TALLINN UNIVERSITY OF TECHNOLOGY

School of Business and Governance

Department of Business Administration

Linnea Lappi

FINANCIAL STATEMENT ANALYSIS ON ARCO VARA AS

Bachelor's thesis

Supervisor: Professor Jaan Alver

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I declare I have written the bachelor's thesis independently.

All works and major viewpoints of the other authors, data from other sources of literature and elsewhere used for writing this paper have been referenced.

Linnea Lappi ……

Student's code: 145784

Student's e-mail address: linnea.lappi@gmail.com

Supervisor Professor Jaan Alver

The thesis conforms to the requirements set for the bachelor's theses

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CONTENTS

ABSTRACT

The purpose of this study was to define the financial status and development of Arco Vara AS during the years from 2011 until 2016. The analysis is based on the information from the annual reports prepared by Arco Vara AS. The following methods are used for the analysis: traditional financial analysis, component analysis on return on equity, cash flow analysis and Altman's Z-score. There have been various changes in the structure of the company, which have had a positive impact on the company's performance. The structural changes in the financial position of the company were focused on the changes between current and non-current liabilities. The main factor affecting the profitability of the company and the return on equity was net profit margin, due to fluctuation of the profits during the research period. The Altman's Z-score of the company was at a catastrophic level in 2012, but the group managed to increase it to the safe-zone.

The title is: Financial statement analysis on Arco Vara AS

Keywords: Financial statement analysis, Altman's Z-score, Component analysis, Cash flow analysis

INTRODUCTION

Financial statement analysis has several roles in an efficient capital market. Financial statements provide useful information for shareholders, so they can know financial status of the company. The lenders are interested in the solvency of the company, whereas the company's employees might be curious of the future of the company. One of the main users of the financial analysis are managers, as they can use it to detect and react to problematic areas of the company.

In this study, the analysed company is an Estonian real estate company Arco Vara. It was chosen, because it is one of the leading real estate firms in the Baltic region (About Arco Vara), and it was discussed previously in a master's thesis by Jelena Soboleva. Soboleva's thesis considered the years between 2004 and 2011, and during that time, Soboleva stated that Arco Vara is highly likely to go bankrupt. Soboleva did not recommend to buy the shares of the company nor investing into the company (Soboleva, 2013). Due to this opinion, the author decided to investigate, how the Arco Vara group has managed to avoid bankruptcy, and how the financial situation of Arco Vara has developed after the previous research. In 2017, while doing this research, in the Nasdaq Baltic rating the Arco Vara group has made it to the second place in the field of Most visible improvement over 3 years (Nasdaq Baltic).

The methods used to analyse the financial status of the company are traditional financial statement analysis, component analysis by DuPont formula, cash accounting system and Altman's Z-score model. While discussing the financial statements of Arco Vara, the used methods are vertical, horizontal and trend analysis, because it allows thorough comparison between the years studied. In the trend analysis, the base year is set to 2012, as it is the first year that had its financial statement numbers adjusted to the changes in the structure of the company. The methods were chosen to provide as wide view of the financial position of the company as possible. In bankruptcy analysis, Altman's Z-score is one of the most popular and used methods, and it was applicable in this study.

Thesis begins by introducing the Arco Vara group by an overview of the information provided in the annual reports. Discussion also presents the changes on the supervisory and

management board, because during a relatively unstable period in a company's history, the people behind it and their connections can be considered relevant. The first chapter also explains the methods used in the research, which include traditional financial statement analysis, component analysis and cash flow analysis. The results are discussed after the methodology overview, starting with the financial statement analysis and traditional analysis, continuing to component analysis and cash flow analysis. The discussion ends with an Altman's Z-score analysis.

1. OVERVIEW OF THE ARCO VARA GROUP

Arco Vara is an Estonian company in real estate industry. The company was established by the name of AS Arco Vara Kinnisvarabüroo in 1992 by Arti Arakas, but since 1994, the company has been known as Arco Vara AS (Nasdaq Baltic). Arakas was soon accompanied by Hillar-Peeter Luitsalu and Richard Tomingas (Arco Vara History). During the 1990's the company spread throughout Estonia, and in 1997 the group started to expand to other Baltic states, starting from Latvia. In 2006 the group opened offices in Bulgaria and Romania, and a year later the group had its initial public offering (Ibid.). Arco Vara's business areas include property management, real estate development and intermediation and valuation of real estate (Nasdaq Baltic). Even though the group operates throughout the Baltic region and in Romania, the main markets are in Estonia, Bulgaria and Latvia (Ibid.). Nowadays the CEO of Arco Vara is Tarmo Sild, and Hillar-Peeter Luitsalu is the chairman of the supervisory board. Overview of the Arco Vara group in this study is based on the information gathered from the annual reports from the research period.

1.1 The annual reports of Arco Vara from 2011 to 2016

During the research period, Arco Vara AS has been through some major structural changes. At the beginning of the period, in 2011, the core activities of the group included construction of buildings, civil engineering, specialised construction activities and real estate activities. These activities can be divided in to three divisions: Development, construction and services (Annual report 2011). The service division includes valuation, brokerage and consultation services, whereas the development division's activities contains developing complete commercial real estates and living environments. The division of construction used to operate as a general contractor and builder, and provided environmental engineering and construction services. The construction division was reorganized during 2011 to avoid risks and potential losses (Annual report 2011), but it was not enough, as in 2014 the group decided to give up the construction division and the group sold Arco Ehitus OÜ in February 2014 (Annual report 2013). In 2016 the group focused on the services and development division. In year 2016, the core activities were real estate development, real estate agencies, rental and operating of

leased or own real estate, and the management of real estate on a contract or fee basis (Annual report 2016).

The change in the number of employees is presented in Figure 1. In 2012 the number of employees dropped, increased again during 2013, and then remained stable for three years, but during 2016 the number of staff declined again. The reason for the drop in 2012 was explained in the annual report, and the layoffs were caused by the changes in the general management and in the construction division (Annual report 2012). Also, the shrinkage of development projects caused termination of employment in the construction division (Ibid.). The increase in workforce in 2013 can be explained by the increase in employed brokers and appraisers in the service division. In 2016 the decrease of the workforce was caused by the sale of the Latvian brokerage agency Arco Real Estate SIA (Annual report 2016, 10).

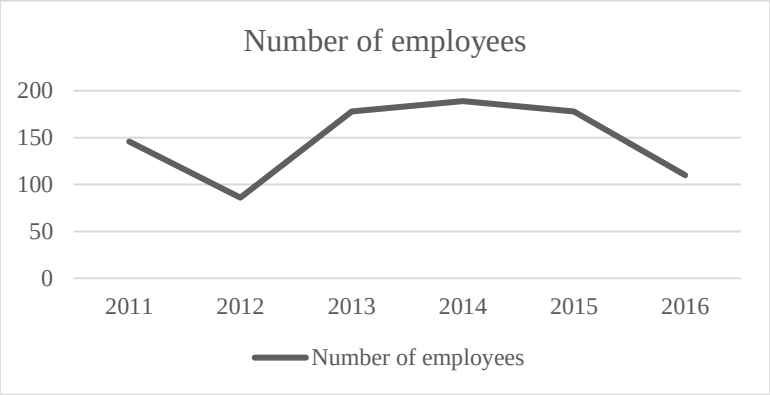

Figure 1. Number of employees
Source: (Annual reports 2011–2016)

The risks in 2011 introduced in the annual report included credit risk, liquidity risk, interest rate risk and currency risk. In 2012, the credit risk was stated to be caused mainly by construction division, but in 2013, also the development division was characterized to have credit risks. However, in 2014, along with the cut out of the construction division, the credit risk was removed from the possible risks attached to the company (Annual report 2014). In 2015, the group added the strategic risk to the company's main risks, as the equity was tied on the development division, and the demand for the product was based on the forecasts. Tying equity in to division, in which the demand is estimated by forecasts, generates a high strategic risk for the company (Annual report 2015).

Arco Vara had its initial public offering in 2007. Changes in the trading history of Arco Vara from 2011 until 2016 are presented in the Figure 2. The main trend of the stock prices has been declining, but there is a clear spike in the stock price in August 2012. During the years 2013 and 2016 the price of the stock was quite stable, and the stock price has been changing around one euro. There is a slight increase in stock price at the end of 2016. The number of shares increased during 2014 from 4,741,707 shares to 6,117,012 shares. However, the number of shareholders has declined during the years 2012 and 2016 (in 2012 the number of shareholders was 1,883, but in 2016 there were 1,502 shareholders). Shares owned by the members of the supervisory and management board are discussed further in chapter 1.2.

Figure 2. The change in the stock price during the years 2011– 2016. Horizontal axis presents the years, and vertical axis presents the stock prices
Source: (Nasdaq Baltic)

During the years 2011–2016, dividends were paid in 2015 and 2016, but not before that. In the author's opinion, the reason for not paying dividends could be the losses and structural changes during the financial years of 2012–2014. One reason could also be the Estonian taxation system, where income taxes are paid based on the dividends paid, not on net profit. Dividends paid were stated in the financing activities in the consolidated cash flow statement, while dividends received were stated in the unconsolidated cash flow statement, in the section of investment activities.

During the years, the group has faced various challenges. In 2012, the annual report states that the sustainability of the whole group was threatened due to "realisation of business risk" (Annual report 2012). During 2012 the group was not able to pay some of its debts taken to develop the project Ahtri 3, as the group had to renegotiate the loan, and Danske Bank did not agree to the terms (Ibid.). During 2013, the negotiations failed, and Danske Bank issued a bankruptcy petition against Arco Vara's subsidiaries Arco HCE, Arco Investeeringute AS and OÜ Ahtrimaa (Annual report 2013). Satisfactory solution was found at the end of 2013, and Arco Vara managed to leave the project with positive cash flow.

Annual report of 2013 explains various liquidity problems with some the group's projects. For example in Bulgaria, the Manatirski Livadi and Madrid Blvd projects faced several difficulties. At first, the provider of the construction loan demanded a larger sum for the loan payments than Arco Invest EOOD received from its customers. Due to this, the parent company had to provide a "capital boost" for the Arco Invest EOOD. Yet another problem was caused by a main client withdrawing from the project. After the withdrawal, a new refinancing contract was made, decreasing the interest to 1.5%. The problems continued, as the sale of the apartments in the Madrid building has been slow, and in 2014 the Arco Invest EOOD was not able to decrease the principal amount of the loan.

