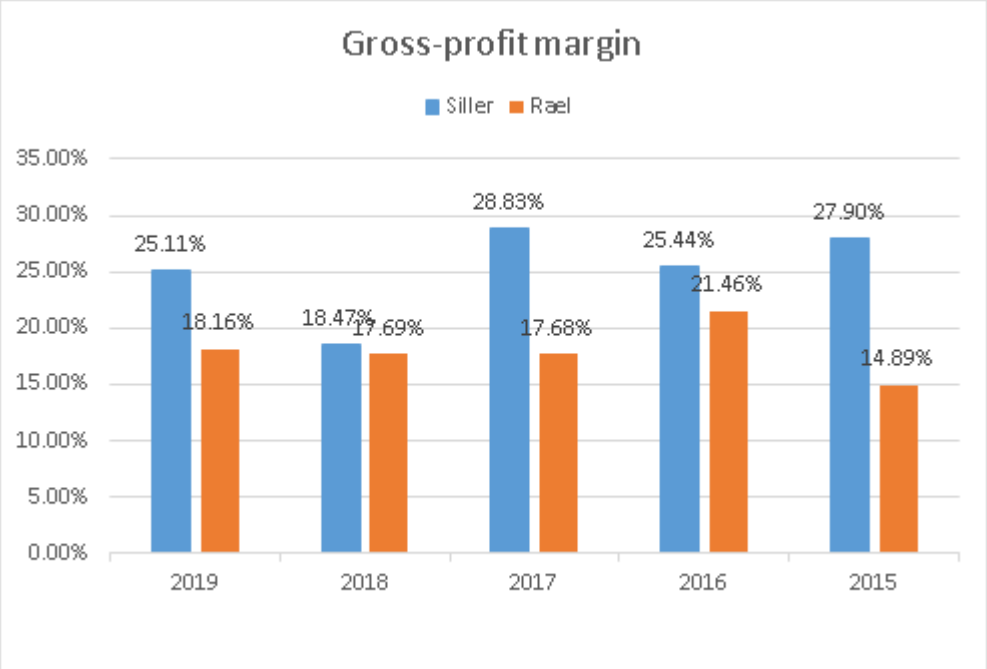

Figure 3. Gross-profit Margin throughout 2015-2019

Source: Appendix 3, Appendix 6

Operating margin

In every case, a higher operation margin is better to have. The graph shows that Siller makes more profit from its core operations in relation to total revenues. Siller has had a positive operating margin in all given years except for 2018 when the company went through a transition of opening a new branch. Operating margin does however fluctuate throught the years several times for Siller. Rael however has had more negative operating margin throughout the years, meaning that they are losing money from their core activities and rather rely on other financial income to stay in profit.

