

MENDEL UNIVERSITY IN BRNO
FACULTY OF REGIONAL DEVELOPMENT AND INTERNATIONAL
STUDIES

**Financial Analysis of a company
THERMOTEMP, spol. s r. o.**

Supervisor:

Ing. Vojtěch Tamáš, Ph.D.

Author:

Dan Škorpík

Brno 2016

I would like to thank to Ing. Vojtěch Tamáš, Ph.D. for his patience with my Bachelor thesis. I appreciate his attitude throughout the process of writing and all his pointers on how to do my Bachelor thesis correctly. He found time in his busy schedule to talk to me when I needed him to and answered my questions, which I am grateful for. I also would like to thank to my tutor from Statistics, Roman Skalický who willingly helped me, when I wasn't sure what to do.

STATEMENT

I declare that Bachelor thesis: Financial analysis of a company Thermotemp, spol. s r.o drafted separately and all used sources are mentioned in the list of information Bibliography. I agree that this Bachelor thesis has been published in accordance with § 47b of the Act no. 111/1998 Coll., on universities, as amended, and in accordance with applicable Directive on publication of university theses.

I am aware of that this Bachelor thesis is covered by Act no. 121/2000 Coll., Copyright Act, and the Mendel University in Brno has the right to conclude a license agreement and the use of thesis as school thesis according to § 60 par. 1 of the Copyright Act.

I also agree that before drafting license agreements for the use of thesis of another person (Entity), I request a written opinion of university that license agreement in question is not in conflict with the legitimate interests of the university, and undertake to pay any contribution to cover costs associated with the creation of the thesis, up to the full amount.

In Brno:

.....

ABSTRACT

The Bachelor thesis is primarily concerned with financial analysis of a selected company assessing the current condition of the company. The key concepts of word processing are financial analysis, rentability, activity, liquidity, profitability, horizontal and vertical analysis, directional indicators, financial claims, receivables.

ANNOTATION

The Bachelor thesis is primarily concerned with financial analysis of a selected company assessing the current condition of the company. The key concepts of word processing are financial analysis, rentability, activity, liquidity, profitability, horizontal and vertical analysis, directional indicators, financial claims, receivables. The theoretical part addresses basic concepts of a financial analysis, description of financial indicators and company assessing methods. In the practical part is introduced company Thermotemp spol. s r.o., which was an object of financial analysis described in theoretical part. The objective of the financial analysis is to find out the state of individual financial aspects and consequently to provide complex view on its overall financial health. The final part consists of evaluation of financial health of the company and recommendation measures.

KEYWORDS

financial analysis, indebtness, liquidity, profitability, ratio indexes, receivables

Content:

1	Introduction	7
2	Main objectives and methodology	8
2.1	Objectives	8
2.2	Methodology.....	8
3	Literature review	10
3.1	Source of information	10
3.1.1	Balance sheet.....	11
3.1.2	Income statement.....	13
3.1.3	Cash-flow statement.....	14
3.1.4	Attachment	15
3.2	Participants of financial analysis	16
4	Methods of financial analysis.....	18
4.1	Analysis of an absolute indicators	18
4.1.1	Horizontal analysis	19
4.1.2	Vertical analysis	19
4.2	Analysis of a ratios	19
4.2.1	Profitability ratios.....	19
4.2.2	Liquidity ratios	20
4.2.3	Activity ratios	22
4.2.4	Leverage ratios	22
4.3	Analytical models	23
4.3.1	Pyramid models.....	24
4.3.2	Bankruptcy models.....	25
4.3.3	Kralickuv Q-test	27
5	Analytical part	29
5.1	Company introduction	29
5.2	Competition in an industry	30
5.2.1	Short Introduction of a company ZahradnikZ.....	30

5.2.2	Short introduction of a company INSTASTAV Helán s. r. o	30
5.3	Analysis of absolute indicators	31
5.3.1	Balance sheet analysis	31
5.3.2	Income statement analysis	40
5.3.3	Analysis of a cash flow statement	43
5.4	Analysis of share ratios	45
5.4.1	Profitability ratios	45
5.4.2	Analysis of liquidity ratios	46
5.4.3	Analysis of an activity ratios	48
5.4.4	Leverage ratios	49
5.5	Analysis of group of indicators	50
5.5.1	DuPont pyramid model	50
5.5.2	Altman's formula	51
5.5.3	IN index	52
5.5.4	Kralickuv q-test	53
6	Summary and future recommendation	54
6.1	Low profit	54
6.2	Low liquidity	55
6.3	Big debt of a company	55
7	Conclusion	57
8	References	58
9	List of tables and graphs	60
10	Abbreviations	62
11	Attachments	63

1 Introduction

Financial analysis is an important tool for evaluating the economic results of the company. It represents a significant part of financial management and has a substantial role in financial decision making. It assesses the economic health of the company, determines whether a business is well managed, helps to identify weaknesses that could cause a possible problems in the future but also helps to identify strengths that could in the future help to get out of a bad financial situation.

Basic information sources of financial analysis are based primarily on financial accounting. Those are accounting statements. They include a balance sheet, income statement, statement of cash flows (cash flow), including attachments and the company's annual report. From these sources, which are publicly available, the external financial analysis is implemented. This analysis is carried out for the needs of banks, investors, strategic partners and major trading partners. Internal financial analysis deals with financial managers and senior management of the company. Draws from sources of financial accounting that are complemented by management (in-house, cost) accounting, costing, business statistics, business plans, etc. Internal analysis is intended for management.

An essential tool for financial analysis is a set of methods that analyze the financial situation of the company. These methods include horizontal and vertical analysis, ratio analysis (indebtedness, liquidity, activity and profitability) analysis of differential indicators (net working capital) and analysis of system parameters (pyramid system, bankruptcy and credibility models).

The objective of this thesis is to investigate the hypothesis by using financial analysis which says that measures in the area of cost reduction and subsequent transformation of the company to a limited liability company helps enterprises and potentially also the owner to achieve higher profitability. The theoretical part explains by what methods and resources the work is based on and there are also discussed individual financial indicators. In practical part I introduce you to the company Thermotemp spol. s r.o that is submitted to a financial analysis using the indicators that are mentioned and also explained in the theoretical part in the above.

2 Main objectives and methodology

2.1 Objectives

The main objective of this Bachelor thesis is the execution of the financial analysis of a selected company and its comparison within the industry. The individual results are used to determination of solvency and financial health of the company. From results of an analysis are also pointed out individual aspects in which the company lacks behind the competition and gives a recommendation to the management of a company of how to improve these aspects. Another objective of the analysis of the whole industry and integrating the company within it. The results are compared with other companies, that are direct competitors within an industry as well as with the whole industry overall. This comparison gives a better understanding of the results.

To fulfill the objectives of this thesis, the thesis was decomposed into following sub-objectives:

1. Characteristic of primary methods used in financial analysis.
2. Evaluation of financial health of a selected company through relevant indicators.

2.2 Methodology

Method of a financial analysis can be summed in general into several important points:

- acquiring of an important materials into analysis of a company and industry,
- analysis of a financial statement – horizontal and vertical analysis of an absolute indicators,
- computation of ratio indicators and its comparison with the industry standards and indicators of other companies (comparative analysis),
- analysis of a ratio indicators and relations between them (groups of indicators and pyramid model),
- overall evaluation of a financial health of the company and comparison within the industry,
- recommendation for the financial management.

This analysis is based on these individual points. Sources for the analysis were acquired from website ejustice.cz, where were pictured the financial statements of the company as well as other companies, that are direct competitors. Data about the whole

industry were acquired from website of Department of industry and trade, where various industry sector are displayed.

The company doesn't publish cash-flow statement, so a cash-flow statement was made from the accessible data of other financial statements. This construction of cash-flow statement was based on the construction in Dluhošová (2004).

The horizontal and vertical analysis is be based on data from 2008 to 2014 of a selected company. Data from 2015 were not available in the time for composition of this work.

In the next part of index ratios are emphasized strongly on the comparison with other companies and also with the while industry. Because of the limited sources of information for other companies the period was shortened for only four-year period during this part, that is from 2011 to 2014.

Evaluation of a solvency and financial health of a company is based on three different models, which is Altman's model, IN Index and Kralickuv Q-test. From these indicators and models is evaluated overall stability of a selected company and are deduced appropriate results.

3 Literature review

Financial analysis can be viewed as a tool which allows to acquire information that is unavailable or unknown from accessible information (financial statements etc.). The main goal of an analysis is usually presented as follows: "Determination of a financial health of a specific company". This financial goal is usually determined as a sum of profitability and liquidity of a business. Other partial goals of a financial analysis according to Kalouda (2015) are:

- identification of strengths and weaknesses of a company,
- analysis not only on a company level, but also on the sector level or state,
- identification of a financial anxiety of a business,
- resumption or improvement of a performance of a business,
- maximization of a utilization rate of available information. [2, p. 52]

We can also divide technique of a financial analysis into four different periods.

1. Finding out basic characteristics.
2. Determination of deviations from standard.
3. Detailed analysis in particular areas.
4. Identification of an undesirable state. [2, p. 51]

3.1 Source of information

The quality of information is essential to financial analysis and to the major extent depends on the source materials that are used. These materials should not only have quality, but also should be complex. The fundamental sources for the financial analysis are the **balance sheet**, **income statement** and **cash flow statement**. The majority of the analysis is usually based on the data from these sources. However in order to present a good quality analysis, financial analyst has to see behind these statements, collect all the other information, connect them together and draw right conclusions. The rule is that the more information the analyst has, the better.

Accounting statements can be divided into **financial statements** and **internal accounts**. Financial statements give information most of all to the external users and they are the basics of all information that are used in the financial analysis. Firm is obligated to publish them at least once a year. Internal accounts don't have a specific legal form and they are tied to the inner needs of every specific company. Using these information leads the specifications of the conclusions from the financial statements. [6, p. 21]

Balance sheet and income statement are accounting statements which structure is determined by the department of finance and every firm is obligated to include them in the annual accounts. They are also structured by the department of justice, thus it presents an advantage for the analysts, because all statements have same composition. On the other hand cash flow statement is not structured. This doesn't mean that the cash flow has a lower value. Its importance for the analysis is crucial especially for the big firms with the high amount of assets to determinate the dynamic of those assets. Annual accounts usually come with the attachment, that usually includes specific information about accounting system of the firm like accounting methods, methods of evaluation etc. [6, p. 22]

In the text as follows are briefly characterized the reports mentioned above and is emphasized the importance of each statement.

3.1.1 Balance sheet

Balance sheet is an annual statement that includes a state of the long-term and short-term assets and the source of their financing (liabilities) to the particular date. Balance sheet is usually made to the last day of the year and contains truthful information about the asset structure of the firm, sources of financing and financial situation of the firm to that particular day.

During the analysis I will focus on these main topics:

- total annual turnover,
- structure of assets, its development and volume of individual items,
- structure of liabilities, its development with the emphasis on the share of the equity, bank and supplier credit,
- relations between items of assets and liabilities. Magnitude of the long-term assets and long-term liabilities, equity, current assets and short-term liabilities, financial asset and short-term receivables to short-term liabilities. [6, p. 23]

a) Assets

All property and possession of the firm to a particular date is in the balance sheet described as assets. Its main purpose is to bring a future economical benefit for the firm. Individual items are usually arranged by its liquidity. In Czech Republic the items that are the most liquid are on the bottom of the assets and the least liquid on the top of the balance sheet. In the United states it's the other way around. Individual items of the assets are included in Table 1.

Table 1: Structure of a balance sheet

	Current accounting			Previous period accounting
	Brutto	Corrections	Netto	Netto
Assets in total				
A. Fixed assets				
A1. Fixed intangible assets				
A2. Fixed tangible assets				
A3. Financial assets				
B. Current assets				
B1. Inventories				
B2. Long-term receivables				
B3. Short-term receivables				
B4. Financial assets				
C. Other assets				
C1. Accruals of assets				

Source: Own construction based on Růčková (2007) p. 24

Fixed assets

In Czech accounting system assets can be marked as fixed if its change for cash is longer than one year. Usually this change is not all at once, but progressively in the form of depreciation. This section can be separated into three groups: **Fixed intangible assets** don't have a physical nature and usually is in the form of patents, license, software or goodwill. **Fixed tangible assets** include physical items of long-term nature that also comes to the costs of the company in the form of depreciation. Buildings and estates are typical items of the fixed tangible assets. The last part are financial investments that are acquired or bought in order make a profit in the form of interests or increase of the market value.

Current assets

These items of the assets are anticipated to change to the form of money within less than a year. It is usually constituted of inventories, short-term receivables, long-term receivables and financial assets (usually cash and bank account). Liquidity of the company is based on these assets thus some amount of these assets is always necessary in the firm.

Other assets

Other assets are usually accruals of assets of the future period that is for example in advance paid rent or revenues in the future period. Usually is a small part of the assets.

b) Liabilities

Liabilities can be defined as a source of the financing of the firm. In contrast of assets, liabilities are not arranged by its liquidity, but by the ownership of the source of financing. In Table 2 are described individual items of the liabilities.

Table 2: Structure of liabilities and equity

	Current accounting	Previous period accounting
Liabilities and Equity		
A. Equity		
A1. Registered capital		
A2. Capital funds		
A3. Funds from profit		
A4. Economic result in accounting period		
A5. Economic result in previous period		
B. Current liabilities		
B1. Reserves		
B2. Long-term liabilities		
B3. Short-term liabilities		
B4. Bank credit		
C. Other liabilities		

Source: Own construction based on Růčková (2007) p. 26

Equity

Equity contains an item share capital, that presents a monetary statement of the shareholders deposits into the specific company. Its amount is enrolled in the Commercial index. Next items are capital funds, which include donations, grants or share premium, funds from profit, economic result in previous period (profit from the past periods) and economic result in current period, thus profit or loss of current income statement.

Current liabilities

Current liabilities are defined as a debt of the company that has to be repaid in the different time horizon. Because firm is a debtor in these liabilities, it has to pay interest and other expenses associated with these items. Current liabilities are comprising by the reserves, long-term liabilities, short-term liabilities and bank credit.