During 2012 there were also problems in Estonia, as the Tivoli project was developing slower than expected, and so, an additional appropriation of 1 million was created in the balance sheet. Slow development speed was accused to be a consequence of a failure in performing the design and construction of the project, which was the responsibility of AS Nordecon. During the spring 2013, the creditors, IIP and Swedbank, cancelled the loan contracts, leaving no other option for Arco Vara but to retreat from the Tivoli project with minimal losses. During 2013 there were also some court cases going on in the group, as the groups subsidiary, Arco Ehitus was accused of fraud as a large share of a million euros dispute was based on arguable circumstances and in bad faith. During 2014 the group sold its shares in Arco Ehitus. (Annual report 2013)

In the annual report of 2014 there were no mentions of any problems, and the group managed to achieve two out of three goals: The group achieved the revenue of 9.1 million euros and profits of 0.88 million euros (Annual report 2014). The only goal not achieved was the return on equity of 20%. The reason for not achieving the goal was that during one quarter,

some of the assets were not suitable for development (Ibid.). However, according to an article in Postimees (Oja, 2014), there were disagreements among the shareholders at the shareholders meeting. The article stated that the group was planning to raise the company's equity by issuing 3.5 million euros worth of shares. To carry out the decision, two thirds of the votes of the members of the supervisory board would have been needed, but as Gamma Holdings and Baltplast voted against the decision, it was rejected. The companies accused of voting against the decision were represented by Arvo Nõges and Toomas Tool. Both of them left the Arco Vara's supervisory board during the next year (Annual report 2015).

In 2015, the group wished to achieve a net profit of 1 million and revenue of 11 million euros, but neither of these was accomplished (Annual report 2015). Some losses occurred, as the project Manastirski Livadi was delayed during the fourth quarter. The losses were accrued to the next quarter, and so, the losses affected the results of the year 2016 (Ibid.). In 2016, the group changed its views, and the company put more weight on customer oriented approach. The year 2016 was referred to be "a year of internal growth" (Annual report 2016). The stated goals for 2016 were introduced in the annual report of 2015: revenue of 10.3 million euros and net profit 0.8 million euros (Annual report 2015). Neither was achieved, but unlike in the annual report of 2015, the group do not mention the failure in achieving goals in the annual report of 2016.

The audit of the annual reports has been done by AS PricewaterhouseCoopers, except for the year 2011, when it was done by KPMG Baltics OÜ. There has been no Emphasis on Matter paragraph in most of the audits, but in the audits for years 2012 and 2013 the auditor doubts the ability of the subsidiary Arco Invest EOOD to "refinance its borrowings and continue as a going concern" (Annual report 2013). Also, in 2016 the auditor's report had a lot of mentioned problems in the statements. However, these two audits also noted that the information in statements are presented fairly and in accordance with International Financial Reporting Standards (IFRS) (Annual report 2016, Note 33).

1.2 The supervisory and management boards of ARCO VARA

Supervisory board's responsibilities include organising and planning the operations of the Arco Vara. They are also obliged to monitor the activities of the management board. The supervisory board does not actively participate in operational management of the company, but the manager (management board has only one member) is expected to consult and inform the supervisory board of all important decisions. The members of the board are elected in the general meetings. The supervisory board in 2016 consisted of 5 members: Hillar-Peeter Luitsalu, Rain Lõhmus, Allar Niinepuu, Kert Keskpaik and Steven Yaroslav Gorelik. (Annual report 2016)

Hillar-Peeter Luitsalu has graduated in 1994 from University of Tartu in the faculty of law. He has been active participator in different companies of Arco Vara group. He also was a member of management board during 1999–2005, and after that he has been in supervisory board of the group. Starting from 2013, he has been the chairman of the supervisory board. He is also a member in management board in Loodusvarade Halduse OÜ, and in one of the Arco Vara major shareholder companies, OÜ HM Investeeringud. The portion of shares hold by this company has decreased during the research period. (Annual report 2016)

Rain Lõhmus graduated with a business administration degree from Tallinn University of Technology in 1988, and before starting in Arco Vara in 2012, he has gained a lot of work experience in different financial organisations, and he is one of the founders and the main shareholder of AS LHV group, and a member in the supervisory board of LHV Pank (Annual report 2016). Lõhmus was also one of the co-founders of Hansabank (Livonia Partners). Lõhmus is a member in various management boards, like AS Lõhmus Holdings and OÜ Merona systems, and in some supervisory boards, for example AS LHV Finance and Kodumaja AS. Lõhmus has been in Arco Vara supervisory board since 2012 (Ibid.). Interestingly, Lõhmus does not mention his position in Arco Vara's supervisory board's membership on his LinkedIn profile (LinkedIn 2017).

Allar Niinepuu started as a member of supervisory board in 2013. In 1992, Niinepuu graduated as shipmaster from Estonian Center of Maritime Education, and he has experience of working in and managing the shipping business. Niinepuu established a company AS Kavass in 1994, which current main activities include management and investment services. Along

with Arco Vara's supervisory board, he is also participating in management board of AS Alarmo Kapital, GEST Invest Grupp OÜ and Intelligent Robots OÜ. (Annual report 2016)

Steven Yaroslav Gorelik has graduated from two universities: Columbia Business School and from Carnegie Mellon University. Gorelik is currently a portfolio manager in Firebird Private Equity Advisors and Firebird Management LLC, and he has worked as a consultant in Deloitte Consulting LLP and as a Deloitte & Touche LLP as a management consultant. He has been in Arco Vara since 2015. (Relationship Science)

Kert Keskpaik has been a member of Arco Vara's supervisory board since 2014. He has a degree from business administration from Tallinn University of Technology, and until 2010 he worked as a real estate broker in Tallinn. He has founded the company OÜ A&K Vara, and is a member of management board of OÜ K Vara. He is an active speed skater, and is involved in the management board of Sporditurg OÜ. (Annual report 2016)

In 2011, only two members held Arco Vara's shares, Richard Tomingas, through Toletum OÜ, and Hillar-Peeter Luitsalu, through HM Investeeringud (Annual report 2011). Tomingas and Luitsalu held 43.4% of all the shares available. The situation has changed considerably during the research years, as the portion of the holdings owned by the management boards and supervisory board have varied between 27% and 68.57% of all shares. For the current management and supervisory boards, the part of shares held by the members of supervisory and management board is 31.7% of all shares available. The shares were divided between the members of the boards in the following way: Lõhmus through Lõhmus holdings (5.7% of all shares), Sild and Niinepuu through Alarmo Kapital OÜ (13.7%), Luitsalu through HM Investeeringud OÜ (9.3%), and Keskpaik through K Vara OÜ (3.1%). Keskpaik and Gorelik are the only members who are mentioned to have personal shares in addition to the firm owning (Annual report 2015), but in 2016, Gorelik does not hold any shares (Annual reports 2016). However, Gorelik is a fund manager in 3 companies with holding interest in Arco Vara: Firebird Republics Fund Ltd, Firebird fund L.P and Firebird Avrora Fund Ltd (Annual report 2016).

Years 2012 and 2013 were the years of change on the supervisory board. Before 2011, the members in the board were Tomingas, Luitsalu, Meltern, Tanner and Tark. They had been several years in the board, but in 2012, all members but Tomingas and Luitsalu were replaced.

All changes in supervisory board happened before the change of the CEO, which took place in the autumn 2012. Luitsalu and Tomingas have been in the company since its early days, and Luitsalu is still one of the members of supervisory board (History of Arco Vara). The resigned members were replaced by Toomas Tool, Aivar Pilv, Stephan Davin Balkin, Arvo Nõges and Rain Lõhmus (Annual report 2012).

During 2013, Tomingas left the supervisory board. Richard Tomingas was the chairman of the supervisory board since 2008, but he left his resignation notice in July 2013, and he has not been a member of the board since (Annual report 2013). As a reason for this decision he declared, that his interests were shifting away from the Arco Vara (Inselberg, 2013). Luitsalu has replaced him as the chairman of the supervisory board during 2013, and supervisory board gained a new member, Allar Niinepuu. In 2014 Tool, Pilv, Balkin and Nõges left the board, and were replaced by Kert Keskpaik and Steven Yaroslav Gorelik. The supervisory board has had the same members since.

The mandate in the management board lasts three years, and since September 2009 there has been only one member in the management board. Lembit Tampere was appointed in the board in 2008, but in 2012 he left his position. After Tampere, Tarmo Sild took the position in the management board. Sild's mandate was extended in 2015, and he will be in management board until 2018 (Annual report 2015). Tarmo Sild has studied law in the University of Tartu and graduated as a bachelor in 1998. Sild also studied in Helsinki during the years 1997–1998, and in Brussels, Vrije university in 1999 (Annual report 2015). In 2012, when starting in the Arco Vara company, Sild informed his interests in companies that are not involved with the Arco Vara group (Annual report 2012). He reported the following firms, of which he was a member of the management board: Aia Tänav OÜ, Alarmo Kapital OÜ, AS IuteCredit Europe and MFV Lootus OÜ. In 2013 the companies of interest had increased by one, OÜ Catsus, and after that, these have remained so.

All of the members of the supervisory and management boards, except for Niinepuu, had a higher education degree. Two members, Keskpaik and Lõhmus have studied in Tallinn Univesity of Technology, and Yaroslav and Sild have studied abroad. Sild and Luitsalu have both studied in the University of Tartu in the faculty of law. The members have various experience of different fields, as Niinepuu has experience from shipping industry, Lõhmus has a lot of experience from different financing institutions. Also, all of the members of the boards

are currently members of the supervisory and management boards in more than one company. Many of the current members have also been involved in establishing a business of their own. Luitsalu has not been a co-establisher in other firms, but he has been in Arco Vara since 1993, and is the only member that has remained in the Arco Vara during the research period.

1.3. About methodology of analysis

1.3.1 Traditional analysis

The main idea in traditional analysis is to analyse the financial trends over time and to compare the financial statements at a certain point in time (Foster 1986). Traditional financial statement analysis consists of two principles, cash flow analysis and financial ratio analysis, which are used to measure the company's performance (Palepu, Healey 2008). The ratio analysis is often used in three situations: comparing other companies with each other, contrasting ratios to a certain benchmark or when analysing the time-series for one company (Ibid.), as in this research.

Time series analysis includes some issues that must be taken under consideration when examining data. For instance, issues may arise from the changes in accounting methods or due to structural changes (Foster 1986, 212–215). In Arco Vara's case there is an issue with a structural change, as comparing the original annual reports of 2012 and 2013 is not recommendable, because the group has dropped one division, which affects substantially numbers in the income statement. Another example is the switch from indirect the cash flow statement method to the direct method. Also, changes in accounting principles modified the formats of the financial statements, making the comparison between years more challenging.

1.3.2 The categories in financial statement analysis

Most common financial ratios used in an analysis can be divided in to four categories. These categories are asset utilization, short-term liquidity risks, long-term solvency and profitability (Revsine, Collins, Johnson 2002).

The ability to make revenues excess expenses is referred to as **profitability.** The main factors of profitability include the return on equity, return on assets, net profit margin and operating profit margin (Revsine, Collins, Johnson 2002). Return on assets shows, how much profit the company could generate with the resources at hand, whereas return on equity is the indicator of the profitability of the company for its owners (Gallinger, Healey 1991). Net profit margin and operating profit margin show, how much profit the company managed to gain from its total sales.