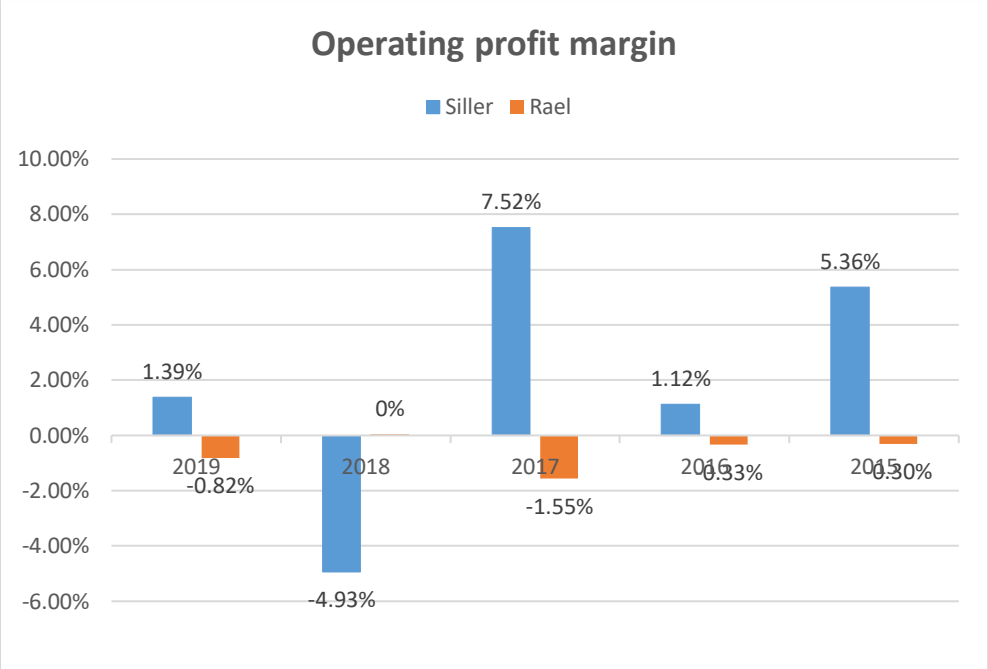

Figure 4. Operating profit margin throughout 2015-2019

Source: Appendix 3, Appendix 6

Liquidity ratios

Current ratio

Siller and Rael are very different when it comes to liquidity. Siller has a significantly higher liquidity than Rael as shown in this graph. Good current ratio is considered to be between 1.2 to 2. This can indicate that whilst Siller is able to easily cover its short-term liabilities, it may not be using its assets as efficiently as Rael does although this does not mean that Rael has a bad current ratio. On the contrary they fit in the good ratio range throughout all the years. A current ratio higher than 1 is what is needed in order for a company to be able to fully pay back its short-term liabilities.

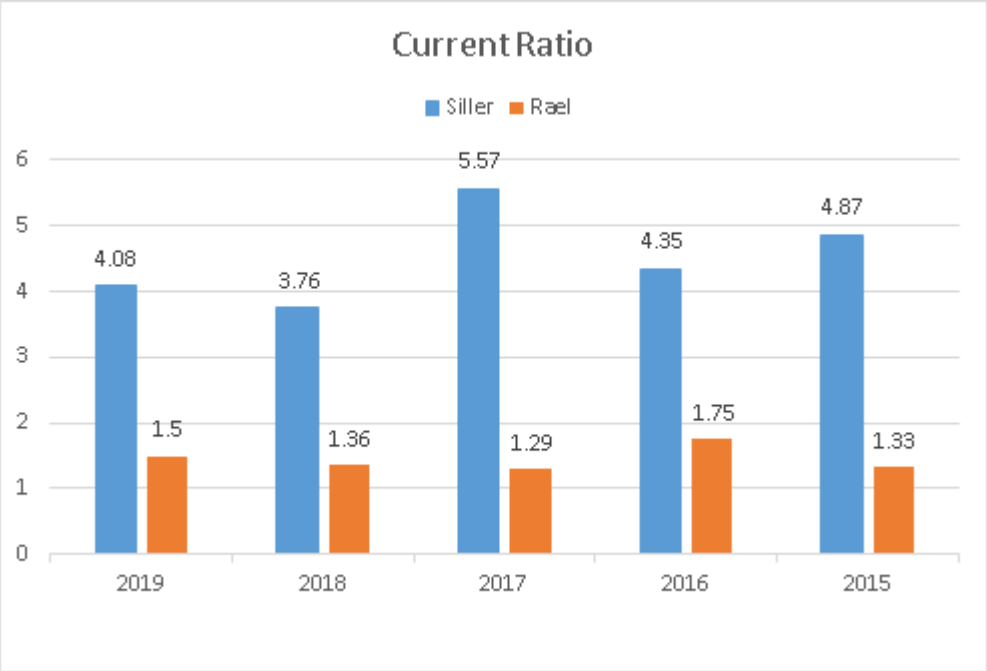

Figure 5. Current ratio throughout 2015-2019

Source: Appendix 3, Appendix 6

Quick ratio

Taking a look at the quick ratio, without selling any inventory Siller would still be able to instantly pay off all their current liabilities more than three times over. In 2017 this value is at its peak with 4.40 This however is not the case for Rael, since they have a quick ratio under 1 throughout all the given years and has a decline from 2017-2016 from 0.71 to 0.35 respectively. This means that they would not be able to cover their current liabilities without selling some of their inventory in addition to it. This however also shows the riskiness of the company because as stated in the horizontal analysis the company's liabilities had tripled by the end of 2019.