3.1.2 Income statement

Income statement is a written review of costs, revenues and an economic result for a certain time (year, half a year, quarter of a year). This is the main difference to a balance sheet that is comprised by items presented in the firm at the one particular day of an account closer. [6, p. 31]

Economic result is defined by the difference of revenues and costs. **Revenues** can be defined as a monetary amounts, that the company retained from all of its activities in a certain accounting time. **Costs** on the other hand present a monetary amount, that the company spent in order to retain a profit in a certain accounting period.

Income statement is composed by the two main parts. Usually the most important is economic result from the **operational activity** that shows how was a firm successful in its business activity (merchandising sales, depreciation etc.). Another part is an economic result from the **financial activity** that is related to the way of business financing. In the non-financial businesses is usually negative (interests, revaluation etc). Sum of the financial and operational economic result and subtraction of taxes denotes **economic result in current activity**. Another part of an income statement that is usually in smaller extent is economic result in **exceptional activity**. These two sections together form a **comprehensive income for an accounting period**. This item is depicted in the balance sheet as one of the component of the equity.

The classification of an income statement introduced above is its typical description in Czech Republic. However other modifications of an income statement can be met that are most common abroad. In Table 3 is introduced a decomposition of the Income statement that is most common internationally. This decomposition is important to express and calculate basic financial indicators. [1, p. 59]

Table 3: Decomposition of Earnings

Process of decomposition	Control indicators
EBITDA – earnings before interest, taxes, depreciation and amortization	
- depreciation	
= EBIT – earnings before interest and taxes	ROA = EBIT/A
- costs interests	Interest taxes = taxes/EBIT
= EBT – earnings before taxes	
- income taxes	Tax burden = taxes/EBT
= EAT – earnings after taxes	ROE = EAT/equity
- dividends	Payout ratio = dividends/EAT
= EAR - earnings	

Source: Own construction based on Dluhošová (2010) p. 59

3.1.3 Cash-flow statement

Another important feature of a balance sheet is definitely cash flow. It is associated with the capability of the firm to settle its liabilities in the right time. Thus cash funds express liquidity of a firm. Balance sheet provides only information about state of cash amounts to the

accounting day at the end of the accounting period. Thus to further description of their movement was introduced cash-flow statement. Cash flow statement, unlike balance sheet and income statement, does not respect an accrual principal of accounting, therefore express distorted reality. [3, p. 58]

Cash-flow is composed by a similar way as an income statement into three parts. **Operational activities** reflect the operations that influence net profit (interest and dividends from shares in another companies, depreciation and also the amount of net working capital). Cash flow from **investing activities** is connected mainly with the movement of the long-term fixed assets and transactions on the long-term financial markets (capital expenditures, buying/selling long-term securities etc.). Cash flow from **financial activities** is a final part of this statement. The content of this part is every transaction to the creditors (short-term loans, income and repayment of the credit and bond, share issue etc.) [1, p. 60]

Common calculation of the cash flow that is denoted as the indirect calculation is depicted in Table 4.

Table 4: Cash-flow statement

Items	Value
Net Income	
+ depreciation	
+/- Decrease (increase) in a account receivable	
+/- Increase (decrease) in liabilities	
+/- Decrease (increase) in inventories	
= Net cash flow from operating activities	
- long-term investments	
= Net cash flow from investing activities	
+/- Increase (decrease) in debt	
+/- Increase (decrease) of profit from previous years	
- Dividends	
+ Sale of stock	
= Net cash flow from financing activities	
= Net increase (decrease in cash a	

Source: own construction based on Dluhošová (2008) p. 61

3.1.4 Attachment

Next to the balance sheet and income statement, attachment is a third component that every firm is obligated to include in the annual accounting. Attachment is a valuable source of information for the financial analysis. It specifies and refills the data of the balance sheet and

income statement gives comments to the items of these statements. In the attachment of the annual accounting can be found following statements:

- information about the physical or legal entities which have a substantial or decisive influence in the company with the amount of shareholders equity in percentages,
- number of employees during the accounting period,
- the magnitude of loans and credit with the amount of interest and main conditions,
- information about an accounting standard – used accounting methods, form of evaluation and depreciation,
- complement information of the balance sheet and income statement. Every information that is associated with the items that is crucial for the evaluation and financial analysis of the firm and is not explained in the balance sheet or income statement is explained in attachment. [5, p. 58]

3.2 Participants of financial analysis

Information involving financial state of a business are not important only for share-holders and creditors, but also for a business management, employees or union members. Every group has his own interest and goals. Most important participants of a financial analysis are depicted in Table 5.

Table 5: External and internal users

Users of financial analysis	
External Users	Internal Users
Investors	Managers
Banks and other creditors	Employees
Business partners	Unions
State and civil service	
Competition	

Source: Own construction based on Kislingerová (2004) p. 33

As the most important users of financial analysis can be described **investors**, which are mostly share-holders or owners of the business. Their goals are usually two-fold: First is that they want to be informed about the business to take part of future financial decisions of the firm. Secondly, they want to find out how the management is dealing with resources provided by them. Owners are focusing on a stability and liquidity of the business, most importantly on profit, because from its amount is derived the size of dividends.

Another important group of external users are **banks** or other creditors. These creditors need maximum amount of information about financial situation of a firm in order to determine its solvency. Based on this information creditors will decide if and in what amount they will provide credit to a company. Therefore banks are making their own financial analysis with an emphasis especially to liquidity and profitability of a company, because these two main characteristics testify if the firm is able to pay its liabilities.

Firm couldn't exist without its **business partners**. These groups of people are interested basically about the same area as creditors of a company, therefore its solvency. Mainly for suppliers this characteristic is crucial in short-term and in long-term period as well.

The main interest of a **competition** is to compare results of a company with its own. This is the reason why firms usually monitor financial situation of its rivals. These analysis are focusing on many aspects of the business like profitability, income, solvency, supplies, rate of return, investments and many more.

State and civil service is mostly interested about the fulfilling of tax obligations. Another group of users are internal users. The biggest influence on the company has its **managers** who manage the firm. For making a financial analysis, managers use not only external information that are known to all public, but also all of firm's internal information. Thus financial analysis of the company from managers is usually the one in best quality. **Employees** are mostly interested about their wages and social environment. With their rights, complains and claims towards the company help the **unions**. [5, p. 34]

4 Methods of financial analysis

There are many methods that financial analysts use to determine financial health of a business. Some examples of financial methods are shown in Table 6.

Table 6: Methods of financial analysis

Methods of financial analysis	
Deterministic models	Mathematical - statistic models
Horizontal analysis	Regression analysis
Vertical analysis	Discrimination analysis
Horizontal - vertical analysis	Analysis of variation
Analysis of a group of indicators	Testing of statistical hypothesis (t-test,F-test)
Analysis of sensitivity	

Source: Own construction based on Dluhošová (2008) p. 73.

Deterministic methods are used for an analysis of a complete company structure. These methods are usually used to analyze shorter term. The analysis of sensitivity determines uncertainty during analysis of financial statements of a company, therefore express influence of changes of chosen indicators for final results. The rest of these deterministic methods are described in more details in the following text.

Mathematical-statistic methods are usually connected with longer time period and express statistical randomness of a data and serve to determine future development and dependency of individual variables.

Basic technique of a financial analysis is using ratios, especially absolute and differential ratios. Magnitude of an absolute indicators depends on the size of the firm and can't be used for a comparison with different companies in the industry. However, comparison of these indicators within a company during different time periods (years, quarters, months) is very important.

As been said, this comparison is a basic method of financial analysis of a company. Key feature is a comparison of relative indicators (in percentages) of a company with other firms in the industry, industry average or the whole economy. [1, p. 74]

4.1 Analysis of an absolute indicators

Analysis of absolute indicators is a basic element of the financial analysis. It is an analysis of an entrance data that are included in the basic financial statement of a company. These data have always its specific monetary value and are divided into status values or flow values. These absolute indicators allow to see relations between individual items of balance sheet or income statements. [3, p. 64]

4.1.1 Horizontal analysis

Horizontal analysis is a basic technique to see relations of a specific items or group of items in a different time periods. It is also known as an analysis “by the lines” or also “analysis of the time periods”. The main output of an analysis is a time frame that is used to a prediction of a future progress of a company.

Future development however not necessarily depends on the past so this method of future planning is a target of many questions. Many economists are in agreement that today’s development follows so called Markow process. That is, economic results of a company do not depend on the past development and they are completely random. [2, p. 56]

4.1.2 Vertical analysis

Another way how to analyze items of the financial statements is “by the columns”. This analysis is called vertical analysis. The main purpose of this analysis is to derive the specific relations between the items or groups of items of the basic financial statements in one specific time.

Vertical analysis is also used to the comparison of the data of analyzed business with another firm in the sector because these indicators are shown in percentages. Another advantage of the vertical analysis is that is not influenced by inflation, thus it is possible to compare these data within different years. Because of this effect it is necessary to combine vertical and horizontal analysis together to receive better results. [2, p. 57]

4.2 Analysis of a ratios

Another way how to see the relations between individual items in balance sheet and income statements is analysis of ratios of individual or group items of a company. Not only that analysis of ratios provide a quick characteristic of a company financial situation, it is also good tool to compare financial situation of the company to other firms in the industry. These ratios are not only useful for the financial analysis, but also as a basic element for the fundamental analysis and evaluation of the firm that is connected with it.

Ratios can be divided into the several groups. In the text as follows are characterized the fundamental ratios in 4 different sections.

4.2.1 Profitability ratios

The main focus of this group of ratios is on rate of return or profitability. They are often used by the stockholders and potential investors in order to evaluate the firm. The most common ratios are as follows:

ROS (Return On Sales):

$$ROS = \frac{\textit{profit}}{\textit{Sales}},$$

where profit can be in the form of EAT, EBT or EBIT. This ratio describes a profit margin, which is an important feature for the success of the business. These margins are compared to the other companies in the industry. [5, p. 98]

ROA (Return On Assets):

$$ROA = \frac{\textit{EBIT}}{\textit{Assets}} \textit{ or } ROA = \frac{\textit{EAT} + \textit{interests}(1 - T)}{\textit{Assets}},$$

where T is a taxation rate.

ROA is considered as a key measure of profitability. It uses a net profit in the relation to net assets in order to see how the firm is able to utilize its assets to create profit. [1, p. 80]

ROE (Return On Equity):

$$ROE = \frac{\textit{EAT}}{\textit{Equity}}.$$

This ratio presents overall profitability of shareholder's equity invested in business. Level of return on equity also depends on the profitability of total liabilities and also on interest rates of the foreign sources. This return can be improved when a business buys back its own stock from investors, or by using more debt and less equity to fund its operations.

ROCE (Return Of Capital Employed):

$$ROCE = \frac{\textit{EBIT}}{\textit{Equity} + \textit{long - term liabilities}}.$$

ROCE is a ratio that measures the profitability and the efficiency in which its capital is employed. Capital employed can also be described as difference of Total assets and Current liabilities. [1, p. 82]

4.2.2 Liquidity ratios

By the term liquidity is considered the basic capability of a company to pay its current liabilities and to gain enough resources to execute its payments. Thus liquidity depends on

how fast is a firm capable cash its receivables. In another words – liquidity ratios measures the ability of a company to remain in business.

Current ratio:

$$\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

This ratio measures the amount of liquidity that is available for paying the current liabilities. The adequate value of its ratio is between 1,5 to 2,5. Important is also comparison with the similar companies in the industry and also with the average of the industry. It is important that current liabilities are in the date of maturity paid from the assets that are determined to this task and not for example by the long-term assets. That can put in danger the future development of the firm. The main weakness of this ratio is that some current assets are not able to change for cash in short-period of time. This weakness is eliminated by the next ratio.

Quick Ratio – Acid Test Ratio:

$$\text{Quick ratio} = \frac{\text{Cash} + \text{Marketable securities} + \text{Accounts receivable}}{\text{Current liabilities}}$$

This ratio is defined the same way as Current ratio, but does not include inventories, that are usually hard to change to cash [10]. It is also recommended to adjust numerator by the receivables after maturity that are also in low liquidity. The advised value of Quick ratio is from 1 to 1,5. The magnitude of a firm also depends on the type of business, whole sector and also its strategy. [1, p. 83]

Cash ratio:

$$\text{Cash ratio} = \frac{\text{cash} + \text{cash equivalents} + \text{invested funds}}{\text{current liabilities}}$$

This ratio looks at the most liquid assets of the firm and measures to what extent current cash covers current liabilities. It completely ignores inventory or receivables. Very few companies have cash that covers current liabilities because these types of assets are considered as very costly, because they can be used somewhere else to generate more profit to the company. The value of this ratio is usually about 0,2 and is important only from the short-term perspective. [12]

4.2.3 Activity ratios

These ratios are a strong indicator of the quality of management, since they reveal how well management is utilizing company resources. [9] Thus activity ratios express how the business manages its assets. These ratios measure turnover of certain assets of the company.

Assets turnover ratio:

$$\text{Assets turnover ratio} = \left(\frac{\text{Revenues}}{\text{Assets}} \right).$$

Assets turnover ratio measures the intensity of use of total assets. The higher is the ratio, the better a company uses its assets. Usually is used for the comparison between companies.

Receivables turnover ratio:

$$\text{Receivables turnover ratio} = \frac{\text{receivables} * 360}{\text{revenues}}.$$

Receivables turnover ratio tells what strategy a company uses to manage its receivables and gives information of how fast are the receivables paid. This ratio should not exceed payback period. [1, p. 86]

Sales turnover rate:

$$\text{Sales turnover rate} = \frac{\text{Sales} * 360}{\text{Revenues}}.$$

This ratio gives information about how long does it take to sale to take one turnover. It means what is the necessary time to cash fund came through the products again to the form of cash. [5, p.104]

4.2.4 Leverage ratios

In this age of business economy it is very rare to finance the business only from its own resources. Thus every company posses some amount of debt. The main essence of leverage ratios is to find optimal amount of debt and also correct relations of equity and current liabilities. Basic ratio which measures overall indebtedness is called **debt ratio**.

$$\text{debt ratio} = \frac{\text{total liabilities}}{\text{total assets}},$$

Usually applies, that the more value this ratio has, the more risk hold the creditors of the company. Creditors usually prefer lower values of this ratio.