Activity analysis shows how well the company is using its assets. Activity ratios can also point out mismatches in the operating cash-flow (Ibid.). Activity analysis includes a group of turnover ratios, which demonstrate the efficiency of the company. These turnover ratios include asset turnover, inventory turnover, accounts receivable turnover and accounts payable turnover (Ibid.). Asset turnover rate represents the efficiency of resource management, inventory turnover shows, how quickly inventory is sold (Gallinger, Healey 1991). Accounts receivable turnover is a directional measure of cash flow, as it shows, how fast the company is able to collect cash from their customers (Ibid.). Turnover ratios can also be presented as days, which present, how many days each activity takes.

Short-term liquidity measures the repayment ability of the current liabilities. The main ratios that are used show the ability to pay for company's current liabilities are current ratio, quick ratio, and cash ratio. Operating cash flow ratio is used to measure, how much resources the company is able to generate to pay the current liabilities. (Palepu, Healy 2008)

Debt and long-term solvency are highly related to debt and to the financing structure of the company. These ratios include the debt-to-equity ratio, liabilities to equity ratio and debt-to-capital ratio. Solvency also includes the ratios that represent the cost of debt: the interest coverage ratio. The interest coverage ratio has two possible equations, earnings based and cash based. The earnings-based ratio uses net income as a factor. This ratio indicates the amount of earnings available for the interest payment obligations. The other coverage ratio is cash flow based. In cash based interest coverage ratio the used factor is the net cash flow of operations instead of net income. This ratio indicates the amount of cash generated by the operations for the amount of interest payment requirements. (Ibid.)

Even though ratio analysis is one of the most popular methods of assessing the performance of a company, it does have its issues. Financial statements generate their limitations for various reasons, and some of them are stated by Tyran (1986). The first one is the usage of historical costs, which ignore the effect of inflation. Secondly, all necessary information of the financial status of the company is not mentioned in the statements, and the information can be manipulated. Thirdly, some parts of the statements include estimations, which are not always accurate, for example the depreciations of assets. Lastly, the financial statements are formed by generally accepted accounting principles, which have been created and refined over time by accounting specialists, making the comparison of the statements more difficult.

Ratio analysis is based on the financial statements and along with accounting issues, ratio analysis faces also problems with calculations, as negative factors may cause difficulties, and provide misleading data. Also, balance sheet has limitations in ratio analysis, as the numbers in the balance sheet may not always present the true market value of the assets (Ibid.). Balance sheet generates also an issue with calculations. While making calculations that include numbers from the balance sheet and from the income statement, it is necessary to acknowledge that the balance sheet figures are momentary, and income statement is periodical. This means that the figures from the balance sheet have to be adjusted to periods, by using the average numbers of the balance sheet figures.

1.3.3. Component analysis

One purpose of financial analysis is to find out, how changes in different factors change the overall phenomenon analysed (Siimann, Alver 2015). In this study, component analysis is used to investigate the impact on analysed phenomenon, when a change occurs in its different parameters. In this study, the subject for analysis is return on equity (ROE). Return on equity is one of the main indicators when discussing the financial performance of the company for its owners (Higgins 2004). The return on equity is derived by three components: efficiency, profitability and financial leverage, and a change in any of these factors will influence return on equity. The component analysis with relation to return on equity will be discussed further in chapter 2.3, when discussing the results of the analysis.

There are some notable issues with choosing return on equity as the examined phenomenon. For instance, Higgins (2004, 47) has named three different issues regarding to return on equity: The timing problem, the risk problem and the value problem. The timing problem forms due to the historical data of the phenomena, and it only focuses on one year. The risk factor indicates, that there is no knowing, how the return on equity was formed, and how much risk were taken to get the suitable drivers for the ratio. The component analysis is used to detect the risk factors related to Arco Vara's return on equity. The value problem generates from the valuation of items, as the used investment of the owners is often a book value, instead of market value.

1.3.4 Cash flow analysis

As the name states, the cash-based accounting focuses on cash flows. The other used accounting system is accrual based accounting system, which is used to prepare income statement. Actual numbers of cash are crucial for the companies, as the certain amount of cash at hand is necessary for liquidity, and company's liquidity states the ability of the company to overcome short-term liabilities (Harrison, 1998). While discussing liquidity of the company, the proper measures used are working capital, current and quick ratios, accounts receivables turnover, inventory turnover and operating cycle (Plewa, Friedlob 1995, 11). Working capital, current ratio and the turnover rates are also included in the ratio analysis. Operating cycle, also called the cash conversion cycle, is calculated as a sum of the days' sales in inventory and average collection period (Accounting Coach).

The main part in the cash flow analysis is formed by the cash flow statements. The structure of the statement of cash flows is stated in international standard, IAS 7. Cash flow statement has three main parts: operating activities, investing activities and financing activities. As mentioned before, cash flow statements can be compiled with two methods: indirect method and direct method. The main difference between these two is the format of the operating activities. Direct method is said to be more straightforward, however harder to prepare. Indirect method is more linked with the income statement, and so, is more preferred among analysts and managers (Tarver 2015; Palepu, Healy, 2013 5-23). Investment activities include cash flows, which come from acquiring or disposal of the long-term assets, which cannot be considered as

cash equivalents (IASPlus). The financing activities are related to equity capital and borrowings of the company (Ibid.).

However, as Alver states in his research, IAS 7 does not indicate exactly, how to label items, which could be allocated in more than one categories (Alver 2005). Examples of these "unclear" items are dividends and interests, both paid or received. These four factors can be classified differently, depending on the national standards used (Ibid.). For example, in IAS 7, interests and dividends paid can be stated as operating activity or financing activity, while interests or dividends received can be reported as an operating or investing activity. Classification of interests paid can be operating cash flow or financial cash flow, depending on, whether the interests are used to determine net profits or as a cost of obtaining financial resource. Dividends paid can also be classified as a cost of obtaining financial resource, or as an operating activity, as dividends define, how well the company can make dividend payments of its operating cash flows. Dividends and interests received behave in similar ways: when stated as operating cash-flow, dividends and interests received are part of determining the net profit; and when stated as an investing cash flow, the dividends and interest received are representing the return on investment (Ibid.). The decision of the classification affects each part of the cash-flow statements, and can affect to the view point of the reader of the statement. In Arco Vara's case, the interests received are shown under the investing activities, and interest and dividends paid are included in the financing activities.

Alver (2005) states two possible approaches for analysing cash flow statements. One could be called net profit approach and the other operating profit approach. Net profit approach uses net operating cash flow to emphasise the difference between the net cash flow from operating activities and net profit. Operating profit approach on the other hand lays stress on the difference between the operating cash flow and operating profit.

In this research, the used approach is the operating profit approach. The main method used for cash flow analysis is introduced by Palepu and Healy (2008), where the analysts examines the free cash flows available for debtors and owners. It is introduced in higher detail in chapter 2.4.

2. FINANCIAL STATEMENT ANALYSIS 2012–2016

2.1 Financial statements of Arco Vara

The analysed financial statements are consolidated statements including all divisions, and the information provided by the subsidiaries of the group. In author's opinion, comparison of the numbers in annual reports was unexpectedly difficult, because there have been a lot of structural changes in the company, and due to this, the structures of the financial statements also differ. Other complicating issue was, that if Arco Vara did not make any transactions on a certain item of the financial statement during the years reported in the annual report, the group has removed the item from the financial statement, instead of marking it as a zero. There is no knowing, if the provider of the reports has decided to remove the item from the financial statement, or have the transaction related to the item just been zero for two straight years.

This overview is based on the financial statements included in the annual reports. The overview includes a short analysis, which is used to compare the data of the years by method of vertical, trend and horizontal analysis. Vertical analysis, also referred to as common-size analysis, describes the structure of the financial statement. In the income statement, the base of structural comparison is usually net sales. In the balance sheet, the base for assets is total assets. Total liabilities and equity is used as a base item to define the structure of liabilities and equity (Siegel, Shim, Hartman 1992). Horizontal analysis is a time series analysis, which provides information of changes between two years (Ibid.). Horizontal analysis provides growth rates between the investigated time periods, whereas trend analysis presents the information of the development of the financial statements over time through indices (Higgins 2004).

2.1.1 Income statement

When analysing the Arco Vara's income statements, it is important to recall that the construction division was sold in 2014, and giving up the division lessened the amount of revenues and to the costs of goods sold. In the annual report of 2013, the revenues and costs of goods sold are adjusted, so the amounts in income statement do not include the discontinued operations. In the annual report 2013, the adjustments are done on both years, 2012 and 2013.

This allows the user of the statements to analyse, how the selling of the construction division affected the amount of revenues and costs of goods sold, and how the structure of the income statement changed. For example, when comparing the revenue in 2012, after selling the construction division, the total revenue dropped from 20,732 thousand euros to 10,931 thousand euros. Cost of sales also decreased, but the decrease in the amount of costs was relatively smaller than sales, which caused a reduction of 482 thousand euros in the gross profit. However, the administrative expenses, finance expenses and other expenses were smaller in the adjusted statement, and so, the loss for the period was smaller than in original statement, which included the discontinued operations. While comparing the revenues during the research period it should be notified that the revenues in 2012 were affected by the selling inventory of 8.3 million to the group's joint venture, Tivoli Arendus OÜ (Annual report 2012).

After 2012 Arco Vara managed to be profitable until the year 2016, when the group had losses of 832 thousand euros. The group's gross profit was positive in the year 2016, but as the administrative and distribution expenses increased, combined with the losses caused by the revaluation of investment property, the result for the year was negative. In the annual statement, the group explained that the revenue from services was affected by the selling the Latvian agency at the end of November 2016 (Annual report 2016). Along with decrease of revenues in service division, the revenue from the development area suffered from the loss of rental income due to renovation works (Ibid.). Also, one of the clients, who occupied one larger rental area, ended their rental agreement. The rented area was divided into multiple smaller areas, but the group had difficulties with finding new tenants (Annual report 2016).

In 2012, the structure of the income statement differs highly from the following years, as the cost of sales was higher than the total revenues (130%) and so, the gross profit was negative. The vertical analysis of 2012 (Appendix 5) demonstrates, how the restructuration of the group and selling the construction division has increased the portion of operational losses in relation to revenues. During 2012, when the discontinued operations were included to income statement, the operating loss was 78% of the revenues, but after removing the effect of the construction division, operating losses were 145% of the total revenues. The reason for this was, that the expenses occurred during 2012 did not decrease as much as the revenue decreased due to removal the construction division.

After 2012, the relation of the cost of sales to revenues has remained at the same level, as the cost of sales has varied from 64% to 69% of the revenues. During the years 2013–2016 the change in net profits has also been moderate, as the relation of net profits to total revenues has varied from 31% to 36%. The changes in the other parts of the statement are larger. For example, the net profit for the period in 2012 was -165% of the revenues, but in 2013 the percentage had increased to 32%. After that, the percentage of net profits to revenues has decreased, as in 2014 the percentage was 9%, and in 2015 it was only 4%.