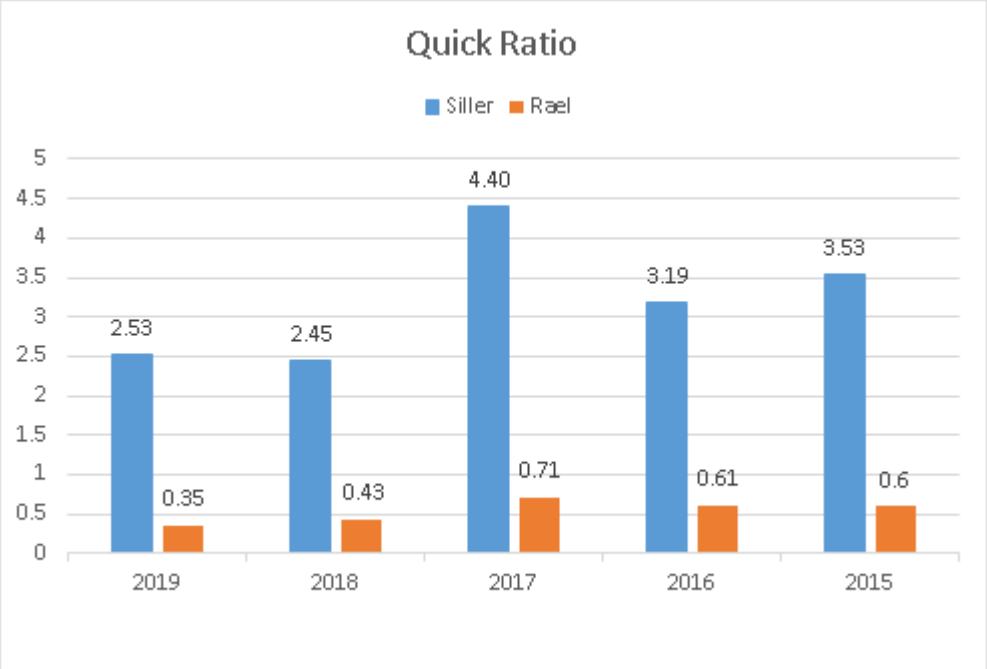

Figure 6. Quick ratio throughout 2015-2019

Source: Appendix 3, Appendix 6

Cash ratio

In terms of paying current liabilities off with only cash and its equivalents Siller unsurprisingly is able to cover liabilities better, although not completely in 2018. Compared with the last graph Rael has significantly lower values, meaning that the company has more receivables in contrast with cash. For instance looking at the year 2017 quick ratio of Rael is 0.71 and also has a cash ratio of 0.01. Siller's cash levels throughout the years are also well represented on this graph as the ratio level is at its peak in 2015 with 1.99 cash ratio. It gradually drops down to 0.50 in 2018, the year when Siller had expanded its expertise. However during the first year Siller managed to grow their cash asset up to 0.73 in 2019.