Another indicator which is a complement to debt ratio is called **equity ratio**.

$$\text{Equity ratio} = \frac{\text{equity}}{\text{total assets}}$$

Equity ratio expresses a proportion, to which are total assets financed by the equity of the company and measures financial independence of the firm. [1, p. 86]

In deriving equity ratio there is disagreement in the literature because of the accruals of liabilities and equity. Some literature derives equity ratio as a Equity / Assets and add that debt + equity ratio equals 1, therefore neglect an influence of accruals of liabilities and equity that are often a significant part of companies balance sheet. In my bachelor thesis is equity ratio computed as a complement to the debt ratio (thus equity ratio includes accruals).

$$\text{Debt to equity} = \frac{\text{long - term debt} + \text{short - term debt} + \text{leases}}{\text{Equity}}$$

Debt to equity combines two previous ratios together. Sometimes is also called rate of indebtedness or rate of risk. It is very important to include leases in this ratio as they are not incorporated in the balance sheet.

Another indicator that measures if debt of the company is still in the acceptable level is called **interest coverage ratio**.

$$\text{Interest cover ratio} = \frac{\text{EBIT}}{\text{Interest expense}}$$

Interest cover ratio measures how many times the profit is higher than the interest expenses. Recommended value of this indicator is about 3. This value is that high because after paying the interest expenses, there has to be still enough profit for the shareholders. [6, p. 58]

4.3 Analytical models

The essence of the financial analysis is a determination of the financial health of a company whether it is from its past or from the prediction of the future. That is, if the firm is able to survive or not.

In the previous were presented many indicators that help to analyze the company or to compare a firm to its competitors. There is a great number of those indicators, thus economists tried to connect these indicators together and derive one specific number that would show the weaknesses and strength of the company. These economists invented so-called overall indexes or group of indicators. Purpose of these overall indexes is to characterize complete financial-economic situation of the company by one specific number.

The main essence is a construction of basic models that according to Růčková (2007) has three main functions:

- explain effect of the change of one or more indicators to whole economic of the firm,
- facilitate analysis of a present development of an industry,
- provides a foundation for a choice of decision of firm goals.

These analytical models can be divided into pyramid models, which results are usually presented in the graphical form and bankruptcy and solvency models which result is usually characterized by one specific number. [6, p. 60]

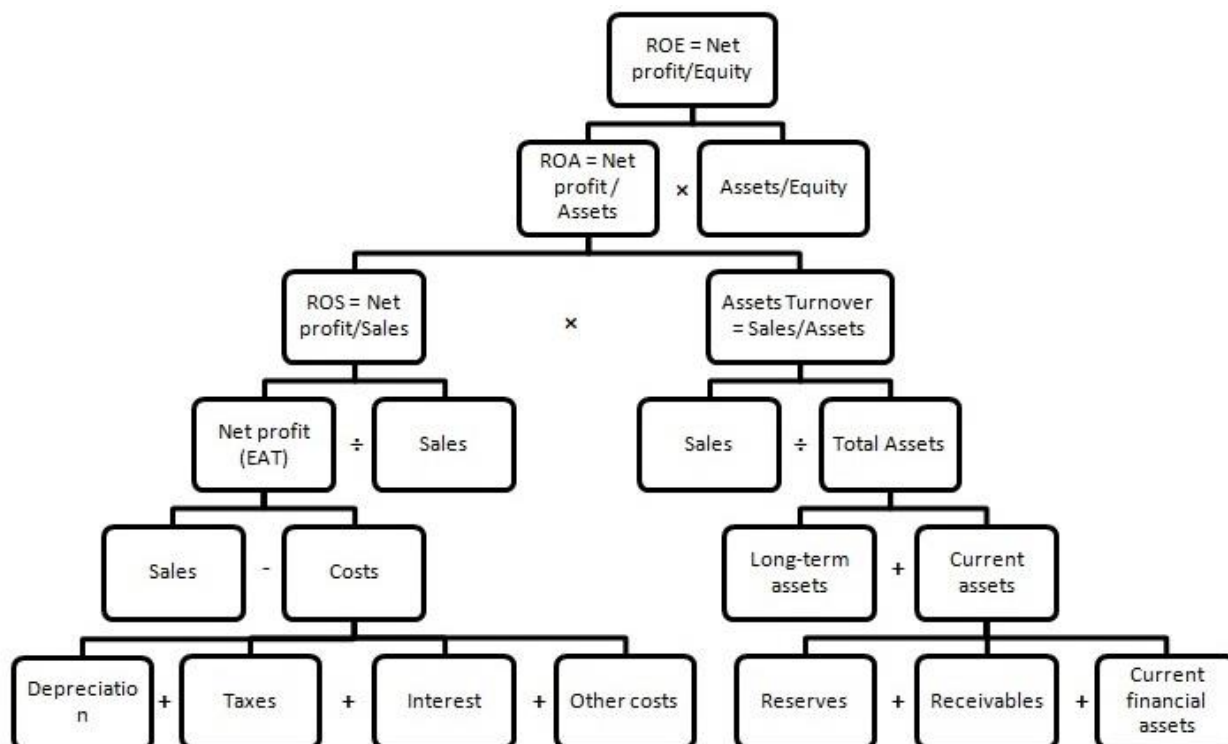
4.3.1 Pyramid models

Individual indicators presented in the previous text have an essential influence on each other. For example return of assets is influenced by the indebtedness, activity and also liquidity of the company. Therefore one of the main purposes of the analyst is to express this indicator as a function of other variables that influence this particular item.

Basic idea of a pyramid models is a decomposition of a main indicator on the top of the pyramid to the partial indicators. This decomposition determines and quantifies the influence of these partial indicators on the indicator on the top. This method allows to uncover mutual bonds between individual indicators.

Main feature is a correct construction of the pyramid model. Thanks to this construction it is possible to derive past, present and also future productivity of the firm. For the main indicator on the top of the pyramid are usually used the most important and most used indicators like ROE, ROA or EVA. The main goal is to express the main indicator as a sum of partial indexes. [1, p. 92]

Graph 1: DuPont decomposition of ROE



Source: Management mania [13]

4.3.2 Bankruptcy models

Bankruptcy and solvency models are often described as an early-warning models, models of identification of future solvency or predication models. Bankruptcy models state if the firm is going to bankrupt or not. These models are also able to predict future development of an industry with a specific probability. [2, p. 64]

a) Altman model

Altman model of bankruptcy, otherwise also called a Z-function or Z-score was firstly introduced in 1968 by an American professor E. Altman. Altman researched numerous firms in bankruptcy and based on his results estimated function composed from 5 different parameters.

a) Altman's formula of bankruptcy for joint-stock company

Z-function for the firms which stocks are commonly traded on public market is defined as follows:

$$Z = 1,2X_1 + 1,4X_2 + 3,3X_3 + 0,6X_4 + 1,0X_5$$

Where $X_1 = \text{Working Capital} / \text{Total Assets}$,

$X_2 = \text{Retained Earnings} / \text{Total Assets}$,
 $X_3 = \text{Earnings Before Interest and Taxes} / \text{Total Assets}$,
 $X_4 = \text{Market Value of Equity} / \text{Book Value of Total Liabilities}$,
 $X_5 = \text{Sales} / \text{Total Assets}$.

Situation of the business is based on the value of Z-function and is defined as follows:

$Z > 2.99$ - "Safe" Zone,
 $1.81 < Z < 2.99$ - "Gray" Zone,
 $Z < 1.81$ - "Distress" Zone.
 $Z = 2,675$ - Line that distinguish surviving and bankrupting firms.

If the value of the Z - function belongs to the Gray zone, it means that the conclusions are inconclusive. Line that distinguish surviving and bankrupting firms is not using in most of the examples in Czech Republic, but in United States is commonly used. Reliability of a prediction depends mostly on the specific industry and also strongly on the time frame. Basic timeframe are considered 2 years and in this time period Z - function has approximately 95 % or reliability.

b) Altman's formula of bankruptcy for private firms

For the other firms that don't offer their shares at public offer applies different Altman's formula, which is described as follows:

$$Z = 0,717X_1 + 0,847X_2 + 3,107X_3 + 0,42X_4 + 0,998X_5$$

Individual variables are defined as before except of the variable X_4 which is defined as a Book Value of Equity / Total Liabilities. Intervals of a safe, gray and distress zones are:

$Z > 2.9$ - "Safe" Zone,
 $1.2 < Z < 2.9$ - "Grey" Zone,
 $Z < 1.2$ - "Distress" Zone.

c) Altman's formula for the companies in Czech environment

This type of modified Altman's formula was introduced by Inka and Ivan Neumaierovi. Their model come out from the Altman's formula for joint-stock companies and its formula as defined as follows:

$$Z = X_1 + 1,4X_2 + 3,3X_3 + 0,6X_4 + 1,0X_5 + 1,0X_6$$

Where X_6 is defined as *liabilities after the due period / total income*. [2, p. 65-70]

b) IN index

Index IN is a bankruptcy model that is applied on market in Czech Republic. Inka and Ivana Neumaierová introduced in 1995 their model of bankruptcy applied on Czech market based on the research of more than 1000 Czech companies. This index reflects some differences that have Czech accounting system with the comparison to the accounting system abroad. Their formula is:

$$IN = \frac{V_1 A}{L} + \frac{V_2 EBIT}{\text{interest expenses}} + \frac{V_3 EBIT}{A} + \frac{V_4 EXPENSES}{A} + \frac{V_5 CA}{CL + SBC} - \frac{V_6 LAD}{\text{Expenses}}$$

Where A are assets, L are liabilities, CA are current assets, CL are current liabilities, SBC are short-term bank credit and LAD are liabilities after due.

Index NI is suitable for a one year evaluation of a firm's financial health.

- $NI > 2 \rightarrow$ business with a good financial health,
- $1 < NI < 2 \rightarrow$ business in middle area that could get into trouble in future,
- $NI < 1 \rightarrow$ financially weak business.

Symbols V1 – V6 present individual weights of the indicators, therefore even their importance. These weights of variables varied with respect to the industry and particular firm. Some examples of the volume of these variables are depicted in Table 6. Variables of V2 and V5 are not in the table because its values are always the same for the whole Czech industry: $V_2=0,11$ and $V_5=0,1$. [1, p. 101]

Table 7: IN index parameters

Types of industry	V1	V3	V4	V6
Agriculture	0,24	21,35	0,76	14,57
Food processing industry	0,26	4,99	0,33	17,38
Textile industry	0,23	6,08	0,43	12,37
Construction materials	0,2	5,28	0,55	28,05
Electrotechnics and electronics	0,27	9,5	0,51	8,27

Source: Dluhošová (2008) p. 101

4.3.3 Kralickuv Q-test

This model evaluates financial situation of the firm based on four indicators. Each one of these indicators is characterizing one of the main segments of the business. These segments are stability, liquidity, profitability and financial result. In Table 8 are depicted parameters of

the test, its calculation and its point evaluation. First two indicators focus on financial stability (R1 and R2), another two contain results of the profitability (R3 and R4).

Table 8: Kralickuv q-test – parameters

Parameters	Parameter construction	0 points	1 point	2 points	3 points	4 points
R1	Equity/assets	<0	0 - 0,1	0,1 - 0,2	0,2 - 0,3	>0,3
R2	(Total debt - cash flow)/ Operational cash flow	>30	12 - 30	5 - 12	3 - 5	<3
R3	EBIT/total assets	<0	0 - 0,08	0,08 - 0,12	0,12 - 0,15	>0,15
R4	Operational cash flow/ operational expenses	<0	0 - 0,05	0,05 - 0,08	0,08 - 0,1	>0,1

Source: Růčková (2007) p. 81

A number of points is added to each of the results and final evaluation is computed as an arithmetic mean of these points. If the final value is bigger than 3, it is concluded that the firm is “very good”. Value lower than 1 marks bad company. If the value is in the interval between 1 and 3, this value represents grey zone, where satisfying results can't be concluded. [6, p. 81]

5 Analytical part

For practical example of financial analysis was chosen Czech company from Brno called THERMOTEMP spol. s r. o. As main resources were used balance sheets and income statements from period 2008 - 2014.

5.1 Company introduction

THERMOTEMP company was founded in 1992 as a successor of a heating and plumbing company of a current executive director Vojtěch Škorpík.

The main focus of a firm is to provide complex services in area of heat provision, water installation, inner sewers and gas installation. Specific services in these areas are characterized on the website of the company:

- **heating, gas installation and cooperation with the firms of ground work:** Inner canalization, inner water pipeline, heating isolations,
- **central heating:** Exchanger station, thermal insulation, boiler rooms, engine rooms, radiators, pipe distribution – copper plastic or steel, fitting, floor heating, coating, heat pumps, solar systems and customer service,
- **pipelines:** Distribution pipeline, fittings and revisions. [14]

Company has its average rate of return about 50 million crowns and employs about 20 workers. Number of the workers depends on the amount of contracts.

Basic information about the firm is sum up in the statement of trade index as follows.

Business firm:	THERMOTEMP spol. s r. o.
Date of registration:	9. 10. 1992
Place of business:	Brno, Gajdošova 3235/84a, PSČ 615 00
Identification number:	46971009
Legal form:	s.r.o.

Field of business:

- montage, repairs, revisions and trials of gas devices,
- water installation, heating fitting,
- production, trade and services not mentioned in attachments 1, 2 or 3 of trade act.

Registered capital: 100 000 Crowns. [8]

5.2 Competition in an industry

In order to compare final results, two companies were chosen that run a business in the same industry as picked company. Company, that was picked as a competition needs to comply these conditions:

- run a business in the same industry as our selected company,
- be direct competitor in the same area,
- total balance sheet sum needed to be similar to my companies sum,
- its annual reports with balance sheet and income statement need to be available online.

Based on these conditions companies ZahradnikZ from Brno and INSTASTAV Helán s. r. o. from Troubsko were chosen. In the following text these two companies are briefly introduced.