The second highest group of costs in the income statement is the administrative expenses. The administrative expenses in relation to revenues increased from 9% to 16% between the years 2011 and 2012 (before adjusting the drop of the construction division). After removing the construction division, the portion of the administrative expenses has been almost one fifth of the total revenues each year, apart from 2013, when the administrative expense was 16% of total revenue.

From the horizontal analysis (Appendix 6), the change in revenue has not been favourable. The revenue from rendering services has decreased each year, and the same declining trend has taken place in revenue from the sale of goods, with an exception of 2015, when the group was able to increase the revenues. In 2015 the increase in the revenue from sales of goods surpassed the decrease in the service revenue, and making the overall revenues in 2015 larger, than in 2014. Still, even during 2015 the revenue was not as high as in 2012, which, as previously mentioned, might be caused by the selling the inventory in 2012. Arco Vara managed to double their gross profit during 2013, mainly by decreasing the cost of sales. During 2014, the gross profit declined. The group managed to decrease its cost of sales, but the decline in revenues was larger. In 2015 the gross profit rose again, as the group managed to increase its revenues more than the cost of sales, which also increased. Still, operating profit and the net profit have constantly decreased during the years 2014–2016, after a large increase of in both during 2013.

The trend analysis shows, that the level of revenues has not reached the level of the base year. The only part of the income statement that increased compared to the base year, is the marketing and distribution expenses, which were almost twice as high in 2015 and 2016 compared to the year 2012, due to increased advertising expenses and brokerage fees (Annual report 2016, 36). Unfortunately, comparing profits is not meaningful in the trend analysis in

this research, as the profits at the basis year are negative, which cause the numbers to be misguiding in the trend analysis.

2.1.2 Balance sheet

Even though there have been changes in other financial statements, the statement of financial position has retained its structure since 2011. This means, that there is no need for separate adjustments when comparing 2012 with other years. The base year in trend analysis remains the year 2012, to ensure comparability and cohesiveness between the financial statement analyses. However, again there is a problem with the negative numbers incurred in the numbers of base year, as the retained earnings decreased in the 2012, and so, the positive retained earnings occurred during the following years are not presented correctly in the table of trend analysis.

The common-size analysis of balance sheet demonstrates that for the whole research period, the structure of non-current and current assets has remained at similar level (Appendix 6). The division between the current and non-current assets has been almost even between the items, current assets being slightly greater than the non-current assets. During 2012 and 2013, the largest part of the assets was investment properties, but during 2014, the percentage of inventories to total assets exceeded the percentage of investment properties. The amount in inventories decreased during the years 2012 and 2013, but after 2013, the inventories have increased each year. The cash levels have remained stable, being 3–6% of the total assets. The group has had a steady decrease in the percentage of short-term accounts receivables and prepayments to total assets during the research period, from 10% in 2012 to 2% in 2016, which could indicate better cash collection methods. The group had also long-term accounts receivables, but that has been only a minor part in the structure of the total assets.

The comparison of the relations between liabilities and equity shows that total liabilities have always been higher than equity. However, there has been great variation in the structure of equity and liabilities. This is mainly caused by the changes in the non-current and current liabilities. The most outstanding factor is the current liabilities, which dominate the amount of total liabilities and equity, being 85% of the total liabilities and equity in 2012. The high portion of current liabilities was caused mainly by the Arco Invest EOOD, as the company was not able to make the scheduled loan settlements, and the bank providing the loan gained the right to call

the whole loan amount early. Due to this, all of the loans of the subsidiary were stated as current liabilities (Annual report 2012, Note 33). The percentage of the current liabilities to total liabilities and equity was quite high in 2013 (64%), whereas non-current liabilities were only 9% of total liabilities and equity. In 2014, the percentage of non-current liabilities to total liabilities and equity increased to 44%, and the percentage of current liabilities decreased to be only 23% of total liabilities and equity. The change in the structure of total liabilities and equity was caused mainly by the increase in non-current loans and borrowings, and in the increase in share capital, in share premium and in retained earnings. The structure of the liabilities and equity changed also due to a decline in the amount of short-term loans and borrowing. The portions remained similar during 2015, as non-current and current liabilities decreased, where equity continued to increase. In 2016 the portion of current liabilities increased, being 50% of the total liabilities and equity. The main reason for the increase in current liabilities was the 300% increase in loans and borrowings (Appendix 9).

The percentage of equity was very low in 2012, being only 11% of total liabilities and equity. However, the group increased the amount of equity during the years 2013 and 2015, by increasing the amount of retained earnings. Also, in 2014, the group had issued share capital, which increased the equity. In 2016 the percentage of equity to total liabilities and equity decreased despite of the increase in share capital, because the retained earnings and other reserves decreased during the year, and the amount of liabilities increased.

According to the trend analysis of the financial position, Arco Vara has managed to decrease the amount of total assets and current liabilities, whereas the amount of non-current liabilities and equity has increased. The decrease of assets has been intentional, as for example in 2013, when the group had to deal with “four essential challenges”, including projects in Bulgaria and Estonia, in addition to the sustainability problems with the group’s subsidiary Arco Ehitus. The similar mention was made in annual report of 2015, in which the group chief executive’s review stated that clearing unnecessary (unprofitable) assets has been Arco Vara’s agenda for the year. Liabilities is the most varied part in the trend analysis, and the main growth have been in the equity and total non-current liabilities, which are nearly three times greater than in 2012. It is clear, that the group has shifted the structure of the liabilities, as the total of the current liabilities in 2016 is 48 percentage points lower than at the end of 2012, whereas the non-current liabilities were 277 percentage points higher than in the basis year. The company

has also increased the amount of equity in balance sheet, as it is 167% higher than in 2012. Interestingly, in annual report of 2012, the group stated that Arco Vara decreased the debt burden by 6.2 million euros, and even though the overall debt burden decreased, short-term loans were increased by 7,176 thousand euros. But, as previously discussed, the increase in short-term liabilities was mainly due to Arco Invest EOOD's troubles with meeting its obligations.

2.1.3 Cash flow statement

Before 2012, Arco Vara group used the indirect method to compile the cash flow statement, but starting from 2013 the group has been using the direct method (Annual report 2013). The group has adjusted the year 2012 in the annual report of 2013, but unfortunately, 2011 is not comparable with other years than 2012, and is left out of the overall analysis, even though the difference between the methods only concerns the operating activities. There are some alarming issues with the change in the cash flow statement method change, as some of the numbers do not match with the direct and indirect one. For example, in indirect version, the amount of loans provided is 400 thousand euros, whereas in the direct method in 2012, the loans provided were 315 thousand euros. The same situation was with the settlement of loan and finance lease liabilities: in indirect version the amount was 4,392 thousand EUR, and in direct version statement it was 3,384 thousand euros. These all have been cash outflows, which have increased after the method change. Still, even though there are differences in the numbers between the methods, the net cash flow from investing activities, as well as operating activities has remained the same.

During the research period, net cash flow has been positive in the years 2014 and quite surprisingly, in 2016. In 2016 there were losses for the period, and the net cash from investing activities have sunken to be a cash outflow of 2,333 thousand euros, and yet, the company managed to have positive net cash flow. One of the reasons for such a large cash outflow in the investing activities was the acquisition of subsidiary, which caused a cash outflow of 1,890 thousand euros. For 2016, the net operating cash flow and the net cash flow from financing activities were positive, and both of these net cash flows managed to be higher than the cash outflow in the investment activities. Due to this, the group managed to increase the cash and cash equivalents at the end of the period.

The group stated in its annual reports for 2012 and 2015 that it decreased highly its debt burden (Annual report 2012, Annual report 2015). This can be seen in the cash flow statement, where the net cash flow from financing activities in 2015 was the second lowest during the research period, with an cash outflow of 3,228 thousand euros. The lowest net cash-flow from financing activities incurred in 2012. Also, in 2015 and in 2012, there were not as much proceeds from loans received as in other years, so the cash inflow from financing activities were lower. Also in 2013 the net cash flow was a cash outflow. This was due to low net operating cash flows, and even though the cash flow from investing activities was relatively high in 2013, the cash outflow from financing activities managed to surpass the cash inflows from two other activities.

2.2 Traditional analysis

The ratios used in this research are presented in the Table 1. The ratios are divided between the categories named in the chapter 1.3.2.

Profitability ratios have changed considerably, as during 2012 and 2016 the group encountered losses. In 2013, profitability figures were relatively large, which indicates that the group gained higher profit, decreased its asset, and that the group was able to increase profit relatively more than sales (Appendix 9, Appendix 6). Especially return on equity was very high, 67% in 2013, but in 2014, it decreased to 10%. The reason for the high return on equity is the highest profit during the research period, along with the lowest average equity, as the equity in 2012 was low. All of the profitability ratios decreased during 2014 and 2015, as the profits decreased. In 2016 the group had losses again, resulting in negative profitability ratios. During 2016, return on assets was also affected by the increase of assets. Assets were affected by obtaining a new property.

Table 1. The ratios for traditional analysis

Indicators	**31.12.2016**	**31.12.2015**	**31.12.2014**	**31.12.2013**	**31.12.2012**
Profitability					
Return on equity	(8.94%)	4.76%	10.34%	67.06%	(147%)
Return on assets	(3.19%)	1.73%	3.15%	12.16%	(41%)
Profit margin	(8.54%)	4.18%	8.98%	31.94%	(165%)

Operating margin	(1.18%)	11.84%	24.93%	42.20%	(145%)
Activity analysis					
Asset turnover	0.373	0.414	0.351	0.381	0.247
Inventory turnover	0.492	0.554	0.519	0.663	0.856
Accounts receivable turnover	35.379	14.443	12.309	7.366	2.074
Accounts payable turnover	2.140	2.989	2.680	2.676	2.464
PPE-turnover	16.151	23.081	20.511	21.477	14.832
Days' inventory (days)	742	659	703	551	426
Days' receivables (days)	10	25	30	50	141
Days' payables (days)	171	122	136	136	148
Operating cycle (days)	752	684	733	600	567
Short-term liquidity					
Current ratio	1.149	3.218	2.426	0.819	0.624
Quick ratio	0.076	0.247	0.460	0.074	0.163
Cash ratio	0.061	0.168	0.276	0.051	0.067
Long-term solvency					
Debt-to-equity	1.59	1.33	1.66	2.17	5.37
Liabilities to equity	2.09	1.54	1.98	2.67	8.28
Debt to capital	0.61	0.57	0.62	0.68	0.84
Interest coverage ratio	(0.19)	1.87	1.84	4.45	(9.30)
Interest coverage ratio (cash flow)	4.09	5.06	1.41	1.29	2.50
Equity multiplier	3.09	2.54	2.98	3.67	9.28

In asset utilization, the asset turnover and the inventory turnover ratios are below one, which indicates, that the use of assets to create sales is not very effective. The same goes with inventory turnover. Low inventory turnover may indicate overestimation of sales, slow-moving products or overstocking (Siegel, Shim, Hartman 1992). The days' inventory ratio indicates that the inventory is not in efficient use, as in 2016 the inventory turnover would have taken over 2 years. This is caused by the long time-frames of development division. Accounts receivable turnover has increased each year, which indicates restrictions in credit policies (Ibid). The receivables cycle has shortened from 141 days to 10 days. Days' payable decreased between 2012 and 2015, but in 2016, the time needed to pay back the group's obligations increased to 171 days, which is even higher than in the 2012. The increase was caused by the increase in accounts payable.