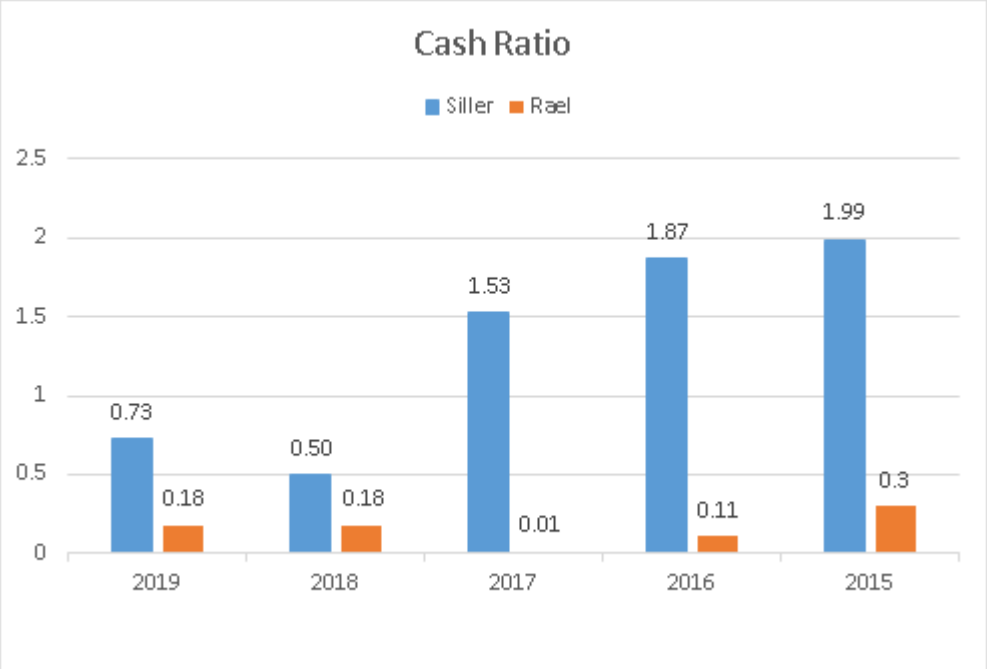

Figure 7. Cash ratio throughout 2015-2019

Source: Appendix 3, Appendix 6

Solvency ratios

Debt-to-assets

Another large difference between the companies comes in debt ratios. A good debt-to-assets ratio is considered to be lower than 0.4 whilst a bad ratio is 0.6 or above. Rael has a substantially higher debt-to-assets ratio than Siller with 63% in 2016 and progressively rising up to a grand total of 87%. Judging from this data, Rael is overleveraged and in a more riskier situation overall. The company would not be able to take much more loans. A shortage in cash flow on top of growing debts in a could mean disaster for the company. Siller on the other hand has a relatively low debt-to-assets ratio which in turn indicates that Siller finances its assets more with its shareholder's equity rather than its debts. There are similarities in the trend in accordance with Rael as the ratio has grown during the years 2015-2018 although not on as high levels as Rael.

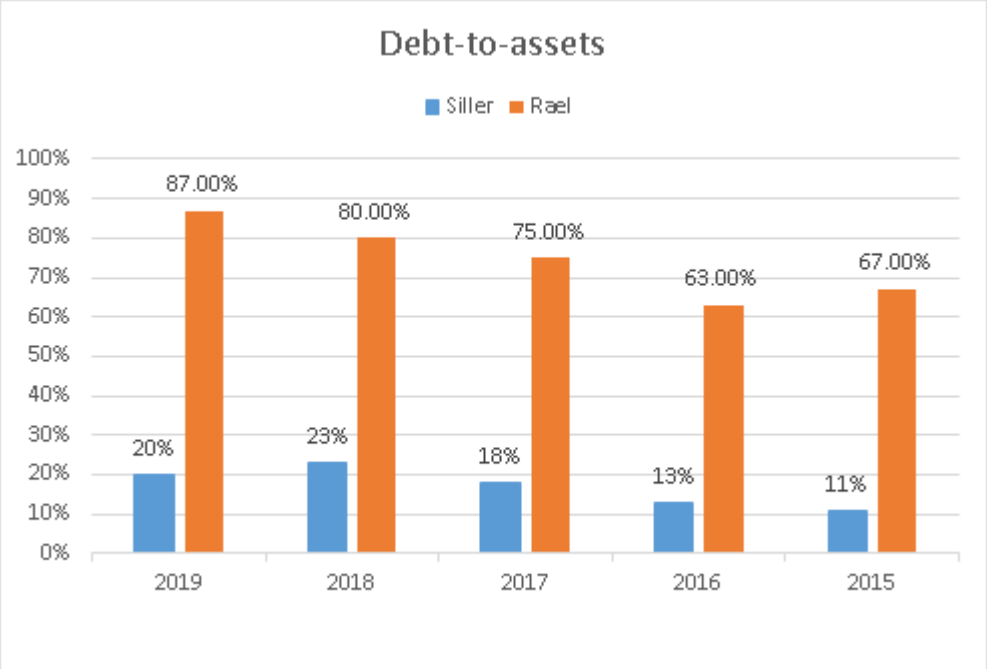

Figure 8. Debt-to-assets throughout 2015-2019

Source: Appendix 3, Appendix 6

Long-term debt-to-assets

With current liabilities excluded, Rael shows better results than on the previous debt ratio graphs. This goes to show that most of the liabilities that Rael has is in the short-term liabilities as the values in the debt-to-assets graph were significantly higher. Although in the most recent year Rael took more short-term loans and has a LTD/TA of 30% in 2019. Siller on the other hand has only 3 values in 2017-2019 due to there not being any long-term liabilities in 2016 or 2015. Long-term liabilities have gradually been declining in 2018 by 10% and in 2019 by 36.39% which also explains the drop in LTD/TA by 3% in 2019.