5.2.1 Short Introduction of a company ZahradnikZ

Firm ZahradnikZ was founded in 1996 by the current executive director Zdeněk Zahradník. Firm's specialization is basically the same as my examined firm that is providing complex servicing that are associated with water, gas and heat installation. Currently company has about 30 workers and has its seat in Brno with its own workshop, storehouse and transportation. [15]

Firm was chosen because of its structure that is very similar to firm THERMOTEMP spol. s r. o. Total assets of the company in 2014 were 62 445 thousands, which is very similar to total balance sheet sum of the company that was chosen for this bachelor thesis (57 192). Firm has available all its statements on web, but only in the simplified shorter form. This simplified form of financial statements of the company is not a problem, because a firm ZahradnikZ is used only for the comparison of basic indicators instead of doing complete financial analysis of the company.

Data from year 2011 to 2014 of the company were used and compared to data of company THERMOTEMP spol. s r. o. Balance sheet and income statement of company ZahradnikZ during these 4 examined years are displayed in Attachment 1.

5.2.2 Short introduction of a company INSTASTAV Helán s. r. o

Other firm that was chosen for the comparison is company INSTASTAV Helán s. r. o. This firm is not direct competitor from the same city, but it has seed within the same district in the town called Troubsko. Company INSTASTAV Helán s. r. o. was found in 2001 by the current

executive directors Jan Helán and Marcela Helánová. Its main specialization is plumbing services connected with water, heating, gas and cooling.

INSTASTAV Helán s. r. o. has its contract in Czech republic, Slovakia and also recently in Germany. It is also slightly bigger than examined company with its total assets in the value of more than 70 000 thousands in the last 3 years. Like in the previous company this company was also analyzed during 4-year period from 2011 to 2014. Its balance sheet and income statement from this period is shown in Attachment 2. [11]

5.3 Analysis of absolute indicators

In this chapter was made vertical and horizontal analysis of a balance sheet and income statement as well as a analysis of a cash-flow statement. These data were compared to the values of two chosen competing companies that were introduced in part 3.2.

Results are also compared to the average values of the industry which are available on websites of Department of industry and trade. This department presents every year financial analysis of all types of industries in Czech Republic. From the menu of industries, the one that is the closest to the specialization of our firm is “Production and distribution of electricity, gas, heating and air-conditioned air”.

5.3.1 Balance sheet analysis

In this section was provided an analysis of a balance sheet firstly in the vertical point of view and after that also in the horizontal point of view. Balance sheet of a company THERMOTEMP spol. s r. o. in a simplified form is shown in the following two tables.

Table 9: THERMOTEMP – assets

	2008	2009	2010	2011	2012	2013	2014
Total assets	33 295	35 722	38 885	33 482	50 449	42 988	57 192
Long-term assets	1 479	962	1 765	1 755	1 864	1 924	2 797
Buildings	75	67	67	59	52	45	39
Movable property	1 404	895	1 698	1 696	1 812	1 879	2 758
Current assets	31 362	34 418	35 742	31 257	48 451	37 687	51 732
Inventories	610	849	1 764	4 787	3 809	3 146	246
Long-term receivables	6 572	7 665	6 795	6 824	7 800	8 967	9 632
Short-term receivables	19 854	20 590	23 276	17 913	24 637	20 417	39 945
Short-term financial property	4 326	5 314	3 907	1 733	12 205	5 157	1 909
Accruals of assets	454	342	1 378	470	134	3 377	2 663

Source: Own construction based on annual accounting of THERMOTEMP (2016).

Table 10: THERMOTEMP - Equity and liabilities

	2008	2009	2010	2011	2012	2013	2014
Liabilities and equity	33 295	35 722	38 885	33 482	50 449	42 988	57 192
Equity	7 642	8 051	8 475	8 923	9 330	9 720	9 996
Registered capital	100	100	100	100	100	100	100
Capital funds	210	210	210	210	210	210	210
Funds from profit	97	97	97	97	97	97	97
Economic result of previous periods	6 491	7 235	7 644	8 068	8 516	8 923	9 312
Economic result in current period	744	409	424	448	407	390	277
Liabilities	25 538	27 413	30 283	24 559	40 864	33 236	46 859
Long-term liabilities	2 187	2 190	3 893	3 310	3 089	3 550	5 225
Current liabilities	17 998	21 723	22 890	17 661	31 775	18 182	18 991
Bank credit	5 353	3 500	3 500	3 588	6 000	11 504	22 643
Accruals of liabilities and equity	115	258	127	0	255	32	337

Source: Own construction based on annual accounting of THERMOTEMP (2016).

a) Vertical analysis of a company

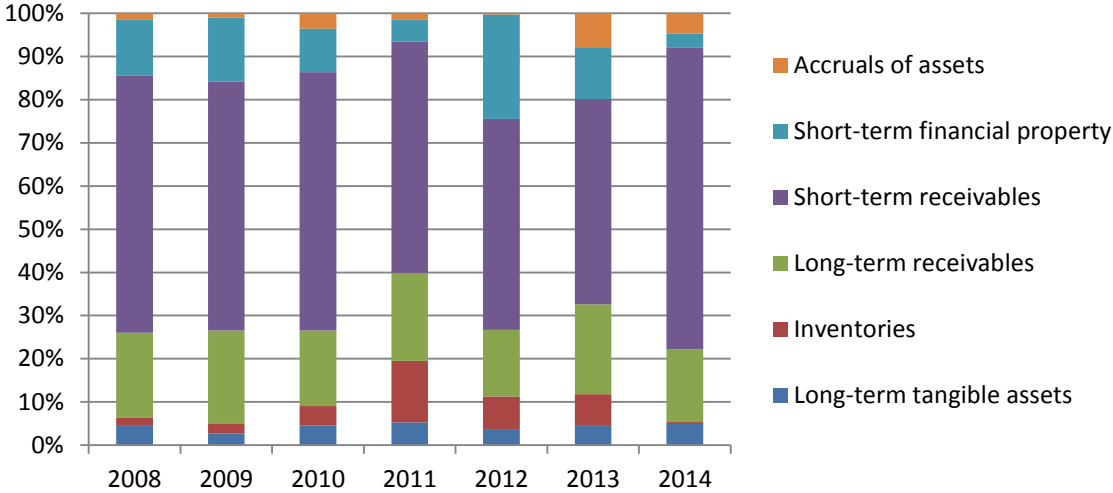
During vertical analysis was watched an overall share of individual items of balance sheet to the total sum of balance sheet. Than were picked the most important items of the vertical analysis on which was later taken a bigger focus during horizontal analysis. The findings are also compared to the whole industry and also to other two competing firms. Results of vertical analysis of a selected company are displayed in Attachment 3. In the attachment 4 and 5 are depicted horizontal analysis of company ZahranikZ and INSTASTAV Helán s. r. o..

Vertical analysis of assets

Graph 2 provides a better understanding of a financial structure of assets in the company from 2008 to 2014. It can be seen that the amounts of individual items are relatively stable across my period. Little deviation from average value can be seen in short-term financial property in 2012 that increased five times from 5 % to nearly 25 % and also increase in Inventories in 2011 from 4 to 14 % with respect to the total amount of assets. Another big increase was registered to short-term receivables in 2014, that increased from 49 % to 69 % of overall assets.

Also notable is very little share of long-term tangible assets on total assets. Overall majority of the firm is formed by the short-term assets and especially short-term receivables that form more than 50 % of all assets of a company. Items of a balance sheet that are important for further analysis are described more in details in the following text.

Graph 2: Vertical analysis of assets of THERMOTEMP



Source: Own construction based on annual accounting of THERMOTEMP (2016).

Long-term assets: Company doesn't have any financial or non-tangible long-term assets, therefore its long-term property is formed only by the long-term tangible assets. Share of long-term assets to total assets is stable across the examined period that is about 4 or 5 %. This amount is very low with respect to the average of the industry (60 %). The reason why this value is that much lower can be that the company doesn't produce any kind of product and focuses only for the services. Overall industry segment that is used for comparison is call "Production and distribution of electricity, gas and water", thus if the firm doesn't involve in any kind of production, it is obvious that its long-term assets will be smaller. This statement is confirmed if the company is compared to the other two companies that were described before. Firm INSTASTAV Helán has its long-term assets under 6 % in all examined years (2011 - 2014) and firm ZahranikZ has its long-term assets in even lower value (under 4 %). Based of these findings it can be concluded, that inconsistency with the total industry doesn't mean that the firm needs more long-term assets, because its value is in agreement with the other direct competitors of the company.

Current assets: This sector of assets forms the vast majority of total assets. Its total share is more than 90 % with only exception in year 2013 when formed 87 % of total assets. Biggest part of the current assets is formed by receivables. Amount of long-term receivables is relatively stable around 20 %. Short-term receivables form from 40 - 50 % with exception of the year 2014, when it's magnitude rose for almost 70 %. Another important item of current assets are inventories. All items of inventories are composed by material and its magnitude is very unstable during the years from 1 - 14 %. Last item of current assets is short-

term financial property, which amount is about 14 % with the exception of year 2012 when its magnitude were about 24 % and 2014 when its amount lowered on the level of 3 %.

If the results to other two firms are compared, it can be seen, that share of current assets is slightly lower than current assets of another two firms. ZahranikZ had in 2014 current assets 97 % and INSTASTAV Helán s. r. o. 94 %. This is caused by higher accruals of assets of the examined firm. Total values of short-term and long-term variables in 2014 correspond with the values of INSTASTAV Helán s. r. o. (65 % of short-term receivables and 17 % of long-term receivables). Firm ZahradnikZ doesn't have any long-term receivables, therefore its magnitude of short-term receivables is much higher – 82 %. If total receivables in 2014 are considered, share of receivables of a selected firm is 85 % which is very similar to the ones of the two competitors, that is 82 % for both firms. In the comparison with the whole industry it can come to absolutely different numbers. In the whole industry receivables forms 22 % of total asset which again doesn't correspond with either of companies that were described in the previous text.

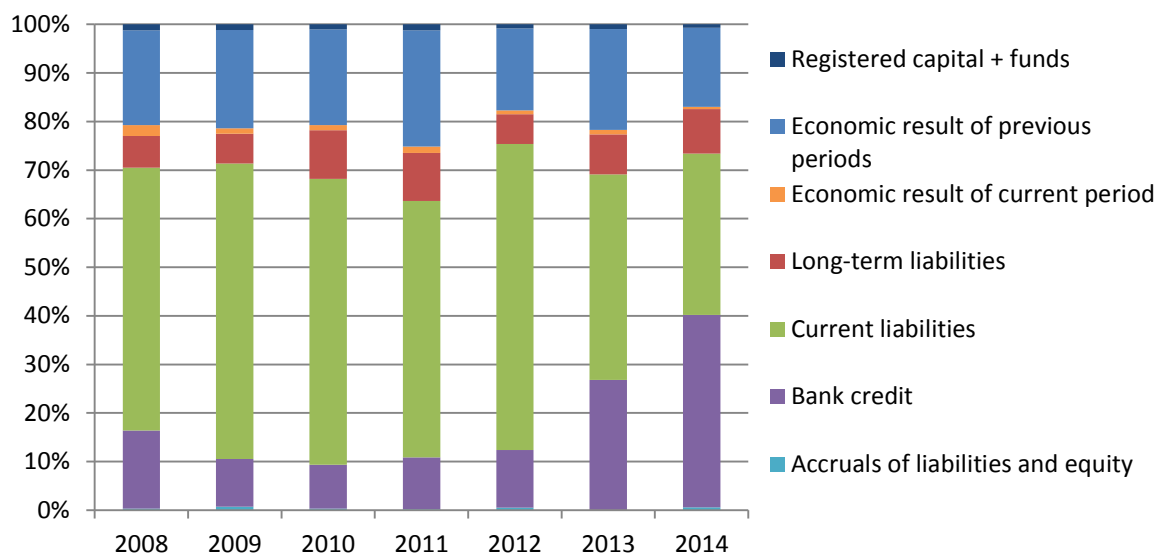
Accruals of assets are the last item in the balance sheet that form from 0 - 7 % of total assets. Main part of accruals is formed by the revenues of future periods. As was said before, value of Accruals is higher than the value of its competitors.

Vertical analysis of Equity and liabilities

Graph 3 displays vertical analysis of Equity and liabilities of selected firm. In this Graph can be seen that share of individual items is stable from 2008 to 2012. In 2013 more bank credit started to take part in company's liabilities and current liabilities take less share of overall Equity and Liabilities. This trend continues also in 2014.

Share of liabilities to total balance sheet sum is about 77 %, equity is 22 % and the rest are accruals of Liabilities and Equity. This distribution is not changing rapidly during the examined period. In the following text the most important items are described in more details.

Graph 3: Vertical analysis of equity and liabilities



Source: Own construction based of annual accounting of THERMOTEMP (2016).

Equity: The main part of equity of the business that the company uses to finance its assets is economic result of previous periods. This economic result comprises of about 20 % from total 22 % of Equity. Only bigger deviation of economic result of previous periods from average value was 2011 when economic result rose to 24 % which resulted in higher total Equity. The selected firm had also stable economic results of current period during all 7 examined years. This result was always in positive numbers and about 1 % of total balance sheet sum. The rest of Equity are registered capital, funds from profit and capital funds that takes less than 1 % share.

Equity is relatively lower with the comparison to the other firms. ZahradnikZ has 25 % share of Equity and INSTASTAV Helán s. r. o. 34 % in 2014 (compared to Equity of THERMOTEMP spol. s r. o. of 17,5 %). This difference is even higher if is considered the whole industry that has a 45 % share of Equity for total balance sheet sum. Structure of Equity in two competing companies is very similar. In competing companies also predominates Economic result of previous period. Big difference is in the economic statement of current period, that is very stable of my company, but other firms have this item very dynamic and unstable and it variate from -10 % to almost 15 % during examined 4 years. In the structure of Equity of the whole industry, it can be seen different results with almost 20 % of Registered capital. This sample of companies however considers wide range of firms which are also a lot bigger than selected company with more shareholders, so this items are not comparable.

Liabilities take share of 77 % of total balance sheet sum. The biggest amount of Liabilities, except for the year 2014, has **current liabilities**. They constitute 40 - 60 % of total Equity and Liabilities, but their size is reducing during the last years. Current liabilities are divided into liabilities from trade relation, that comprise the biggest part, liabilities to the employees, liabilities to the companions, liabilities to the state (tax liabilities) and other liabilities. This makes them the biggest source of assets of a firm. However in years 2013 and especially this main asset source started to shift towards the bank credit.