Short term liquidity ratios show that the liquidity of the group has varied significantly. Overall, the ratios were at the highest during 2014 and 2015. The current ratio has been over one after 2013, which can be seen as a healthy sign. As the effect of inventories is removed in

quick ratio analysis, the ratio fell under one, and the company was not able to pay even half of the current liabilities with its liquid assets. Low quick ratio often indicates low possibilities to borrow short-term funds. When comparing the quick ratio to the structure of the financial position, it is clear that in 2014 and 2015 the group lowered the relative amount of short-term loans. Cash ratio indicates the cash available at the moment to pay short-term liabilities. The cash ratio followed the same trend as the other factors, where the highest figures were during 2014 and 2015. Cash ratio was the highest in 2014 (0.276), and lowest in 2016 (0.061).

Long-term solvency ratios measure the capital structure of the company (Bernstein, Jones-Irwin 1987). Insolvency can lead to difficulties to get loans with reasonable interest levels. In 2012 the debt-to equity ratio shows that debt was five times higher than equity. It means that Arco Vara was highly leveraged with debt, which can be a high risk. However, the group managed to decrease the debt-to-equity ratio, until 2016, when the ratio rose again. During the researched years, the company's financial leverage has been debt-focused. High debt ratio might be a result caused by the nature of the real estate industry, which is seasonal and works at high investment costs. The interest coverage ratio based on earnings was the highest in 2013, but then decreased by 58%. In 2012 and 2016 the interest coverage ratio was negative due to losses, but when focusing on the cash-flow based interest coverage ratio, in 2016 it is lower than in 2015, but higher compared to other years. Insolvency can be avoided by selling non-profitable assets, which has been in Arco Vara's agenda during the research years. Excessive debt has also been a problem in the company during 2012 and 2013, as was discussed earlier. During those years, the group tried to renegotiate the loans, without success. Problems with insolvency issues led the company into selling the group joint ventures and exiting projects.

2.3 Component analysis

As previously mentioned, the analysed subject in this component analysis is return on equity. Also, referred to as the DuPont formula, it is combined from three factors: profit margin, asset turnover and equity multiplier:

$$\frac{Net\ profit}{Owners\ equity} = \frac{Net\ profit}{Sales} \times \frac{Sales}{Total\ assets} \times \frac{Total\ assets}{Owners\ equity}$$

Component analysis shows, how much the change in profitability (net profit margin), efficiency (asset turnover) and financial leverage (equity multiplier) impact the return on equity. The absolute and relative changes in the return on equity caused by different parameters are presented in the Table 2. In the table, the numbers in the second column (ΔP/OE) represent the absolute change in the return on equity between the years compared. Each comparison has three calculated factors. The first row represents the return on equity after the component has changed. The second row represents the absolute change in return on equity due to the change in different parameters. The third row shows, how each of the parameters affected the total relative change in ROE during the years.

Between 2012 and 2013, return on equity increased 214 percentage points. The drivers of the return on equity were beneficial for the ratio, but the main change was caused by net profit margin, as the group managed to increase their net income from loss to profits. During 2013, the growth in financial leverage caused an increase of 15.34 percentage points to return on equity, and the increase in efficiency caused an increase of 23.28 percentage points to the ratio. In 2014 the situation turned upside down, as return on equity decreased by 57 percentage points, due to decrease in all drivers. Again, the net profit margin was the main affecting factor in the decrease of ROE. The change in the efficiency was low, and so the impact on return on equity was not significant. The group decreased its financial leverage, by increasing the equity but decreasing the liabilities.

Table 2. DuPont analysis, the impact of each component on ROE

Year	**Δ(P/OE)**	**Explanation**	**P/S**	**S/TA**	**TA/OE**
2016/2015		ROE after the factor changed	(9.74%)	(8.79%)	(8.94%)
	(14 %)	The absolute impact in ROE caused by a change in each factor	(14.50%)	0.95%	(0.15%)
		Relative impact on ROE after the change in each factor	105.81%	(6.93%)	1.12%

2015/2014		ROE after the change in factor	4.81%	5.67%	4.76%
	(6 %)	The absolute impact in ROE caused by a change in each factor	(5.53%)	0.86%	(0.91%)
		Relative impact in ROE after the change in each factor	99.16%	(15.42%)	16.26%
2014/2013		ROE after the change in factor	18.84%	17.39%	10.34%
	(57 %)	The absolute impact in ROE caused by a change in each factor	(48.22%)	(1.45%)	(7.05%)
		Relative impact in ROE after the change in each factor	85.01%	2.56%	12.43%
2013/2012		ROE after the change in factor	28.44%	43.78%	67.06%
	214 %	The absolute impact in ROE caused by a change in each factor	175.32%	15.34%	23.28%
		Relative impact in ROE after the change in each factor	81.95%	7.17%	10.88%

The ROE continued to decrease in 2015, due to continuing decrease of the net profit margin and financial leverage. However, efficiency increased and offset some of the decrease caused by the two other factors. The growth of efficiency was mainly caused by the increase in sales, along with the decrease in total assets during 2015. In 2016, the profits were negative, and then there is no return on equity. Again, the main reason for the decline of return on equity was the decrease in the net profit margin and financial leverage. Even though there was a small increase in efficiency of the company, the growth was not enough to offset the impact of the two other factors.

2.4 Cash flow analysis

One model for analysing cash flows is presented by Palepu and Healy (2008). The analyst focuses on four different cash flow measures. Firstly, the analyst examines a firm's ability to generate a cash surplus from its operations, which is presented in the cash flow statement as a net cash flow from operating activities. Then the analysis moves on to assessing

the working capital: how is it managed, and if there is any flexibility for investments in long-term assets. The third target is to examine the free cash flow available to equity and debt holders, and if the company is able to meet the principal payments and interest. The focus in last phase considers if there is free cash flow for equity holders. Free cash flow for equity holders' is calculated, so the analyst can examine if there is any agency problems in the company, or to evaluate the sustainability of the company's dividend payments. Changes in these measurements show the stability of the dynamics in the cash flows.

The method presented by Palepu and Healy was created for the indirect cash flow statement, but when using the direct method, the idea stays the same, because only the structure of the operating activities differs between these two methods. Free cash flow to debt and equity is calculated by deduction of the net cash flow from investing activities from net cash flow operating activities, and free cash flow to equity is calculated by deduction of the settlement of loans and finance lease liabilities, interests paid and other financing activities' outflows from free cash flow available for debt and equity. The cash flows are examined in Table 3.

Each year, the net cash flow from operating activities has been positive. The same cannot be said of the investing activities, as for the last two years, the investing activities have provided cash outflow, which has decreased the amount available for debt and equity payments. In 2016 the Arco Vara group had to lean completely on new stock issuance in financing activities, due to non-available free cash flow. In 2016, the greatest cash outflow in investment activities was caused by the acquisition of the subsidiary. Before 2016, there has been excess cash flow after investing activities for debt and equity financing.

Table 3. Cash flow analysis

Items	**2016**	**2015**	**2014**	**2013**	**2012**
Net cash flow from operating	1,698	2,584	365	290	2,339
Net cash flow from investing	(2,333)	(302)	205	1,672	738
Free cash flow available for debt and equity	**(635)**	**2,282**	**570**	**1,962**	**3,077**
(Interests paid)	(797)	(788)	(1,091)	(964)	(1,478)
Net debt (repayment) or issuance	1,498	(2,291)	85	(1,763)	(1,993)
Other payments related to financing activities	(138)	(88)		(75)	(31)

Cash flow from discontinued operations	0	0	(76)	0	(9)
Free cash flow available for equity	**(72)**	**(885)**	**(512)**	**(840)**	**(434)**
Dividends (payments)	(61)	(61)	0	0	0
Net stock issuance	273	0	1,375	0	0
Net increase (decrease) in cash	**140**	**(946)**	**863**	**(840)**	**(434)**

The Arco Vara's ability to meet its short-term financial obligations is shifty. During 2013 and 2014 the net cash flow from operating activities did not exceed the amount of interest expenses, but in 2013 the net cash flow from investing activities was enough to cover the difference between operating activities and interest expenses. The only years during which there was an increase in net cash balance were 2016 and 2014, due to stock issuance.

When comparing Arco Vara's operating profit and net operating cash flows, the main difference is that during the years after 2011, the net cash flows from operating activities have been cash inflows. However, there has been an operating profit only during 2013–2015. As the expenses are lower than cash outflows, the reason for the difference can be found from comparing the total revenue and cash receipts from customers with each other, as the cash receipts from customers are higher than the revenues. This can be a consequence from pre-selling of the Arco Vara's apartments and rental areas.

2.5 The bankruptcy analysis

Altman's Z-score is one of the most favoured methods in bankruptcy analyses (Ketz 2003). Z-score model was first published in the Journal of Finance in September 1968 (Altman 1968), and even though it has been used for decades, and while the method has been developed and modelled, the main model has remained (Altman 2002). In this paper, the Z-score method used is introduced based on the Altman's book Bankruptcy, Credit risk and High Yield Junk Bonds.

The original sample in the development of the Z-score involved 66 companies with 2 groups, 33 companies in each group. Group 1 consisted of the distressed companies working in the manufacturing field that have given a bankruptcy notice during the years 1940–1965. Group

2 was the "control" group, which consisted of the randomly chosen, still functioning manufacturing companies. Altman then decided to eliminate the largest and the smallest asset-holding groups in the group one, as the comparison of financial ratios is size-depended, and due to the asset range. (Altman 2002)

Altman also investigated the accuracy of the model in three tests. Altman chose 86 bankrupts from 1969–75, 110 distressed companies from 1976–95 and 120 companies that went bankrupt during 1997–1999. The prediction of bankruptcy, accuracy rate range was 82–94 with cut-off 2.675. However, with companies having Z-score below 1.81, the error of bankruptcy classified company not-going bankrupt (Type II error), has increased 15–20% during the research period.

The original function was developed for manufacturing companies, but Altman revised the formula, so it could be adapted to non-manufacturers. In this formula, the factor of sales/total assets was removed (the effect of industry is minimized). Revised formula is used in this research, for various reasons. Arco Vara is a real estate company, which consists of service division and development division, in which the income is mainly of the rental income, and so, the firm can be considered to lean more on the non-manufacturing business than on manufacturing (Annual reports 2016). The revised formula for non-manufacturing companies is the following:

$Z= 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4,$

where

X_1 – working capital/total assets, working capital being the difference between current assets and current liabilities,

X_2 – retained earnings/total assets,

X_3 – earnings before interest and taxes/total assets,

X_4 – book value of equity/book value of total liabilities,

Z – overall index.