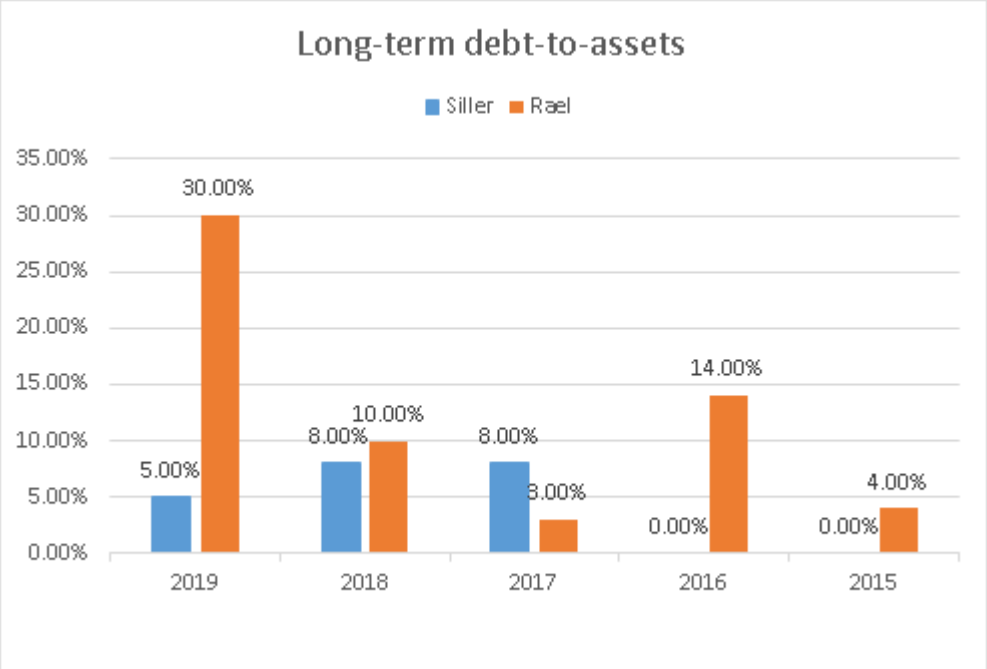

Figure 9. Long-term debt-to-assets throughout 2015-2019

Source: Appendix 3, Appendix 6

Turnover ratio

Assets turnover

According to assets turnover ratio, Rael is better utilizing its assets in order to generate revenue. Rael has higher values throughout all the given years with a highest value of 9.78, meaning that each euro invested in the assets generates 9.78 euro revenue. Although Rael's asset turnover seems to be declining whereas Siller's ratio is on the rise. Siller had a small decline in turnover ratio from 2015-2016 although from there on turnover ratio had grown from 2.72 up to 3.66. There are several factors coming into play here however. As seen from the previous graphs and the horizontal and vertical analysis, Siller as a company is a lot more liquid than Rael as the company holds a high amount of current assets. Siller is also more invested into fixed assets than Rael.