Analyzed company started to finance its assets through **bank account** in the higher measure from 2013, when its bank credit rose to 26 % to total balance sheet sum. This growth continued in 2014 when bank credit became the biggest source of assets for the firm with the overall share of 39 %. Bank credit balances the growth of the current receivables in these two years.

The last part of liabilities is the **long-term liabilities** which share is from 6 to 10 % of a total balance sheet sum. Company distinguishes two types of liabilities – liabilities from trade relations and other liabilities.

THERMOTEMP spol. s r. o. differs from its competitors by differentiating its liabilities into short-term and long-term. Other two firms has only short-term liabilities. Also bank credit of a selected company is much higher than in the competition. Firm ZahradnikZ doesn't shown any kind of bank credit and firm INSTASTAV Helán s. r. o. has its bank credit in the share of 10 % in 2014 which is on a very low level with comparison to the two firms level of bank credit in 2014 that is 40 %. The whole industry has its share of long-term liabilities of 20 %, short-term liabilities of 20 % and bank credit of 10 %. These results show that bank credit of a company is on a really high level which can cause problem in the future that the company needs to deal with.

Accruals of Equity and liabilities comprise less than 0,5 % of the balance sheet sum, therefore they won't be that important for our analysis.

b) Horizontal analysis of a balance sheet

During horizontal analysis of a company will be monitored absolute and relative changes of individual items of balance sheet. Horizontal analysis of a company THERMOTEMP spol. s r. o. in absolute and relative numbers shows Attachments 6 and 7. Based on the results from the vertical analysis were excluded some items from this analysis because of their low share on total balance sheet sum. These items are registered capital, funds from profit, capital funds and accruals of liabilities and equity.

Horizontal analysis of assets

In Table 11 is shown horizontal analysis of assets of a company in relative numbers. Perhaps most important item of balance sheet is its total balance sheet sum which is in Table 11 displayed as Total assets. It can be seen that this sum is varies from year to year, doesn't show any kind of trend in the company and years of decline in total assets are changing with years of growth. However it is important to look at the total balance sheet sum in a point of view of absolute numbers (Attachment 2). In this table is shown, that absolute sum of total assets increased from year 2008 to 2014 by the 23 897 thousands, that is by 71 %. This shows more than 10 % growth of the company per year. In Table 11 can be seen, that after every year of decline in total balance sheet sum in the examined period (2010/11 and 2012/13) is followed by a big growth in the next year. This caused that companies property is growing by average of 10 % every year.

This growth of 10 % per year is twice as high that has company THERMOTEMP spol. s r. o. which has annual average growth of 5 %. Firm ZahradnikZ has annual growth of 12,5 % but this growth is mostly caused by the big increase in total assets in 2014 by more than 60 %. If this year was eliminated, its average growth were also lower than 5 %. Selected company however has its 10 % annual growth also thanks to two successful years 2014 and 2012.

Individual items that are essential for the horizontal analysis are described further in the following text.

Table 11: Horizontal analysis of assets of THERMOTEMP

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
Total assets	7,29 %	8,85 %	-13,89 %	50,67 %	-14,79 %	33,04 %	71,18 %
Long-term assets	-34,96 %	83,47 %	-0,57 %	6,21 %	3,22 %	45,37 %	102,75 %
Buildings	-10,67 %	0,00 %	-11,94 %	-11,86 %	-13,46 %	-13,33 %	-61,27 %
Movable property	-36,25 %	89,72 %	-0,12 %	6,84 %	3,70 %	46,78 %	110,67 %
Current assets	9,74 %	3,85 %	-12,55 %	55,01 %	-22,22 %	37,27 %	71,10 %
Inventories	39,18 %	107,77 %	171,37 %	-20,43 %	-17,41 %	-92,18 %	188,31 %
Long-term receivables	16,63 %	-11,35 %	0,43 %	14,30 %	14,96 %	7,42 %	42,39 %
Short-term receivables	3,71 %	13,05 %	-23,04 %	37,54 %	-17,13 %	95,65 %	109,77 %
Short-term financial property	22,84 %	-26,48 %	-55,64 %	604,27 %	-57,75 %	-62,98 %	424,26 %
Accruals of assets	-24,67 %	302,92 %	-65,89 %	-71,49 %	2420,15 %	-21,14 %	2539,88 %

Source: Annual accounting of company THERMOTEMP (2016).

During the vertical analysis was seen that the most important item of a balance sheet is **short-term receivables**, because they form from 40 - 70 % of overall assets. It is obvious that total sum of balance sheet strongly depends on the value of short-term receivables. It can be

seen that movement of total assets corresponds with the decline or growth of short-term receivables therefore it can be said that short-term receivables are the key item for the growth of the firm. Its total value grew by more than 100 % over the last 7 years (15,6 % per year) which gave the firm really strong foundation for total growth.

Another item that also expresses a really large share of companies property are **long-term receivables**. Its share is about 20 % of total assets and its magnitude is relatively stable. It can be seen at Table 11, that every year these receivables are growing in average of 10 % (with exception of the year 2010), so this is the reason why their share of overall assets are relatively stable over the examined period.

Interesting results were obtained with respect to **short-term financial property**. It can be seen that in 4 out of 6 examined periods there is a decline of the financial property (3 times more than 50 %), but in total financial property grew by more than 400 %. This was caused by the growth of the item by 604 % in 2012 when short-term financial property grew from 1 700 to 12 205 thousands just in one year. This big growth of financial property was caused by new receivables before the end of the accounting period. This money were paid to suppliers after the accounting closure, therefore the value of short-term financial property was higher.

Horizontal analysis of equity and liabilities

In Table 12 is displayed horizontal analysis of equity and liabilities in relative numbers. If its looked at the equity of the company, it is noticeable that its growth is very stable during past 7 year, that is 2 - 6 % every year. More important part are liabilities, that are considered as the main source of capital for assets. Total sum of liabilities therefore balances the sum of receivables on the side of assets. Other items that are important in the view of horizontal analysis are analyzed in the following text.

Table 12: Horizontal analysis of equity and liabilities

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
Liabilities and equity	7,29 %	8,85 %	-13,89 %	50,67 %	-14,79 %	33,04 %	71,18 %
Equity	5,35 %	5,27 %	5,29 %	4,56 %	4,18 %	2,84 %	27,49 %
Registered capital	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Capital funds	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Funds from profit	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Economic result of previous periods	11,46 %	5,65 %	5,55 %	5,55 %	4,78 %	4,36 %	37,35 %
Economic result in current period	-45,03 %	3,67 %	5,66 %	-9,15 %	-4,18 %	-28,97 %	-78,00 %
Liabilities	7,34 %	10,47 %	-18,90 %	66,39 %	-18,67 %	40,99 %	87,62 %
Long-term liabilities	0,14 %	77,76 %	-14,98 %	-6,68 %	14,92 %	47,18 %	118,35 %
Current liabilities	20,70 %	5,37 %	-22,84 %	79,92 %	-42,78 %	4,45 %	44,81 %
Bank credit	-34,62 %	0,00 %	2,51 %	67,22 %	91,73 %	96,83 %	223,68 %
Accruals of Liabilities and equity	124,35 %	-50,78 %	-100,00 %		-87,45 %	953,13 %	839,25 %

Source: Own construction based on annual accounting of THERMOTEMP (2016).

According to the vertical analysis, the item that is taking biggest share in companies liabilities and Equity is **Current liabilities** (except for the year 2014). It can be seen that decline or growth of current liabilities correspond with the movement of the total balance sheet sum, its movement however is more dynamic during 7 examined years. For example in 2012 its magnitude grew by almost 80 %. Current liabilities were mainly used to finance current receivables, however in recent year company's strategy shifted and it started to use bank credit in a more extent. Because of this change of strategy of the firm total growth of current liabilities is not as high as the growth of total balance sheet sum.

If its looked on the growth of **Bank credit**, it can be seen that it doesn't correspond with the total balance sheet sum. Bank credit of the company is growing continuously from 2009 and especially in the past two years its value almost doubled each year. As was said before, company started in recent years using bank credit to financing its receivables and total growth of the bank credit during the examined period was 223 %.

Biggest growth of the long-term liabilities was registered in 2010, when its magnitude grew by more than 70 %. Its total share to the balance sheet sum was no more than 10 %, therefore this growth didn't have significant effect to the company.

With regard to Equity, the biggest part is **economic result from previous period**. It is noticeable that its growth is very stable during the past 7 years that is around 5 % per year. It is observable that economic result of current period is very small with regard to the result from previous periods, therefore its impact to total balance sheet sum is negligible.

5.3.2 Income statement analysis

In the following text were provided vertical and horizontal analysis of an income statement of a selected company. Simplified income statement that is used to analysis is shown in table Attachment 6.

a) *Vertical analysis of an income statement*

Vertical analysis of an income statement shows percentage share of individual items on total revenues in individual periods. Vertical analysis of company THERMOTEMP spol. s r. o. is shown in the Table 13. Economic result of an accounting period of THERMOTEMP spol. s r. o. firm is mainly formed by the operational economic result. Every item is compute as a share to Sales from production and services of a selected company. Financial economic result and extraordinary economic result form really small part of an income statement, thus these parts are not discussed further. Items that are essential for more detailed description are discussed in the following text.

Table 13: Vertical analysis of THERMOTEMP

	2008	2009	2010	2011	2012	2013	2014
Sales from goods and services	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %
Output consumption	80,14 %	85,14 %	85,04 %	82,14 %	90,72 %	88,95 %	83,77 %
Value added	19,86 %	14,86 %	14,96 %	17,86 %	9,28 %	11,05 %	16,23 %
Personal expenses	16,08 %	12,18 %	12,85 %	14,49 %	7,82 %	11,15 %	10,97 %
Taxes and fees	0,10 %	0,07 %	0,08 %	0,12 %	0,06 %	0,08 %	0,08 %
Depreciation of long-term assets	0,96 %	1,01 %	0,00 %	0,24 %	0,01 %	0,14 %	0,23 %
Sales from long-term assets and material	0,44 %	0,02 %	0,00 %	0,00 %	0,13 %	0,20 %	0,33 %
Residual value of sold material and long-term assets	0,02 %	0,00 %	0,00 %	0,00 %	0,13 %	0,20 %	0,89 %
Other operational revenues	0,23 %	3,50 %	0,04 %	1,67 %	0,04 %	1,89 %	1,01 %
Other operational expenses	0,17 %	2,86 %	0,21 %	2,06 %	0,07 %	0,24 %	3,22 %
Operational economic result	3,20 %	2,26 %	1,86 %	2,62 %	1,35 %	1,32 %	2,16 %
Interest revenues	0,11 %	0,08 %	0,07 %	0,08 %	0,04 %	0,03 %	0,03 %
Interest expenses	0,63 %	0,42 %	0,44 %	0,33 %	0,24 %	0,45 %	0,79 %
Other financial revenues	0,03 %	0,07 %	0,46 %	0,12 %	0,00 %	0,35 %	0,05 %
Other financial expenses	0,64 %	0,77 %	0,83 %	1,19 %	0,44 %	0,50 %	0,61 %
Financial economic result	-1,12 %	-1,04 %	-0,74 %	-1,33 %	-0,65 %	-0,56 %	-1,32 %
Taxes for current period	0,53 %	0,57 %	0,28 %	0,22 %	0,17 %	0,15 %	0,40 %
Economic result of current period	1,54 %	0,65 %	0,84 %	1,08 %	0,54 %	0,61 %	0,44 %
Economic result of accounting period	1,54 %	0,65 %	0,84 %	1,08 %	0,54 %	0,61 %	0,44 %
Economic result before taxes	2,08 %	1,22 %	1,12 %	1,30 %	0,71 %	0,75 %	0,84 %

Source: Own construction based on annual accounting of THERMOTEMP (2016).

The most important items for a selected company are sales from production and services and output consumption. Sales from production are determined as a fundamental item for my analysis. It can be seen, that Output consumption forms 80 - 90 % share of sales in the examined period. This value of output consumption corresponds with the ones that have firm INSTASTAV Helán s. r. o.. Firm ZahradnikZ however is making its services with the lower consumption for the firm that is from 70 to 80 % of total sales.

Another important item of the income statement is personal expenses. These expenses are formed by wage expenses, expenses for social and health security and other social expenses. Personal expenses forms from 10 to 20 % to total sales during the examined period. This value of personal expenses also corresponds with the value of other two competitors.

Other items form mainly less than 1 % of the total sales, therefore they are not essential for further analysis.

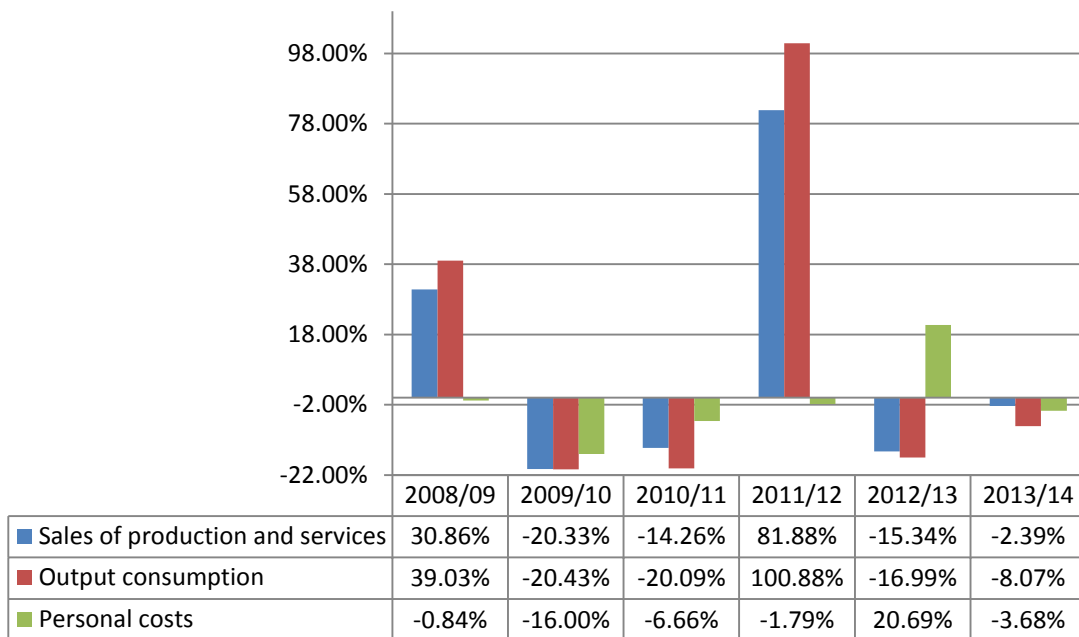
As was discussed before during vertical analysis of the company, economic result of accounting period of a selected company is really stable and its magnitude is about 1 % of total sales. Its competitors doesn't show this kind of pattern and its economic result is deviating really dynamically from its average value to positive as well to negative numbers.

b) Horizontal analysis of income statement

During horizontal analysis of income statement were discussed how the items were moving during the examined period. Again was made horizontal analysis in absolute and also relative numbers. Whole analysis is shown in Attachment 8 and 9.