The numerical values of Z-score can be classified as following:

- "Distress" zone – below 1.1
- "Safe" zone – over 2.6
- The "Grey" zone – between 1.1 and 2.6

The results for Arco Vara are presented in the Table 3. The table contains all of the variables for each year, including both versions of the year 2012. The first column represents the factor calculated.

Table 4. The calculations of the Z-score

Factor	2016	2015	2014	2013	2012 (adj.)	2012
X_1	0.079	0.381	0.335	(0.103)	(0.226)	(0.226)
X_2	0.075	0.109	0.083	0.058	(0.063)	(0.063)
X_3	0.004	0.049	0.088	0.161	(0.359)	(0.365)
X_4	0.480	0.649	0.504	0.374	0.121	0.121
Z-score	**1.24**	**3.87**	**3.59**	**0.99**	**(3.97)**	**(4.01)**

Interesting issue with Arco Vara's Z-score is the year 2012, where all the factors, apart from X_4, are negative, decreasing the overall Z-score to -4.01, which is indeed a catastrophic situation. It is also notable, that the adjusted numbers for the year are slightly better than the original numbers. This is due to increased earnings before interest and taxes, as the dismissing of the construction division slightly increased the operating profits in the adjusted statements. The increase of the Z-score during the following years indicates that the restructuring helped to change the situation in the company, at least for the few years.

As the table shows, the Z-score has remained above the distress-zone after 2013, and even in the "Safe"-zone during 2014–2015. The company's Z-score decreased to the grey-zone in 2016, due to decreased profits and retained earnings, and the increase in assets. During 2016 the main decrease happened in X_1 (working capital to assets) due to significant decrease in working capital, as Arco Vara increased its current liabilities more than it acquired assets. The current liabilities grew due to increase in short-term loans, to finance an acquisition of a subsidiary and of a long-term assets.

In 2013 the working capital to total assets figure was negative, due to negative working capital, but otherwise all factors were positive, and higher than in 2012. But, as all of the factors were quite low, the Z-score stayed in the distress zone. The main reason for the increase in the Z-score during 2014 and 2015 is the increase of X_1 and in X_4 (market value of equity/book value of liabilities). Working capital increased during 2015 (9,816 thousand EUR) and 2014 (8,739 thousand EUR). In 2014, the total assets were higher than in 2013, but in 2015, the amount of total assets decreased again, and the level was even lower than in 2013. The decrease in total assets in 2015 was a consequence of the restructuring and clearing of non-profitable assets. During the 2014–2015 period, the factor X_2 (retained earnings to total assets) increased due to increasing retained earnings. However, the factor X_3 (earnings before interest and taxes to total assets) decreased compared to the year 2013, due to decreased operating income.

CONCLUSION

During the researched period, Arco Vara Group has been through major changes. The group has revaluated its assets during multiple years, and the structuring changes have affected financial statements rather notably. From supervisory board and management board, only one member, Hillar-Peeter Luitsalu, has remained in the company over the whole period, and there have been some disagreements among between the members of the management and supervisory boards. The changes were not only related to structure and the personnel, but also the results of all methods show that the performance of the Arco Vara group has been constantly changing.

From the research methods, traditional analysis and Altman's Z-score provided consistent results. The 2012 was the year of restructuring, which allowed the company to improve its performance for the following years. During 2013, the profitability ratios were very high, and the group performed well during 2014 and 2015. In 2016, the company suffered from losses, which affected to profitability. Component analysis showed that the return on equity has been affected due to changes in the net profits, but also by the equity multiplier. The impact of efficiency has been quite stable.

During the research, some issues in the annual reports and financial statements emerged, mainly considering the structure of the group. It is not entirely clear, how the parent company is connected to its subsidiaries, and how much debts and revenues are moved internally in the company, and how this affects the overall performance of the company. Also, there were issues with the figures of the cash flow statement, as there was a discrepancy between the direct and indirect method of the statement did not match.

Mainly, the company has been able to increase the amount of equity, and made the business less risky. The results show, that the performance of the company has changed each year, and there has been no stability in the company's performance, which was clearly presented in the return on equity ratios. One of the reasons for variation was the changing structures and highly unstable profit of the company. Even though the Z-score has managed to be above the critical level, it has varied too much during the research period to make any proper conclusions of the future. During the research period, the structure of the balance sheet has been the main indicator of good performance. When the group has been increasing the amount of long-term

liabilities instead of short-term liabilities, it has performed better than in the years with higher short-term liabilities.

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APPENDICES

Appendix 1. Income statements for the years 2011–2016 (thousand EUR)

Item	**2016**	**2015**	**2014**	**2013**	**2012**	**2012**	**2011**
Continuing operations							
Revenue from rendering of services	3,127	3,633	3,744	3,791	3,899	13,700	23,214
Revenue from sale of goods	6,620	7,019	5,414	6,937	7,032	7,032	19,918
Total revenue	**9,747**	**10,652**	**9,158**	**10,728**	**10,931**	**20,732**	**43,132**
Cost of sales	(6,745)	(6,865)	(5,902)	(7,450)	(14,241)	(23,560)	(42,790)
Gross profit	**3,002**	**3,787**	**3,256**	**3,278**	**(3,310)**	**(2,828)**	**342**
Other income	182	80	37	404	889	1,092	3,049
(Marketing and) Distribution expenses	(556)	(530)	(324)	(278)	(267)	(267)	(346)
Administrative expenses	(2,064)	(2,020)	(1,811)	(1,676)	(2,467)	(3,409)	(3,903)
Other expenses	(99)	(151)	(82)	(196)	(5,430)	(5,445)	(634)
Gain on revaluation on investment property	(584)	95	0				
Gain on reversal of inventory write-down		0	572				
Share of loss of equity-accounted investees/Gain on sale of subsidiary	4	0	662	98		(5,272)	(914)
Gain/loss on transactions involving joint ventures		0	-27	2897	(5,272)		
Operating profit/loss	**(115)**	**1,261**	**2,283**	**4,527**	**(15,857)**	**(16,129)**	**(2,406)**
Finance income	1	4	5	22	81	84	586
Finance expenses	(591)	(670)	(1,067)	(994)	(1,726)	(1,738)	(1,811)
Finance income&costs	(590)	(666)	(1,062)	(972)	(1,645)	(1,654)	(1,225)
Profit/Loss before income tax	**(705)**	**595**	**1,221**	**3,555**	**(17,502)**	**(17,783)**	**(3,631)**
Income tax income/expense	(127)	(135)	(75)	0	(251)	(251)	250
Profit/loss for the year for continuing operations	**(832)**	**460**	**1146**	**3555**	**(17,753)**	**(18,034)**	**(3,381)**
Loss from discontinued operations		(15)	(324)	(128)	(281)		
Profit/loss for period	**(832)**	**445**	**822**	**3427**	**(180,34)**	**(18,034)**	**(3,381)**

Appendix 2. Balance sheet for the years 2011–2016 (thousand EUR)

Item	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**
Cash and cash equivalents	845	745	1,691	818	1,775	2,209
Receivables and prepayments	470	679	1,205	656	3,094	7,445
Inventories	14,593	12,818	11,970	10,780	11,701	21,564
Assets belonging to sales group				847	0	469
Total current assets	**15,908**	**14,242**	**14,866**	**13,101**	**16,570**	**31,687**
Investments in equity-accounted investees	0	0	0	1	1	4
Other investments	0				0	8
Receivables and prepayments	11	0	5	252	0	3,058
Deferred income tax asset					0	250
Investment property	10,835	9,513	11,585	11,331	14,097	21,252
Property, plant and equipment	718	489	434	459	540	934
Intangible assets	248	229	113	13	21	26
Total non-current assets	**11,812**	**10,231**	**12,137**	**12,056**	**14,659**	**25,532**
TOTAL ASSETS	**27,720**	**24,473**	**27,003**	**25,157**	**31,229**	**57,219**
Loans and borrowings	9,372	2,345	3,194	12,589	16,838	9,662
Payables and deferred income	4,369	1,935	2,659	1,746	3,822	7,735
Provisions	108	146	274	172	2,823	2,012
Liabilities belonging to sales group				1,488	3,084	1,205
Total current liabilities	**13,849**	**4,426**	**6,127**	**15,995**	**26,567**	**20,614**
Loans and borrowings	4,886	10,417	11,826	2,308	1,231	14,675
Payables and deferred income				0	64	741
Total non-current liabilities	**4,886**	**10,417**	**11,826**	**2,308**	**1,295**	**15,416**
TOTAL LIABILITIES	**18,735**	**14,843**	**17,953**	**18,303**	**27,862**	**36,030**
Share capital	4,555	4,282	4,282	3,319	3,319	3,319
Share premium	292	292	292			
Statutory capital reserve	2,011	2,011	2,011	2,011	2,011	2,011
Other reserves	52	298	179	60		
Retained earnings	2,075	2,656	2,250	1,452	(1,958)	16,306
Total equity attributable to owners of the parent	**8,985**	**9,539**	**9,014**	**6,842**	**3,372**	**21,636**
Equity attributable to non-controlling interests	0	91	36	12	(5)	(447)
TOTAL EQUITY	**8,985**	**9,630**	**9,050**	**6,854**	**3,367**	**21189**
TOTAL LIABILITIES AND EQUITY	**27,720**	**24,473**	**27,003**	**25,157**	**31,229**	**57219**

Appendix 3. Cash flow statements, years 2011–2012, indirect (thousand EUR)

Item	2012	2011
Loss for the year	(18,034)	(3,381)
Adjustments for the effects of non-cash transactions:		
Interest income and expense	1,356	1,381
Gains and losses on sale of investments in subsidiaries and joint ventures	0	(285)
Share of profits and losses of equity-accounted joint ventures	5,272	914
Change in fair value of investment property	4,080	(2,998)
Gains and losses on sale of investment property	699	92
Depreciation amortisation and impairment losses on property plant and equipment and intangible assets	398	99
Gain/loss on sale of property plant and equipment and intangible assets	4	28
Loss on write-down of inventories	5,869	1,214
Gain on sale of other assets	(192)	0
Income tax expense/income	251	(250)
Other non-cash transactions	276	226
Operating cash flow before working capital changes	(21)	(2,960)
Changes in working capital	2,360	2,290
NET CASH FROM/USED IN OPERATING ACTIVITIES	**2,339**	**(670)**
Acquisition of property plant and equipment and intangible assets	(28)	(94)
Proceeds from sale of property plant and equipment and intangible assets	14	5
Paid on development of investment property	0	(967)
Proceeds from sale of investment property	1,160	774
Acquisition of investments in subsidiaries and joint ventures	(12)	(4)
Proceeds from sale of investments in subsidiaries and joint ventures	0	893
Loans provided	(400)	(631)
Repayment of loans provided	77	114
Other payments related to investing activities	(90)	0
Interest received	17	197
NET CASH FROM INVESTING ACTIVITIES	738	287
Proceeds from loans received	2,399	6,646
Settlement of loans and finance lease liabilities	(4,392)	(6,308)
Interest paid	(1,487)	(1,955)
Other payments related to financing activities	(31)	0
NET CASH USED IN FINANCING ACTIVITIES	(3,511)	(1,617)
NET CASH FLOW	(434)	(2,000)
Cash and cash equivalents at beginning of year	2,209	4,209
Decrease in cash and cash equivalents	(434)	(2,000)
Cash and cash equivalents at end of year	1,775	2,209