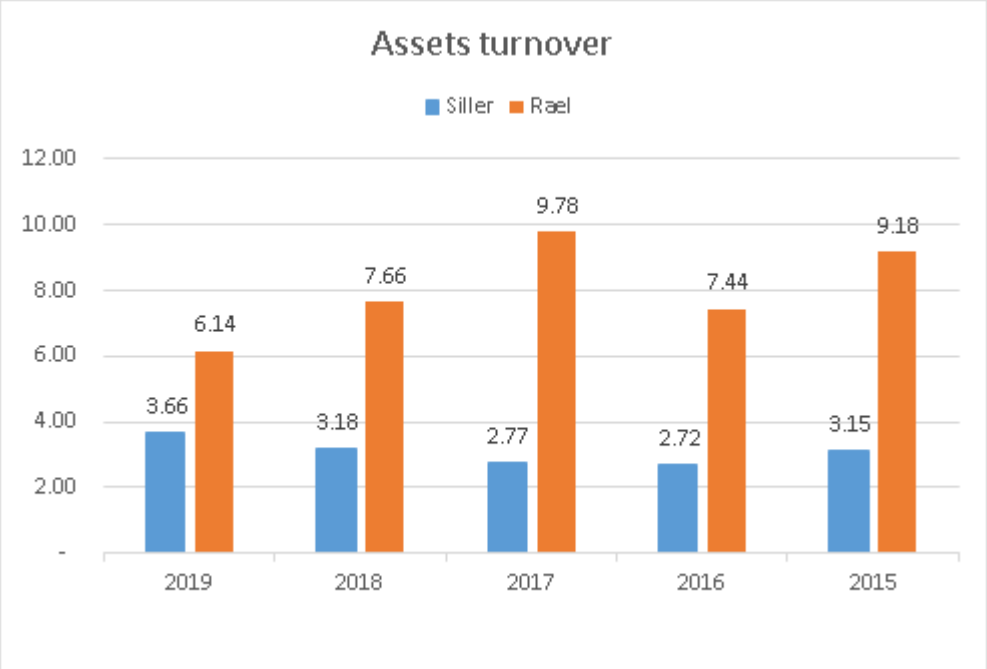

Figure 10. Assets turnover throughout 2015-2019

Source: Appendix 3, Appendix 6

2.4 Discussion

Rael is a company that uses mostly debt to finance their assets. This is shown by ratio analysis solvency formulas indicating very high debt ratios and can also be seen on vertical analysis of the balance sheet where the company's total liabilities amount to an average of 74.4% throughout researched years of total shareholders equity and liabilities. In addition to that Rael is also heavily invested in current assets as opposed to fixed assets which is seen in the vertical analysis. Siller on the other hand has a more equity based financing and is more invested in fixed assets. Compared to Rael the debt ratios are significantly smaller and the company has a high equity in relation to total debts. While there is nothing wrong with a company having some debt, too much debt can have severe consequences especially when facing a poor year with lower cash flows. Ratio analysis proved that the company is becoming more overleveraged by each passing year and may soon reach a point where it would not be able to cover its operating expenses and interest payments. Siller Auto on the other hand is not at an overleveraged company and in no immediate threat of facing debt payment issues.

When it comes to liquidity both companies managed to achieve a current ratio higher than 1.0, although Siller proved to be remarkably more liquid than Rael. Quick ratio proved that even without having to sell any inventory, Siller is able to still pay back their more than twice over. Rael on the other hand has a lot lower liquidity and has a poor quick ratio that has declined over the years down to 0.35. This does not go well with Rael since the company is already heavily relying on external financing.

In terms of profitability, Siller is more profitable overall than Rael. Looking at ROA, although with a lot of fluctuations, Siller has maintained a positive ROA except for 2018 when Siller expanded their enterprise. What exactly could be the reason for that? If we look at asset turnover in figure 10 then its important to note that during 2017-2018 it has rised from 2.77 to 3.18. This means that the number of sales is not to blame for the company's drop in ROA 2018 and fault lies in the cost management in 2018 instead. This is also reflected in the horizontal analysis where the company COGS changed by It is understandable since in addition to a whole new staff, new site, a new IT system was also introduced and it takes time to fully transition.

CONCLUSION

Siller and Rael are car dealerships that are both in the same industry, private limited companies, located in the same town and are providing similar services however they are both managed in a very different way.

Siller Auto compared to Rael is a very liquid company. Siller has accumulated a lot of current assets throughout the years that the company keeps on to. This makes Siller able to cover its liabilities easily. Siller is able to clear its liabilities in one-go without having the need to sell inventory. Rael on the other hand is the opposite of that. While the company can cover its liabilities by using all current assets, due to company having a very high debt-to-assets ratio the company is not able to cover the liabilities with only cash and receivables. Profitability wise Siller is better due to maintaining positive ROA and OPM throughout the years with the exception of year 2018 when Siller expanded their enterprise. Due to new staff, new location and a new IT program the company could not control their costs as well as before, resulting in a loss in profit.