Vertical analysis shows, that important items for further analysis are Sales from goods and services, output consumption and personal expenses thus these items have my focus during horizontal analysis and they are displayed in the following graph.

Graph 4: Horizontal analysis of income statement



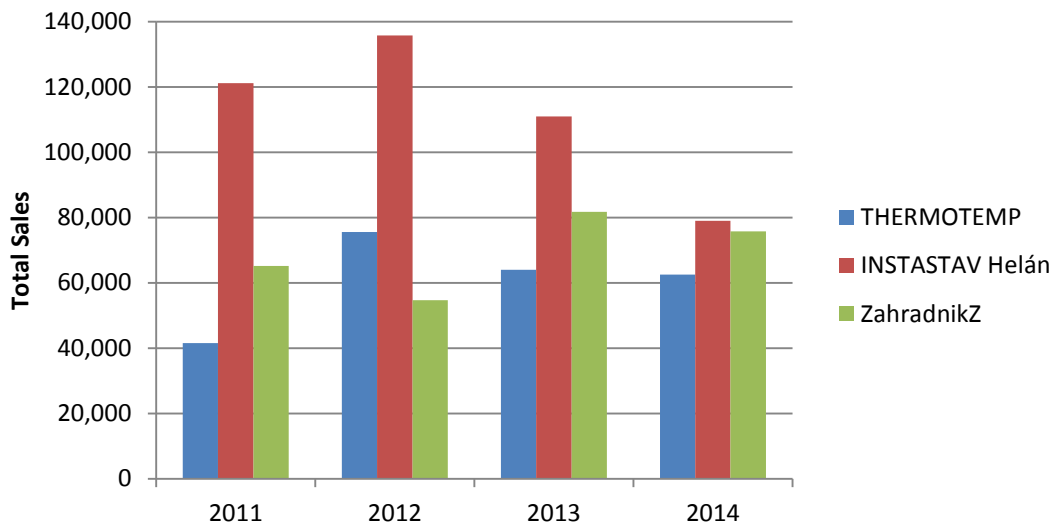
Source: Own construction based on annual accounting of THERMOTEMP (2016).

As it may be expected, sales and output consumption are moving together. Output consumption also reacts more dynamically on the increase or decrease of Sales. It can be seen that in four out of six years there were decrease in total sales and output consumption however thanks to the two years of major growth of sales (more than 80 % in 2012) total sales grew in my examined period by 57 % and output consumption by 74 %. This means 8 % of sales growth per year which is associated with the 10,5 % growth of consumption.

On the other hand if its looked at the personal costs it can't be seen any consistency to the Sales or output consumption. This means that hiring new workers are not that flexible to the firm as other variable costs.

Comparison of sales with other firms is shown in Graph 5. This graph shows total sales during 4-year period 2011 - 2014.

Graph 5: Comparison of our companies sales with the competition



Source: Own construction based on annual accounting of THERMOTEMP, INSTASTAV Helán and ZahradnikZ (2016).

It is notable that none of these two firms has bigger growth of sales than a selected company. Firm ZahradniZ has growth annual average growth of sales at 6,5 % and INSTASTAV Helán s. r. o. has even negative annual growth of sales -8,5 %. These results however are not that conclusive, because only short 4-year period of time was analyzed. In order the stat, that a selected company is growing more dynamically than competition a longer period of time would be needed.

5.3.3 Analysis of a cash flow statement

Even though that the company doesn't publish its cash-flow statement, It can be derived this statement from the information included in the balance sheet and income statement of the company. Therefore was made a cash flow statement based on the process that was presented in Dluhošová (2008).

Table 14: Cash flow statement of THERMOTEMP

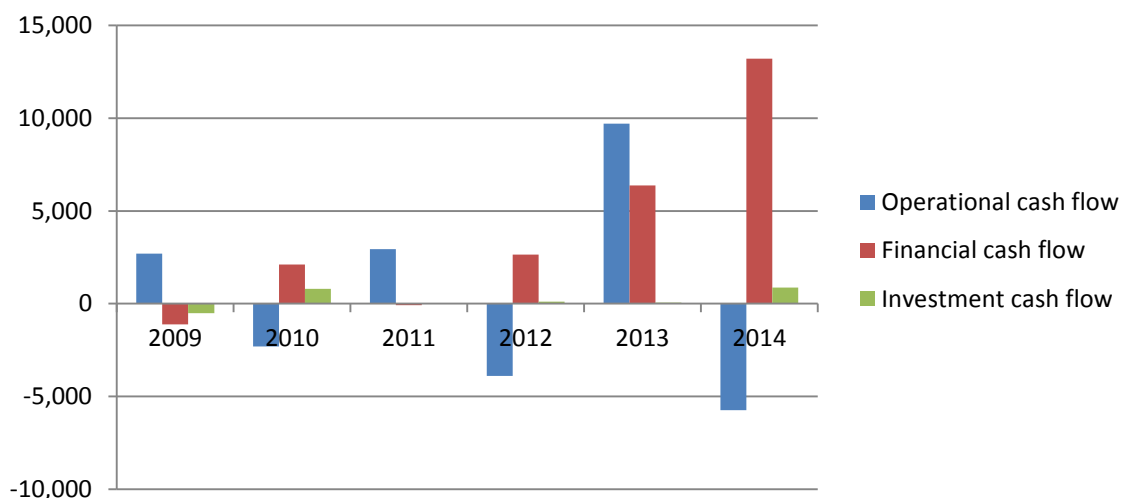
Cash-flow statement	2008	2009	2010	2011	2012	2013	2014
Financial property at the beginning of the year		4 326	5 314	3 907	1 733	12 205	5 157
Economic result	744	409	424	448	407	390	278
Depreciation	461	634	0	99	7	88	145
Change of inventories		-239	-915	-3 023	978	663	2 900
Change of receivables		-1 829	-1 816	5 334	-7 700	3 053	-20 193
Change of short-term liabilities		3 725	0	88	2 412	5 504	11 139
Operational cash flow		2 700	-2 307	2 946	-3 896	9 698	-5 731
Change of bank credit		-1 853	0	88	2 412	5 504	11 139
Change of economic result of previous periods		744	409	424	448	407	389
Change of long-term liabilities		3	1 703	-583	-221	461	1 675
Financial cash-flow		-1 106	2 112	-71	2 639	6 372	13 203
Change of long-term assets		-517	803	-10	109	60	873
Investment cash flow		-517	803	-10	109	60	873
Total cash flow		1 077	608	2 865	-1 148	16 130	8 345

Source: Annual accounting of THERMOTEMP (2016) and Dluhošová (2008) p. 61

Main focus during the analysis of cash-flow statement should be on item operational cash-flow. If the firm is capable to acquire bigger income than expense in this area of cash flow, than total managing of the firm is satisfying.

In an ideal case the cash-flow statement should be published more than once a year because this statement doesn't correspond with the financial management. Situation of cash-flow is determined to one particular day, but one day after the situation could be completely different.

In the following graph can be seen the relation between three parts of cash-flow statement – operational, financial and investment.

Graph 6: Progress of three cash-flow indicators

Source: Annual accounting of THERMOTEMP (2016) and Růčková (2007).

In this graph can be seen the growing influence of the financial cash flow in the business. This growth is caused mainly by the big growth of bank credit in recent years of the company. This growth was discussed in the previous text during the analysis of the balance sheet. Until year 2014 the main part of the cash-flow statement was operational cash flow, however due to the higher bank credit financial cash flow exceeded operational in 2014.

5.4 Analysis of share ratios

In this part of my bachelor thesis were discussed basic ratios that were introduced earlier in the theoretical part. Ratios are examined in four categories – profitability, liquidity, activity and leverage ratios.

5.4.1 Profitability ratios

In this section were discussed two ratios that are considered as one of the most important for the company. These ratios of a selected company are compared to other two competing companies as well as with the whole industry.

First ratio will be **Return of Assets** that is computed as was shown in the theoretical part of this work. Results are shown in table 15.

Table 15: Return on assets ratio

ROA	2011	2012	2013	2014
THERMOTEMP	1,61 %	1,06 %	1,12 %	0,92 %
INSTASTAV Helán	-10,70 %	-1,99 %	7,04 %	0,21 %
ZahradnikZ	7,53 %	0,38 %	13,68 %	0,75 %
Industry	5,41 %	3,97 %	5,58 %	3,75 %

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

Value of Return of assets should comply two conditions in order to be in ideal volume. First is that it has to be higher than average in the industry and second that it has to have growing trend. Unfortunately none of these conditions are fulfilled. Lower number of ROA is caused by a low profit of my company in each year. As was said before, profit of other competing companies is much more dynamic and deviating each year, therefore even ROA ratio has very different value in each year and it can be seen that other competing firms also don't comply two conditions that was set to ideal ROA.

Results of second important ratio **Return of equity** are summed in Table 16.

Table 16: Return on equity ratio

ROE	2011	2012	2013	2014
THERMOTEMP	6,04 %	5,73 %	4,97 %	5,26 %
INSTASTAV Helán	-32,82 %	-8,09 %	20,91 %	0,63 %
ZahradnikZ	33,94 %	1,57 %	34,64 %	3,00 %
Industry	12,43 %	19,30 %	16,00 %	6,70 %

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

Level of Return of Equity is much higher than return of Assets mainly because firm is financing most of its assets from liabilities and number of Equity in the firm is at very small level as was shown during vertical analysis. Level of ROE 5 - 6 % during selected period is however still much smaller than an average in the whole industry. Only one firm shows higher levels of ROE in more than one period and that is firm ZahradnikZ. This firm has its ROE much higher than average in years 2011 and 2013, level of ROE however changes rapidly each year which is caused by a deviation of profit.

ROE is mostly viewed by the investors. ROE of 5 - 6 % is not very attractive for the investors. Selected firm however has an advantage that it's ROE and profit is stable during the examined period. This is a statement that can't be said about THERMOTEMP spol. s r. o. and INSTASTAV Helán s. r. o. which ROE is very unstable during that period.

5.4.2 Analysis of liquidity ratios

In this part were discuss all three ratios of liquidity that were discussed earlier in the theoretical part of this work. First ratio that is putting in relation current assets and current liabilities is **current ratio**. Its results are displayed in Table 17.

Table 17: Current ratio analysis

Current ratio	2011	2012	2013	2014
THERMOTEMP	1,014269	0,775358	1,122924	2,103365
INSTASTAV Helán	1,74817	1,364433	1,687567	1,673214
ZahradnikZ	1,249277	1,288043	1,625297	1,309006
Industry	1,34	1,36	1,67	1,38

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

In the theoretical part i expressed that an optimal value of current ratio is between 1,5 to 2,5. This value is fulfilled only in 2014 for a selected company. In other years was value of current ratio under the recommended value. Higher number of current ratio in 2014 was caused by big increase in short-term receivables that were cover by bank credit instead of increase of short-term liabilities like in the previous years.

If a year 2014 is not count, it can be seen that volume of current ratio is lower than current ratio of the competition and the whole industry. Firm INSTASTAV Helán s. r. o. has its values in optimal interval with 3 out of 4 years. ZahradnikZ has lower values than INSTASTAV Helán s. r. o., but these values are really close to optimal and almost correspond to the values of total industry.

Another ratio discussed in theoretical part is quick ratio. Results of this ratio are presented in Table 17

Table 18: Quick ratio analysis

Quick ratio	2011	2012	2013	2014
THERMOTEMP	0,74322	0,655484	0,949896	2,090411
INSTASTAV Helán	0,536294	0,657186	0,925841	1,022117
ZahradnikZ	1,124148	1,059914	1,435855	1,002721
Industry	1,2	1,23	1,56	1,28

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

Values of quick ratio don't reach optimal values in any of the examined period. During years 2011 - 2013 where its value lower than 1 that means that the firm would need to sell its inventories in order to pay its short-term liabilities. In 2014 however is its level above optimal level which express a conservative strategy of a company regarding to paying its debt.

Selected firm reached similar values of quick ratio as its competitor INSTASTAV Helán s. r. o., which has its current ratio also lower than one in 3 out of 4 year. Last firm ZahradnikZ has its level of quick ratio in optimal value in every examined year. This statement is also valid if is considered the whole industry.

Last liquidity ratio is **cash ratio** that is important mainly from the short-term view.

Table 19: Analysis of cash ratio

Cash ratio	2011	2012	2013	2014
THERMOTEMP	0,098126	0,384107	0,283632	0,100521
INSTASTAV Helán	0,092724	0,047347	0,074109	0,065152
ZahradnikZ	0,034356	0,109287	0,120939	0,087235
Industry	0,24	0,3	0,57	0,39

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

Cash ratio of a selected company differs from 0,1 to 0,4 during given period. For example its value of 0,1 in 2014 means that company can immediately pay 10 % of its current liabilities just from its cash resources. This ratio grew significantly in 2012 because of the rapid growth of short-term financial assets that were discussed during vertical analysis of a

company. It can be seen that cash ratio of my company reaches lower values that is average in the industry, but higher values than its two competitors.

5.4.3 Analysis of an activity ratios

In this section were observed two types of activity ratios that were also presented in the theoretical part: Assets turnover ratio and receivables turnover ratio. Assets turnover ratio is presented in Table 20.