Appendix 4. Cash flow statements, years 2012–2016, direct (thousand EUR)

Item	2016	2015	2014	2013	2012
Cash receipts from customers	14,290	13,770	10,812	10,516	11,442
Cash paid to suppliers	(9,608)	(7,569)	(8,945)	(7,058)	(6,429)
Taxes paid	(106)	(197)	(1,150)	(1,976)	(2,252)
Taxes recovered	(1,631)	(2,399)	805	189	471
Cash paid to employees	(1,151)	(1,015)	(866	(846)	(1,030)
Other cash payments and receipts related to operating activities	(96)	9	(41	(218)	(140)
Net cash flow of discontinued operations	0	(15)	(250)	(317)	277
NET CASH FROM OPERATING ACTIVITIES	**1,698**	**2,584**	**365**	**290**	**2,339**
Purchase of property, plant and equipment	(99)	(196)	(71)	(34)	(24)
Proceeds from sale of property, plant and equipment	1		0	118	9
Proceeds from sale of investment property	(383)	(110)	0	80	0
Proceeds from sale of a subsidiary	41	0	10	1,610	1,160
Acquisition of a subsidiary	(1,890)		1	0	(12)
Loans provided			(3)	(48)	(315)
Repayment of loans provided				0	2
Placement of security deposits			(438)	(263)	0
Release of security deposits			701	258	0
Interests received	0	4	5	7	14
Other payments related to investing activities	(3)		0	0	(90)
Net cash flow of discontinued operations				(56)	(6)
NET CASH FROM/USED IN INVESTING ACTIVITIES	**(2,333)**	**(302)**	**205**	**1,672**	**738**
Proceeds from loans received	6,135	2,734	4,885	3,046	1,391
Settlement of loans and finance lease liabilities	(4,637)	(5,025)	(4,800)	(4,809)	(3,384)
Interests paid	(797)	(788)	(1,091)	(964)	(1,478)
Dividends paid	(61)	(61)			
Other payments related to financing activities	(138)	(88)	(76)	(75)	(31)
Net cash flow of discontinued operations				0	(9)
Proceeds from share capital increase	273		1,375		
NET CASH USED IN FINANCING ACTIVITIES	**775**	**(3,228)**	**293**	**(2,802)**	**(3,511)**
NET CASH FLOW	**140**	**(946)**	**863**	**(840**	**(434)**
Cash and cash equivalents at beginning of period	745	1,691	818	1,775	2,209
Decrease in cash and cash equivalents	140	(946)	863	(840)	(434)
Decrease in cash and cash equivalents through sale of a subsidiary	(40)	0	10	(37)	0
Cash and cash equivalents reclassified to sales group assets			0	(80)	0
Cash and cash equivalents at end of period	845	745	1,691	818	1,775

Appendix 5. Income statement, vertical analysis

Item	2016	2015	2014	2013	2012	2012	2011
Continuing operations							
Revenue from rendering of services	32%	34%	41%	35%	36%	66%	54%
Revenue from sale of goods	68%	66%	59%	65%	64%	34%	46%
Total revenue	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Cost of sales	69%	64%	64%	69%	130%	114%	99%
Gross profit	**31%**	**36%**	**36%**	**31%**	**(30%)**	**(14%)**	**1%**
Other income	2%	1%	0%	4%	8%	5%	7%
(Marketing and) Distribution expenses	(6%)	(5%)	(4%)	(3%)	(2%)	(1%)	(1%)
Administrative expenses	(21%	(19%)	(20%	(16%)	(23%)	(16%)	(9%)
Other expenses	(1%)	(1%)	(1%)	(2%)	(50%)	(26%)	(1%)
Gain on revaluation on investment property	(6%)	1%	0%	0%	0%	0%	0%
Gain on reversal of inventory write-down	0%	0%	6%	0%	0%	0%	0%
Share of loss of equity-accounted investees/Gain on sale of subsidiary	0%	0%	7%	1%	0%	(25%)	(2%)
Gain/loss on transactions involving joint ventures	0%	0%	0%	27%	(48%)	0%	0%
Operating profit/loss	**(1%)**	**12%**	**25%**	**42%**	**(145%)**	**(78%)**	**(6%)**
Finance income	0%	0%	0%	0%	1%	0%	1%
Finance expenses	(6%)	(6%)	(12%)	(9%)	(16%)	(8%)	(4%)
Finance income&costs	(6%)	(6%)	(12%)	(9%)	(15%	(8%	(3%
Profit/Loss before income tax	**(7%)**	**6%**	**13%**	**33%**	**(160%)**	**(86%)**	**(8%)**
Income tax income/expense	(1%)	(1%)	(1%)	0%	(2%	(1%	1%
Profit/loss for the year for continuing operations	**(9%)**	**4%**	**13%**	**33%**	**(162%)**	**(87%)**	**(8%)**
Loss from discontinued operations	0%	0%	(4%)	(1%)	(3%)	0%	0%
Profit/loss for period	(9%)	4%	9%	32%	(165%)	(87%)	(8%)

Appendix 6. Income statement, horizontal analysis

	2016		2015		2014		2013		2012	
Items	Δ	%	Δ	%	Δ	%	Δ	%	Δ	%
Continuing operations										
Revenue from rendering of services	(506)	(14%)	(111)	(3%)	(47)	(1%)	(108)	(3%)	(9,514)	(41%)
Revenue from sale of goods	(399)	(6%)	1,605	30%	(1,523)	(22%)	(95)	(1%)	(12,886	(65%
Total revenue	**(905)**	**(8%)**	**1,494**	**16%**	**(1,570)**	**(15%)**	**(203)**	**(2%)**	**(22,400)**	**(52%)**
Cost of sales	(120)	(2%)	963	16%	(1,548)	(21%)	(6,791)	(48%)	(19,230)	(45%)
Gross profit	(785)	(21%)	531	16%	(22)	(1%)	6,588	199%	(3,170	(927%)
Other income	102	128%	43	116%	(367)	(91%)	(485)	(55%)	(1,957)	(64%
(Marketing and) Distribution expenses	26	5%	206	64%	46	17%	11	4%	(79)	(23%)
Administrative expenses	44	2%	209	12%	135	8%	(791)	(32%)	(494)	(13%)
Other expenses	(52)	(34%)	69	84%	(114)	(58%)	(5,234)	(96%)	4,811	759%
Gain on revaluation on investment property	(679)	(715%)	95	0%	0	0%	0	0%	0	0%
Gain on reversal of inventory write-down	0	0%	(572)	(100%)	572	0%	0	0%	0	0%
Share of loss of equity-accounted investees/Gain on sale of subsidiary	4	0%	(662)	(100%)	564	576%	98	0%	(4,358)	(477%)
Gain/loss on transactions involving joint ventures	0	0%	27	100%	(2,924)	(101%)	8,169	155%	0	0%
Operating profit/loss	(1,376)	(109%)	(1,022)	(45%)	(2,244)	(50%)	20,384	129%	(13,723)	(570%)
Finance income	(3)	(75%)	(1)	(20%)	(17)	(77%)	(59)	(73%)	(502)	(86%)
Finance expenses	(79)	(12%)	(397)	(37%)	73	7%	(732)	(42%)	(73)	(4%)
Finance income&costs	(76)	(11%)	(396)	(37%)	90	9%	(673)	(41%)	429	35%
Profit/Loss before income tax	(1,300)	(218%)	(626)	(51%)	(2,334)	(66%)	21,057	120%	(14,152)	(390%)
Income tax income/expense	8	6%	(60)	(80%)	(75)	0%	251	100%	(501)	(200%)
Profit/loss for the year for continuing operations	(1,292)	(281%)	(686)	(60%)	(2,409)	(68%)	21,308	120%	(14,653)	(433%)
Loss from discontinued operations	15	100%	309	95%	(196)	(153%)	153	54%	0	0%
Profit/loss for period	(1,277)	(287%)	(377)	(46%)	(2,605)	(76%)	21,461	119%	(14,653)	(433%)

Appendix 7. Income statement, trend analysis

Item	**31.12.2016**	**31.12.2015**	**31.12.2014**	**31.12.2013**	**31.12.2012**
Continuing operations					
Revenue from rendering of services	80.2%	93.2%	96.0%	97.2%	100.0%
Revenue from sale of goods	94.1%	99.8%	77.0%	98.6%	100.0%
Total revenue	**89.2%**	**97.4%**	**83.8%**	**98.1%**	**100.0%**
Cost of sales	47.4%	48.2%	41.4%	52.3%	100.0%
Gross profit	**90.7%**	**114.4%**	**98.4%**	**99.0%**	**100.0%**
Other income	20.5%	9.0%	4.2%	45.4%	100.0%
(Marketing and) Distribution expenses	208.2%	198.5%	121.3%	104.1%	100.0%
Administrative expenses	83.7%	81.9%	73.4%	67.9%	100.0%
Other expenses	1.8%	2.8%	1.5%	3.6%	100.0%
Gain on revaluation on investment property	0.0%	0.0%	0.0%	0.0%	0.0%
Gain on reversal of inventory write-down	0.0%	0.0%	0.0%	0.0%	0.0%
Share of loss of equity-accounted investees/Gain on sale of subsidiary	0.0%	0.0%	0.0%	0.0%	0.0%
Gain/loss on transactions involving joint ventures	0.0%	0.0%	0.5%	-55.0%	100.0%
Operating profit/loss	**0.7%**	**8.0%**	**14.4%**	**28.5%**	**100.0%**
Finance income	1.2%	4.9%	6.2%	27.2%	100.0%
Finance expenses	34.2%	38.8%	61.8%	57.6%	100.0%
Finance income&costs	35.9%	40.5%	64.6%	59.1%	100.0%
Profit/Loss before income tax	(4.0%)	3.4%	7.0%	20.3%	100.0%
Income tax income/expense	50.6%	53.8%	29.9%	0.0%	100.0%
Profit/loss for the year for continuing operations	(4.7%)	2.6%	6.5%	20.0%	100.0%
Loss from discontinued operations	0.0%	5.3%	115.3%	45.6%	100.0%
Profit/loss for period	(4.6%)	2.5%	4.6%	19.0%	100.0%