Overall, during the years 2015-2019 the given companies both managed to increase their revenues and along with it also their total assets. In 5 years time Rael and Siller both managed to increase their net sales by 35.08% and 53.48% respectively. With the increasing revenue however, both companies saw a rise in liabilities. Rael had tripled its debt by the end of 2019 whereas Siller's liabilities had doubled, mainly due to the long-term loan that the company took in 2017 in order to expand their enterprise. Whilst Siller managed to keep the debt-to-assets relatively low throughout the years without any significant growth, Rael's debt-to-assets in 2016 was 63% and had since gradually grown larger by the year and at the end of 2019 was 87% which means that nearly all company's assets are financed by loan.

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APPENDICES

Appendix 1. Balance sheet of Siller Auto OÜ 2015-2019

€	31.12.2019	31.12.2018	31.12.2017	31.12.2016	31.12.2015
Assets					
Current assets					
Cash	114847	72841	190759	214595	176570
Recievables	284697	284009	358680	151235	136360
Inventory	244681	190739	145934	131968	118768
Total current assets	**644225**	**547589**	**695373**	**497798**	**431698**
Fixed assets					
Advance payments	48835	98253	122671	0	
Tangible assets	329901	345759	333421	358414	373325
Total fixed assets	378736	444012	456092	358414	373325
Total assets	**1022961**	**991601**	**1151465**	**856212**	**805023**
Shareholders equity and liabilities					
Liabilities					
Short term liabilities					
Loans and borrowings	28915	27915	22082	0	
Debts and prepayments	128982	117622	102763	114560	88694
Total short term liabilities	157897	**145537**	**124845**	**114560**	**88694**
Long-term liabilities					
Loans and borrowings	50539	79455	87918	0	0
Total long-term liabilities	50539	79455	**87918**	**0**	0
Total liabilities	**208436**	**224992**	**212763**	**114560**	**88694**
Equity					
Share capital	41696	41696	41696	41696	41696
Fair value reserve	4170	4170	4170	4170	4170
Undistributed profits	720743	892836	695786	670463	542032
Net profit/loss for financial year	47916	-172093	197050	25323	128431
Total equity	**814525**	**766609**	**938702**	**741652**	**716329**
Total shareholders equity and liabilities	**1022961**	**991601**	**1151465**	**856213**	**805023**

Source: Siller auto OÜ annual reports, 2015-2019

Appendix 2. Income statement of Siller Auto OÜ 2015-2019

€	2019	2018	2017	2016	2015
Net sales	3687573	3405215	2777427	2259908	2402683
Other income	1317	412	6629	993	1873
Supplies, materials and services	-2761727	-2776214	-1976669	-1685094	-1732355
Operating costs	-59098	-68720	-44367	-22346	-22916
Salary costs	-756348	-679164	-524075	-494701	-486878
Depreciation, amortization and impairments	-60443	-49451	-29946	-33438	-33669
Operating profit	**51274**	**-167922**	**208999**	**25322**	**128738**
Interest income	0	0	0	1	2
Interest expense	-3358	-4171	-11949	0	-309
Income before income taxes	**47916**	**-172093**	**197050**	**25323**	**128431**
Profit for the period	**47916**	**-172093**	**197050**	**25323**	**128431**

Source: Siller auto OÜ annual reports, 2015-2019

Appendix 3. Financial ratios of Siller Auto OÜ 2015-2019

Financial ratio	2019	2018	2017	2016	2015
Profitability ratios					
Return on assets	4.76%	-16.06%	19.63%	3.05%	16.83%
Return on equity	6.06%	-20.18%	23.45%	3.47%	19.69%
Gross-profit margin	25.11%	18.47%	28.83%	25.44%	27.90%
Operating margin	1.39%	-4.93%	7.52%	1.12%	5.36%
Liquidity ratios					
Current ratio (times)	4.08	3.76	5.57	4.35	4.87
Quick ratio (times)	2.53	2.45	4.40	3.19	3.53
Cash ratio (times)	0.73	0.50	1.53	1.87	1.99
Solvency ratios					
Debt-to-assets	20.38%	22.69%	18.48%	13.38%	11.02%
Long-term debt-to-assets	4.94%	8.01%	7.64%	0.00%	0.00%
Turnover ratios					
Assets turnover (times)	3.66	3.18	2.77	2.72	3.15