Table 20: Assets turnover ratio

Assets turnover ratio	2011	2012	2013	2014
THERMOTEMP	1,241652	1,498781	1,489113	1,092583
INSTASTAV Helán	1,882677	1,758389	1,555475	1,10587
ZahradnikZ	1,305448	1,197247	2,113345	1,212795
Industry	0,78	0,82	0,77	0,68

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

These results means how many times are revenues bigger than assets of the company. Its value is more than 1 in every year of our analysis that means that revenues are fully covering total assets every year. Values of assets ratio are higher in every year than average of an industry which means that a selected firm uses its assets more effectively. On the other hand if values of a selected company are compared to the competition it can be seen that competitors have slightly bigger values of assets ratio in average. Thus despite higher values than whole industry, company could use its assets more effectively. Another ratio is **receivables turnover ratio** described in table 21.

Table 21: Receivables turnover ratio analysis

Receivables turnover ratio	2011	2012	2013	2014
THERMOTEMP	214,2092223	154,4373909	165,2488518	285,6229296
INSTASTAV Helán	146,785617	166,2521543	198,5759585	270,3281013
ZahradnikZ	249,9923311	254,3630614	146,9969919	244,7931549
Industry	108,5753501	102,3663671	119,814043	121,8736017

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

Rate of return of receivables informs about how long the company is waiting for payment of its receivables. It can be seen that receivables turnover ratio of a selected company was much higher than industry average. The highest values of receivables turnover ratio were in year 2011 and 2014. Growth of receivables turnover ratio in 2014 was mainly caused by growth of short-term receivables that wasn't associated enough with the growth of revenues. Receivables turnover ratio is very oscillating in all three companies. It can be also

noticed that in 2014 the receivables ratio was much higher than previous year in all three companies. It's because all companies in 2014 were experiencing year of growth with an increase in receivables that wasn't yet reflected in the growth of revenues.

5.4.4 Leverage ratios

In this part of the thesis are described 4 leverage ratios – debt ratio, equity ratio, debt/equity ratio and interest cover ratio. First three ratio are connected together, therefore comparison is made only for the first one (debt ratio) because all three ratios gives the same results of a aggressive / conservative strategy of a company. During

First ratio, that is also one of the most important that company needs to focus on, is **Debt ratio** which measures total indebtedness of a company.

Table 22: Debt, equity and debt/equity ratio

Debt ratio	2011	2012	2013	2014
THERMOTEMP	73,35 %	81,00 %	77,31 %	81,93 %
INSTASTAV Helán	65,49 %	75,23 %	66,35 %	66,05 %
ZahradnikZ	77,82 %	75,57 %	58,70 %	74,15 %
Industry	48,00 %	48,00 %	50,00 %	46,00 %
Equity	26,65 %	19,00 %	22,69 %	18,07 %
Debt/equity ratio	2,752325	4,263328	3,408121411	4,534888222

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ and data from Department of industry and trade (2016).

It can be seen that total debt of our company is very large with comparison to the competition and whole industry. In Two out of five years this value even exceeds 80 %. Competitors of a selected company however also have higher values than industry, especially ZahradnikZ, that has beyond one year total debt over 70 % of total assets. Total debt of the industry is stable during the examined period and is near 50 % of total assets. Therefore can be seen that all three examined firms have aggressive strategy with the big amount of liabilities. Fluctuation of the debt ratio is influenced mainly by the increase and decrease of short-term liabilities and bank credit mainly in the recent years.

Equity ratio would be just a complement to the debt ratio so the results would be completely opposite: large amount of equity ratio of the industry in comparison to the other three firms and especially a chosen firm, which would have the equity ratio lowest. This lower value of equity ratio of chosen company is caused by the aggressive strategy of the company.

Debt to equity ratio is very inconsistent during selected period and confirms the result of a aggressive strategy of the company.

Interest cover ratio tells how many times can be covered interest expenses from profit. Unfortunately data for interest expenses are not available on the website of Department of industry and agriculture, therefore data of an industry are not expressed in Table 21.

Table 23: Interest cover ratio

Interest cover ratio	2011	2012	2013	2014
THERMOTEMP	3,9343066	2,891892	1,671280277	1,062626263
INSTASTAV Helán	-20,36686	-5,40845	6,993036212	0,259322034
ZahradnikZ	52,943662	17,3	-	-

Source: Annual accounting of THERMOTEMP, INSTASTAV Helán, ZahradnikZ (2016).

It can be seen that cover ratio of my company is decreasing every year. This is caused because total bank credit of a selected company is increasing, therefore interest expenses are increasing also. The company started with interest cover ratio above recommended value, but with the change of strategy into financing its assets with more bank credit this ratio decreased to the level of 1,06 in 2014. Interest cover ratio is very deviating in INSTASTAV Helán s. r. o. company because of its profit that is very instable during given period. Firm ZahradnikZ doesn't have any bank credit, though its interest expenses are very low or equal to zero. In this case results of other two companies are inconclusive.

5.5 Analysis of group of indicators

5.5.1 DuPont pyramid model

In this part were done DuPont pyramid model of Return of Equity in order the find out which indicators effect ROE the most. Du Pont decomposition which was based on the Graph 1 that was presented in the theoretical part is displayed in Attachment 10.

In the model there are two changes with respect to the previous results. Return of capital is computed with the EAT not EBIT which gives different results, thus ROA is smaller than in previous text. Second change is, that long-term assets contain also accruals of assets which was done in order to maintain the correctness of the decomposition.

It can be seen that indicator ROE has decreasing tendency from year 2008 when started at the level of almost 10 % to today's level of less than 3 %. Especially after the first examined year ROE dropped rapidly by 50 % to level of 5,08 %. Thanks to Du Pont model can be determined causes of this decrease and especially keep focus on the drop in 2008.

It can be seen that financial leverage is relatively stable during the examined period, so the causes needs to be at the side of ROA which were also decreasing during past 7 years as ROE.

If its taken a look at years 2008 and 2009 it can be seen that return of sales dropped from 1,54 % to 0,64 % from 2008 to 2009 due to the decrease in profit and increase in sales as well. Profit is on a low level of the company in every examined year so it is hard to tell which expenses can cause the decrease of profit. Because of the decomposition however can be noticed that depreciation costs were highest in 2009 in the examined period as well as taxes. These two items could cause the big drop (or at least part of it) of ROE in 2008 even though that they do not form big part of total expenses. For next years to come however can't be concluded the same result of decreasing ROE.

Between years 2009 to 2011 ROE was really stable and not changing around 5 %. From 2011 ROE started slowly decreasing and dropped rapidly in 2014. This drop in 2014 was caused mainly by the drop in profit after taxes that decreased from 390 to 278. If its taken a look at the expenses it can be seen that in 2014 due to the higher amount of bank credit interest expenses of the company increased to very high level, which can be detected as a cause of the low profit.

5.5.2 Altman's formula

For the computation of Altman's formula was used "Altman's formula for private firms" that is described in the theoretical part. The original Altman's formula was chosen instead of the formula that is modified to Czech market, because formula for Czech market will be computed in next section with IN equation.

Computation was of Altman's Z-function was based on the formula that was introduced in the theoretical part. In parameter X₂ was used earnings after taxes (EAT) instead of retained earnings. This was done because company doesn't pay any share of the earnings to its shareholders or owners. In the following table are expressed results of the Altman's formula for THERMOTEMP company.

Table 24: Altman's formula for THERMOTEMP company

Parameters	Weight	2008	2009	2010	2011	2012	2013	2014
X1	0,717	0,055744	-0,03172	0,009927	0,007526	-0,14149	0,051991	0,36638
X2	0,847	0,022346	0,01145	0,010904	0,01338	0,008068	0,009072	0,004861
X3	3,107	0,030065	0,021555	0,014479	0,016098	0,010605	0,011236	0,009197
X4	0,42	0,29924	0,293693	0,27986	0,363329	0,228318	0,292454	0,213321
X5	0,998	1,447485	1,765523	1,292144	1,241652	1,498781	1,489113	1,092583
Z-function		1,722577	1,939272	1,468438	1,458514	1,530011	1,688837	1,475379

Source: Annual accounting of THERMOTEMP (2016).

It can be seen that result of the Z-function belongs to the grey zone in all examined years, which is defined for private firms from 1,2 to 2,9. Z-function is relatively stable during the examined period as its moving from 1,5 to 2. Closest to the distress zone was Z-function in years 2010 and 2011 when its value was 1,46 and 1,45. Parameter that influence Z-function the most is X5 which has really high value in all years and forms about 85 % of Z-function. On the contrary influence of parameters of X1, X2 and X3 are on a very low level and its impact on Z-function is negligible.

The results of Altman’s formula therefore are inconclusive. It can’t be concluded that company is in the danger of bankruptcy however it can’t say that company is safe from it either.

5.5.3 IN index

Altman’s bankruptcy model is mainly used for companies with the seed in other countries, therefore in this section was discussed formula that was introduced by Czech economists and is applicable for Czech industry – IN formula.

Formula that was used is IN 95, that is more than 20 years old but it is known for its more than 80 % accuracy and correctness of the prediction. Parameters V2 and V5 are given the same for the whole industry and other parameters are based on the values for the industry “Electricity, gas and water” that is given by the authors.

Table 25: IN 95 formula for THERMOTEMP company

Parameters	Weight	2008	2009	2010	2011	2012	2013	2014
V1	0,15	1,303743	1,303104	1,284054	1,363329	1,234559	1,293417	1,220513
V2	0,11	3,31457	2,927757	2,536036	3,934307	2,891892	1,67128	1,062626
V3	4,61	0,030065	0,021555	0,014479	0,016098	0,010605	0,011236	0,009197
V4	0,72	1,459258	1,830161	1,299524	1,264829	1,501913	1,525937	1,10804
V5	0,1	0,850242	0,816318	0,882001	0,843004	0,652204	0,687765	0,959432
V6	55,89	0	0	0	0	0	0	0
IN 95		1,834452	2,016237	1,562176	1,706463	1,698777	1,597101	1,236096

Source: Annual accounting of THERMOTEMP (2016).

IN 95 is deviating from 2008 to 2014 from the level of 1,2 to 2. Highest levels this index achieved at the beginning of given examined period in 2008 and 2009 when its value even exceeded value 2 which denote a business with a good financial health. Lowest value of IN index is in 2014 1,23. This value is very close to the line that marks financial weak businesses so the company needs to be careful with manages its assets in the future. This value decreased mainly because of the parameter V4. This parameter indicates that increase in assets in 2014 wasn’t accompanied with the increase of sales. Despite the decline in IN 95

index with comparing to the previous years it can't be said that the company is in direct danger of a bankruptcy.

5.5.4 Kralickuv q-test

Last model that was presented is Kralickuv q-test. This is a solvency model that gives information about the financial health of the company. The results are based on the theoretical part of the work that is presented in following table.

Table 26: Kralickuv q-test

Kralickuv q-test	2009	2010	2011	2012	2013	2014
R1	0,225379	0,21795	0,266501	0,184939	0,22611	0,17478
R2	2,97323	-11,619	9,306857	-6,59831	2,550423	-4,34322
R3	0,021555	0,014479	0,016098	0,010605	0,011236	0,009197
R4	0,176984	-0,04296	0,068945	-0,11409	0,141381	-0,10064
Points	2009	2010	2011	2012	2013	2014
R1	3	3	3	2	3	2
R2	4	4	2	4	4	4
R3	2	3	4	2	2	2
R4	4	0	2	0	4	0
Total result	3,25	2,5	2,75	2	3,25	2

Source: Annual accounting of THERMOTEMP (2016).

It can be seen, that results of the firm vary from 2 to 3,25. Therefore can be concluded that a selected firm is far from the danger of bankruptcy in the examined period. In four out of six years the firm is ranked into the grey zone where can't be determined the results. In 2013 and 2010 firm is ranked as "very good" based on the Kralickuv q-test.

6 Summary and future recommendation

In the previous chapter was analyzed company THERMOTEMP spol. s r. o. in various sectors. The results were compared to the two competing firms in the same industry as chosen company and also to the data of the whole industry that were available on the websites of Department of industry and trade.

The analysis doesn't show any signs that the company could be in danger of a lack of solvency or on the edge of bankruptcy. If its taken a look at the models that were presented at the end of the thesis in part Analysis of group indicators, none of them rank the company as a firm which is in danger of a bankruptcy in any year of examined period from 2008 to 2014. Of course in most of these results the company belonged to the so called "grey zone" where the conclusive results can't be deduced, but the value of evaluation of a company was far from "stress zone" that marks the danger of a bankruptcy.

The conclusion of good financial health of a company however doesn't mean that company has nothing to improve. On the contrary were revealed some fields in the company in which the firm lack behind the competition or the whole industry. These areas should get more focus by the company's management in the future.

6.1 Low profit

Probably the biggest shortage of the company is its low profit during all years that the analysis was made. This profit is only about 1 % of total assets of the company and is still decreasing. Of course with comparison to other companies that have its profit different in each year it can be said that profit of THERMOTEMP spol. s r. o. is stable, but still on a very low level. This level of profit caused lower levels of other important indicators like ROE or ROA which values are much lower than average of the industry or with comparison to other companies.

From vertical analysis of an income statement was concluded, that most part of the profit is made by the difference between sales from goods and services and output consumption and personal expenses. With the comparison with the other companies was found out that amount of output consumption of THERMOTEMP spol. s r. o. is on higher level than value of these item in other companies. This item forms more than 80 % of the company's so company should draw more focus on this item in order to reduce these costs and with this reduction increase total profit.

During DuPont pyramid model was deduced that increase in profit was made due to the depreciation and also higher interest expenses. These items however caused only one-time

decrease of the profit and they are not responsible for the total low level of profit because they form usually 1 % or less of companies sales. In addition company can hardly affect its value and reduce them. This is the reason why company's attention should be drawn more on the output consumption than on these items.

6.2 Low liquidity

Another important part is lower liquidity level of the company. In majority of examined period the company had lower liquidity ratio than other companies and also than the whole industry. Its values are also lower than recommended values for firms. This may cause problems of the company in the future with respect of paying its liabilities.