Appendix 8. Balance sheet, vertical analysis

Item	31.12.2016	31.12.2015	31.12.2014	31.12.2013	31.12.2012	31.12.2011
Cash and cash equivalents	3%	3%	6%	3%	6%	4%
Receivables and prepayments	2%	3%	4%	3%	10%	13%
Inventories	53%	52%	44%	43%	37%	38%
Assets belonging to sales group	0%	0%	0%	3%	0%	1%
Total current assets	57%	**58%**	**55%**	**52%**	**53%**	**55%**
Investments in equity-accounted investees	0%	0%	0%	0%	0%	0%
Other investments	0%	0%	0%	0%	0%	0%
Receivables and prepayments	0%	0%	0%	1%	0%	5%
Deferred income tax asset	0%	0%	0%	0%	0%	0%
Investment property	39%	39%	43%	45%	45%	37%
Property, plant and equipment	3%	2%	2%	2%	2%	2%
Intangible assets	1%	1%	0%	0%	0%	0%
Total non-current assets	43%	**42%**	**45%**	**48%**	**47%**	**45%**
Total assets	100%	**100%**	**100%**	**100%**	**100%**	**100%**
Loans and borrowings	34%	10%	12%	50%	54%	17%
Payables and deferred income	16%	8%	10%	7%	12%	14%
Provisions	0%	1%	1%	1%	9%	4%
Liabilities belonging to sales group	0%	0%	0%	6%	10%	2%
Total current liabilities	**50%**	**18%**	**23%**	**64%**	**85%**	36%
Loans and borrowings	18%	43%	44%	9%	4%	26%
Payables and deferred income	0%	0%	0%	0%	0%	1%
Total non-current liabilities	**18%**	**43%**	**44%**	**9%**	**4%**	**27%**
Total liabilities	**68%**	**61%**	**66%**	**73%**	**89%**	**63%**
Share capital	16%	17%	16%	13%	11%	6%
Share premium	1%	1%	1%	0%	0%	0%
Statutory capital reserve	7%	8%	7%	8%	6%	4%
Other reserves	0%	1%	1%	0%	0%	0%
Retained earnings	7%	11%	8%	6%	(6%)	28%
Total equity attributable to owners of the parent	**32%**	**39%**	**33%**	**27%**	**11%**	**38%**
Equity attributable to non-controlling interests	0%	0%	0%	0%	0%	(1%)
Total Equity	**32%**	**39%**	**34%**	**27%**	**11%**	**37%**
Total Liabilities and Equity	100%	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix 9. Balance sheet, horizontal analysis

Assets	**2016**		**2015**		**2014**		**2013**		**2012**	
	Δ	**%**	Δ	**%**	Δ	**%**	Δ	**%**	Δ	**%**
Cash and cash equivalents	100	13%	(946)	(56%)	873	107%	(957)	(54%)	(434)	(20%)
Receivables and prepayments	(209)	(31%)	(526)	(44%)	549	84%	(2,438)	(79%)	(4,351)	(58%)
Inventories	1,775	14%	848	7%	1,190	11%	(921)	(8%)	(9,863)	(46%)
Assets belonging to sales group	0	0%	0	0%	(847)	(100 %)	847	0%	(469)	(100%)
Total current assets	**1,666**	**12%**	**(624)**	**(4%)**	**1,765**	**13%**	**(3,469)**	**(21%)**	**(15,117)**	**(48%)**
Investments in equity-accounted investees	0	0%	0	0%	(1)	(100 %)	0	0%	(3)	(75%)
Other investments	0	0%	0	0%	0	0%	0	0%	(8)	(100%)
Receivables and prepayments	11	0%	(5)	(100 %)	(247)	(98%)	252	0%	(3,058)	(100%)
Deferred income tax asset	0	0%	0	0%	0	0%	0	0%	(250)	(100%)
Investment property	1,322	14%	(2,072)	(18%)	254	2%	(2,766)	(20%)	(7,155)	(34%)
Property, plant and equipment	229	47%	55	13%	(25)	(5%)	(81)	(15%)	(394)	(42%)
Intangible assets	19	8%	116	103%	100	769%	(8)	(38%)	(5)	(19%)
Total non-current assets	1,581	15%	(1,906)	(16%)	81	1%	(2,603)	(18%)	(10,873)	(43%)
Total assets	**3,247**	**13%**	**(2,530)**	**(9%)**	**1,846**	**7%**	**(6,072)**	**(19%)**	**(25,990)**	**(45%)**

Appendix 9 (continued)

Liabilities and equity	**2016**		**2015**		**2014**		**2013**		**2012**	
	Δ	**%**	Δ	**%**	Δ	**%**	Δ	**%**	Δ	**%**
Payables and deferred income	2,434	126%	(724)	(27%)	913	52%	(2,076)	(54%)	(3,913)	(51%)
Provisions	(38)	(26%)	(128)	(47%)	102	59%	(2,651)	(94%)	811	40%
Liabilities belonging to sales group	0	0%	0	0%	(1,488)	(100%)	(1,596)	(52%)	1,879	156%
Total current liabilities	**9,423**	**213%**	**(1,701)**	**(28%)**	**(9,868)**	**(62%)**	**(10,572)**	**(40%)**	**5,953**	**29%**
Loans and borrowings	(5,531)	(53%)	(1,409)	(12%)	9,518	412%	1,077	87%	(13,444)	(92%)
Payables and deferred income	0	0%	0	0%	0	0%	(64)	(100%)	(677)	(91%)
Total non-current liabilities	(5,531)	(53%)	(1,409)	(12%)	9,518	412%	1013	78%	(14,121)	(92%)
Total liabilities	**3,892**	**26%**	**(3,110)**	**(17%)**	**(350)**	**(2%)**	**(9,559)**	**(34%)**	**(8,168)**	**(23%)**
Share capital	273	6%	0	0%	963	29%	0	0%	0	0%
Share premium	0	0%	0	0%	292	0%	0	0%	0	0%
Statutory capital reserve	0	0%	0	0%	0	0%	0	0%	0	0%
Other reserves	(246)	(83%)	119	66%	119	198%	60	0%	0	0%
Retained earnings	(581)	(22%)	406	18%	798	55%	3,410	(174%)	(18,264)	(112%)
Total equity attributable to owners of the parent	(554)	(6%)	525	6%	2172	32%	3470	103%	(18,264)	(84%)
Equity attributable to non-controlling interests	(91)	(100%)	55	153%	24	200%	17	(340%)	442	(99%)
Total Equity	**(645)**	**(7%)**	**580**	**6%**	**2196**	**32%**	**3,487**	**104%**	**(17,822)**	**(84%)**
Total liabilities and equity	**3,247**	**13%**	**(2,530)**	**(9%)**	**1,846**	**7%**	**(6,072)**	**(19%)**	**(25,990)**	**(45%)**

Appendix 10. Balance sheet, trend analysis

Item	**31.12.2016**	**31.12.2015**	**31.12.2014**	**31.12.2013**	**31.12.2012**
Cash and cash equivalents	48%	42%	95%	46%	100%
Receivables and prepayments	15%	22%	39%	21%	100%
Inventories	125%	110%	102%	92%	100%
Assets belonging to sales group	0%	0%	0%	0%	0%
Total current assets	96%	**86%**	**90%**	**79%**	100%
Investments in equity-accounted investees	0%	0%	0%	100%	100%
Other investments	0%	0%	0%	0%	0%
Receivables and prepayments	0%	0%	0%	0%	0%
Deferred income tax asset	0%	0%	0%	0%	0%
Investment property	77%	67%	82%	80%	100%
Property, plant and equipment	133%	91%	80%	85%	100%
Intangible assets	1,181%	1,090%	538%	62%	100%
Total non-current assets	81%	**70%**	**83%**	**82%**	100%
TOTAL ASSETS	89%	**78%**	**86%**	**81%**	100%
Loans and borrowings	56%	14%	19%	75%	100%
Payables and deferred income	114%	51%	70%	46%	100%
Provisions	4%	5%	10%	6%	100%
Liabilities belonging to sales group	0%	0%	0%	48%	100%
Total current liabilities	**52%**	**17%**	**23%**	**60%**	**100%**
Loans and borrowings	397%	846%	961%	187%	100%
Payables and deferred income	0%	0%	0%	0%	100%
Total non-current liabilities	**377%**	**804%**	**913%**	**178%**	**100%**
TOTAL LIABILITIES	67%	**53%**	**64%**	**66%**	100%
Share capital	137%	129%	129%	100%	100%
Share premium	0%	0%	0%	0%	0%
Statutory capital reserve	100%	100%	100%	100%	100%
Other reserves	0%	0%	0%	0%	0%
Retained earnings	(106%)	(136%)	(115%)	(74%)	100%
Total equity attributable to owners of the parent	**266%**	**283%**	**267%**	**203%**	**100%**
Equity attributable to non-controlling interests	0%	(1,820%)	(720%)	(240%)	100%
TOTAL EQUITY	**267%**	**286%**	**269%**	**204%**	**100%**
TOTAL LIABILITIES AND EQUITY	89%	**78%**	**86%**	**81%**	100%

Appendix 11. Financial ratios, used formulas

Profitability

Return on equity = $\frac{Net\ profit}{Equity}$

Return on assets = $\frac{Net\ profit}{Assets}$

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

Net operating margin = $\frac{Operating\ profit}{Sales}$

Activity analysis

Asset turnover = $\frac{Sales}{Average\ assets}$

Inventory turnover = $\frac{Sales}{Average\ inventory}$

Accounts receivables turnover = $\frac{Net\ credit\ sales}{Average\ accounts\ receivable}$

Account payable turnover = $\frac{Cost\ of\ good\ sold}{Accounts\ payable}$

Property, plant and equipment turnover = $\frac{Sales}{Net\ property,plant\ and\ equipment}$

Days' inventory = $\frac{Cost\ of\ good\ sold}{Average\ cost\ of\ goods\ sold\ per\ day}$

Days' receivables = $\frac{Accounts\ receivable}{Average\ sales\ per\ day}$

Days' payables = $\frac{Accounts\ payable}{Average\ cost\ of\ good\ sold\ per\ day}$

Short-term liquidity

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

Quick ratio = $\frac{Cash+Short-term\ investments+Accounts\ receivable}{Current\ liabilities}$

Appendix 11 (continued)

Cash ratio = $\frac{Cash + Marketable\ securities}{Current\ liabilities}$

Long-term solvency

Debt-to-equity = $\frac{Short-term\ debt + Long-term\ debt}{Shareholder's\ equity}$

Liabilities to equity = $\frac{Total\ Liabilities}{Equity}$

Debt to capital = $\frac{(Short-term\ debt + Long-term\ debt)}{Shareholder's\ equity + Short-term\ debt + Long-term\ debt}$

Interest coverage ratio = $\frac{(Net\ income + Interest\ expense + Tax\ expense)}{Interest\ expense}$

Interest coverage ratio (cash flow) = $\frac{Cash\ flow\ from\ operations + Interest\ expense + Taxes\ paid}{Interest\ expense}$

Equity multiplier = $\frac{Total\ assets}{Total\ equity}$

Working capital = Current assets – Current liabilities