Source: Author's calculations

Appendix 4. Balance sheet of Rael Autokeskus 2015-2019

€	31.12.2019	31.12.2018	31.12.2017	31.12.2016	31.12.2015
Assets					
Current assets					
Cash	57909	49653	2365	12927	45823
Recievables	56096	69116	140819	59693	47681
Inventory	372383	256796	116949	136745	112255
Total current assets	486388	**375565**	**260133**	**209365**	**205759**
Fixed assets					
Tangible assets	85830	17965	21554	32197	40779
Total fixed assets	85830	17965	21554	32197	40779
Total assets	**572218**	**393530**	**281687**	**241562**	**246538**
Shareholders equity and liabilities					
Liabilities					
Short term liabilities					
Loans and borrowings	67853	6962	7250	8604	28943
Debts and prepayments	256287	268896	193693	111223	125765
Total short term liabilities	**324140**	**275858**	**200943**	**119827**	**154708**
Long-term liabilities					
Loans and borrowings	172944	38758	9222	33344	9335
Total long-term liabilities	172944	38758	**9222**	**33344**	9335
Total liabilities	**497084**	**314616**	**210165**	**153171**	**164043**
Equity					
Share capital	32000	32000	32000	32000	32000
Share premium	47000	47000	47000	47000	47000
Undistributed profits	-86	-7478	9391	3495	-7446
Net profit/loss for financial year	-3780	7392	-16869	5896	10941
Total equity	**75134**	**78914**	**71522**	**88391**	**82495**
Total shareholders equity and liabilities	**572218**	**393530**	**281687**	**241562**	**246538**

Source: Rael Autokeskus OÜ annual reports 2015-2019

Appendix 5. Income statement of Rael Autokeskus 2015-2019

€	2019	2018	2017	2016	2015
Net sales	2963789	2586181	2558961	1816748	2194050
Other income	846	970	4258	698	506
Supplies, materials and services	-2425620	-2128717	-2106409	-1426860	-1867291
Operating costs	-170229	-116520	-142406	-136166	-94406
Salary costs	-386433	-333336	-302050	-250169	-231919
Depreciation, amortization and impairments	-4339	-5538	-10643	-8582	-7303
Olulised käibevara allahindlused	0	0	-40485	0	0
Other expenses	-2303	-1993	-919	-1719	-265
Operating profit	-24289	1047	-39693	-6050	-6628
Interest income	5	1	43	0	0
Interest expense	-1394	-457	-684	-564	0
Other financial income (expense)	21898	6801	23465	12510	-1496
Income before income taxes	-3780	7392	-16869	5896	-8124
Profit for the period	-3780	7392	-16869	5896	-8124

Source: Rael Autokeskus OÜ annual reports 2015-2019

Appendix 6. Financial ratios of Rael Autokeskus 2015-2019

Financial ratio	**2019**	**2018**	**2017**	**2016**	**2015**
Profitability ratios					
Return on assets	-0.78%	2.19%	-6.45%	2.42%	-3.40%
Return on equity	-4.91%	9.83%	-21.10%	6.90%	-10.55%
Gross-profit margin	18.16%	17.69%	17.68%	21.46%	14.89%
Operating margin	-0.82%	0.04%	-1.55%	-0.33%	-0.30%
Liquidity ratios					
Current ratio (times)	1.50	1.36	1.29	1.75	1.33
Quick ratio (times)	0.35	0.43	0.71	0.61	0.60
Cash ratio (times)	0.18	0.18	0.01	0.11	0.30
Solvency ratios					
Debt-to-assets	87%	80%	75%	63%	67%
Long-term debt-to-assets	30%	10%	3%	14%	4%
Turnover ratios					
Assets turnover (times)	6.14	7.66	9.78	7.44	9.18

Source: Author's calculation

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