However if its taken a look at the last year of the analysis it can be seen that liquidity of all grew above industry level and exceeded also values of its competitors. This was caused mainly by the big growth in current receivables in 2014. The main task of the company therefore should be to maintain this level of liquidity and amount of current receivables on the same level. In addition level of bank credit which has a big influence on liquidity ratios is not expecting to rise and will be smaller every year, so it could be easier to obtain same level of liquidity as in 2014 in future years.

In the same time in 2014 however arise another problem of cash ratio. In 2014 company could repay only 10 % of its liabilities which is much lower level that the industry average and other companies. It was caused mainly by the growth of bank credit in 2014 that was followed by the decrease in the short-term financial assets. This short-term financial property should move consistently with liabilities in order to remain financial solvency in the time of sudden crisis.

6.3 Big debt of a company

The last point in which company shows different values that the rest of the industry is its total indebtedness that is measured by the debt, equity and debt to equity ratios that were presented in the part of leverage ratios.

Total debt of the company is higher not just of a selected firm, but also if we look to its competitors. This is common example of smaller firms in the industry to practice more aggressive strategy than the larger firms and to finance its assets more from its liabilities than equity. Another reason of higher debt is that company doesn't have any shareholders which would influence management of the firm and push them to higher level profit or equity. Comparison to the industry therefore is not very accurate. Selected firms value of debt is

however higher than its competitors. This debt could be decreased by the higher profit of the company, more funds or higher economic result of previous periods. Increase of profit of the company was discussed in the previous part. Its increase could also resolve the problem of the big debt of the company.

7 Conclusion

In presented Bachelor thesis the focus was laid on theoretical and also practical part of financial analysis. The main goal of this thesis was a composition of a financial analysis of THERMOTEMP spol. s r. o. company and determination of its financial health.

In order to reach right conclusion a complete financial analysis of a company was made as well as its competition and the whole industry. This comparison helped with right incorporation of a company into the industry.

After the analysis of an income statement and balance sheet can be concluded that a selected company doesn't show any signs of a danger of bankruptcy of a company or instability. Vertical and horizontal analysis of financial statements of a company showed growth potential of the firm, as it grew by average 7 % per year from 2007 which exceeds growth of the competitors as well as the whole industry.

An essential part of the thesis was analysis of indicators and ratios. In this part the focus was laid on the comparison with other companies and determined strong and weak areas of the companies management. Three areas were established in which the company lacks behind of competition, therefore needs to put more focus in the recent future. These problematic areas are low liquidity, low profit and big debt of a company which were discussed more in depth in section 6. These problems however are not in such extent that they could cause solvency problems in the recent future.

Prove of the good financial health of a selected company was also confirmed by the solvency and bankruptcy models presented at the end of the practical part in which were put individual indicators together.

8 References

Book references:

- [1]. Dluhošová, D. (2008). *Finanční řízení a rozhodování podniku*. Praha: Ekopress.
- [2]. Kalouda, F. (2015). *Finanční analýza a řízení podniku*. Plzeň: Vydavatelství a nakladatelství Aleš Čeněk.
- [3]. Kislingerová, E. (2004). *Manažerské finance*. Praha: C.H. Beck.
- [4]. Kislingerová, E. and Hnilica, J. (2005). *Finanční analýza*. Praha: C.H. Beck.
- [5]. Knápková, A., Pavelková, D. and Šteker, K. (2013). *Finanční analýza*. Praha: Grada.
- [6]. Růčková, P. (2007). *Finanční analýza*. Karviná: Slezská univerzita v Opavě, Obchodně podnikatelská fakulta v Karviné.
- [7]. Sedláček, J. (2007). *Finanční analýza podniku*. Brno: Computer press.

Websites:

- [8]. 46971009, T. (2016). *THERMOTEMP spol. s r.o., IČO: 46971009, 21. 4. 2016 - Obchodní rejstřík | Peníze.cz*. [online] Rejstrik.penize.cz. Available at: <http://rejstrik.penize.cz/46971009-thermotemp-spol-s-r-o> [Accessed 21 Apr. 2016].
- [9]. Accountingtools.com. (2016). *Financial Statement Analysis - AccountingTools*. [online] Available at: <http://www.accountingtools.com/financial-statement-analysis> [Accessed 21 Apr. 2016].
- [10]. Accountingtools.com. (2016). *Quick Ratio | Acid Ratio | Acid Test Ratio - AccountingTools*. [online] Available at: <http://www.accountingtools.com/quick-ratio> [Accessed 21 Apr. 2016].
- [11]. Instastav.cz. (2016). *O společnosti*. [online] Available at: <http://www.instastav.cz/o-spolecnosti/> [Accessed 21 Apr. 2016].
- [12]. Investopedia. (2007). *Liquidity Measurement Ratios: Cash Ratio | Investopedia*. [online] Available at: <http://www.investopedia.com/university/ratios/liquidity-measurement/ratio3.asp> [Accessed 21 Apr. 2016].
- [13]. Management mania. (2016). *DuPont analysis*. [online] Available at: <https://managementmania.com/en/dupont-analysis> [Accessed 21 Apr. 2016].
- [14]. Thermotemp.cz. (2016). *Thermotemp spol. s r.o. - o společnosti*. [online] Available at: <http://www.thermotemp.cz/o-spolecnosti> [Accessed 21 Apr. 2016].

- [15]. Tools, F. (2016). *O společnosti - ZAHRADNÍK Z., s.r.o.* [online] Zahradnikz.cz. Available at: <http://www.zahradnikz.cz/o-spolecnosti> [Accessed 21 Apr. 2016].

Other materials

- [16]. Annual accounting of INSTASTAV Helán s.r.o. 2011-2014 (2016). 1st ed. [ebook] Available at: [https://or.justice.cz/ias/ui/rejstrik\\$firma?p%3A%3Asubmit=x&.%2Frejstrik-%24firma=&nazev=INSTASTAV+helán&ico=&obec=&ulice=&forma=&oddil=&vlozka=&soud=&polozek=50&typHledani=STARTS_WITH&jenPlatne=PLATNE](https://or.justice.cz/ias/ui/rejstrik$firma?p%3A%3Asubmit=x&.%2Frejstrik-%24firma=&nazev=INSTASTAV+helán&ico=&obec=&ulice=&forma=&oddil=&vlozka=&soud=&polozek=50&typHledani=STARTS_WITH&jenPlatne=PLATNE) [Accessed 21 Apr. 2016].
- [17]. Annual accounting of Thermotemp s.r.o 2008 - 2014. (2016). 1st ed. [ebook] THERMOTEMP s.r.o. Available at: [https://or.justice.cz/ias/ui/rejstrik-\\$firma?jenPlatne=PLATNE&nazev=thermotemp&polozek=50&typHledani=STARTS_WITH](https://or.justice.cz/ias/ui/rejstrik-$firma?jenPlatne=PLATNE&nazev=thermotemp&polozek=50&typHledani=STARTS_WITH) [Accessed 21 Apr. 2016].
- [18]. Annual accounting of ZahradnikZ 2011-2014. (2016). 1st ed. [ebook] ZahradnikZ. Available at: [https://or.justice.cz/ias/ui/rejstrik-\\$firma?p%3A%3Asubmit=x&.%2Frejstrik-%24firma=&nazev=ZahradnikZ&ico=&obec=&ulice=&forma=&oddil=&vlozka=&soud=&polozek=50&typHledani=STARTS_WITH&jenPlatne=PLATNE](https://or.justice.cz/ias/ui/rejstrik-$firma?p%3A%3Asubmit=x&.%2Frejstrik-%24firma=&nazev=ZahradnikZ&ico=&obec=&ulice=&forma=&oddil=&vlozka=&soud=&polozek=50&typHledani=STARTS_WITH&jenPlatne=PLATNE) [Accessed 21 Apr. 2016].
- [19]. Financial analysis of a business sphere 2011-2014. (2016). 1st ed. [ebook] Ministry of industry and trade. Available at: <http://www.mpo.cz/dokument157262.html> [Accessed 21 Apr. 2016].

9 List of tables and graphs

List of tables

Table 1: Structure of a balance sheet.....	12
Table 2: Structure of liabilities and equity	13
Table 3: Decomposition of Earnings.....	14
Table 4: Cash-flow statement.....	15
Table 5: External and internal users	16
Table 6: Methods of financial analysis	18
Table 7: IN index parameters	27
Table 8: Kralickuv q-test – parameters	28
Table 9: THERMOTEMP – assets.....	31
Table 10: THERMOTEMP - Equity and liabilities	32
Table 11: Horizontal analysis of assets of THERMOTEMP	37
Table 12: Horizontal analysis of equity and liabilities.....	39
Table 13: Vertical analysis of THERMOTEMP	40
Table 14: Cash flow statement of THERMOTEMP	44
Table 15: Return on assets ratio	45
Table 16: Return on equity ratio	46
Table 17: Current ratio analysis	46
Table 18: Quick ratio analysis.....	47
Table 19: Analysis of cash ratio	47
Table 20: Assets turnover ratio	48
Table 21: Receivables turnover ratio analysis.....	48
Table 22: Debt, equity and debt/equity ratio.....	49
Table 23: Interest cover ratio	50
Table 24: Altman´s formula for THERMOTEMP company	51
Table 25: IN 95 fomrula for THERMOTEMP company	52
Table 26: Kralickuv q-test.....	53

List of graphs

Graph 1: DuPont decomposition of ROE.....	25
Graph 2: Vertical analysis of assets of THERMOTEMP	33
Graph 3: Vertical analysis of equity and liabilities	35

Graph 4: Horizontal analysis of income statement 42
Graph 5: Comparison of our companies sales with the competition..... 43
Graph 6: Progress of three cash-flow indicators 44

10 Abbreviations

EAR: Earnings

EAT: Earnings after taxes

EBIT: Earnings before interest and taxes

EBITDA: Earnings before interest taxes, depreciation and amortization

EBT: Earnings before taxes

EVA: Economic value added

ROA: Return on assets

ROCE: Return on capital employed

ROE: Return on equity

ROS: Return on sales

11 Attachments

Attachment 1: ZahradnikZ balance sheet and income statement

Attachment 2: INSTASTAV Helán s.r.o. balance sheet and income statement 2011-2014

Attachment 3: Vertical analysis of a company

Attachment 4: Vertical analysis of company ZahradnikZ

Attachment 5: Vertical analysis of INSTASTAV Helán

Attachment 6: Horizontal analysis of THERMOTEMP company in absolute numbers

Attachment 7: Horizontal analysis of a company in relative numbers

Attachment 8: Horizontal analysis of income statement of THERMOTEMP in relative numbers

Attachment 9: Horizontal analysis of income statement of THEREMOTEMP in absolute numbers

Attachment 10: DuPont decomposition

Attachment 1: ZahradnikZ balance sheet and income statement

	2011	2012	2013	2014
Total assets	49 943	45 694	38 696	62 445
Long-term assets	1 297	1 109	1 672	1 564
Long-term tangible assets	1 297	1 109	1 672	1 564
Current assets	48 362	44 480	36 917	60 607
Inventories	1 757	2 052	778	5 071
Long-term receivebles	0	0	0	0
Short-term receivebles	45 275	38 654	33 392	51 497
Short-term financial property	1 330	3 774	2 747	4 039
Accruals of assets	284	105	107	274

	2011	2012	2013	2014
Liabilities and equity	49 943	45 694	38 696	62 445
Equity	11 077	11 003	15 283	15 591
Registered capital	100	100	100	100
Capital funds	0	0	0	0
Funds from profit	10	10	10	10
Economic result of previous periods	7 948	10 967	10 893	15 173
Economic result in current period	3 019	-74	4 280	308
Liabilities	38 866	34 533	22 714	46 300
Long-term liabilities	154	0	0	0
Current liabilities	38 712	34 533	22 714	46 300
Bank credit	0	0	0	0
Accruals of Liabilities and equity	0	158	699	554

	2011	2012	2013	2014
Sales from production and services	65 198	54 707	81 778	75 733
Output consumption	48 437	40 531	62 641	60 724
Value added	16 761	14 176	19 137	15 009
Personal expenses	11 962	11 969	12 797	13 463
Taxes and fees	114	48	47	45
Depreciation of long-term assets	613	692	808	596
Sales from long-term assets and material	2 405	26	71	27
Other operational revenues	2 297	0	113	94
Other operational expenses	288	1 224	350	434
Operational economic result	3 948	269	5 319	592
Interest revenues	0	5	5	2
Interest expenses	71	10	0	0
Other financial revenues	51	18	48	11
Other financial expenses	164	109	95	125
Financial economic result	-184	-96	-42	-112
Taxes for current period	740	247	1 014	160
Economic result of current period	3 024	-74	4 263	320
Economic result of accounting period	3 019	-74	4 280	308
Economic result before taxes	3 759	173	5 294	468

Source: Annual accounting of ZahradnikZ (2016).

Attachment 2: INSTASTAV Helán s.r.o. balance sheet and income statement 2011-2014

	2011	2012	2013	2014
Total assets	64 361	77 215	71 366	71 437
Long-term assets	3 111	2 443	3 194	4 204
Long-term non-tangible assets	52	30	30	26
Long-term tangible assets	3 059	2 413	4 178	3 164
Current assets	61 123	74 408	68 041	66 952
Inventories	8 475	9 124	3 821	5 023
Long-term receivables	22 180	17 739	20 082	13 400
Short-term receivables	27 226	44 963	41 150	45 922
Short-term financial property	3 242	2 582	2 988	2 607
Accruals of assets	127	364	131	281

	2011	2012	2013	2014
Liabilities and equity	64 361	77 215	71 366	71 437
Equity	20 972	18 991	24 012	24 251
Registered capital	100	100	100	100
Capital funds	0	-273	0	0
Funds from profit	35	35	35	35
Economic result of previous periods	27 702	20 837	18 856	23 877
Economic result in current period	-6 865	-1 708	5 021	239
Liabilities	42 150	58 087	47 354	47 186
Long-term liabilities	-318	-147	-147	0
Current liabilities	34 964	54 534	40 319	40 014
Bank credit	7 504	3 700	7 182	7 172
Accruals of Liabilities and equity	1 239	137	0	0

	2011	2012	2013	2014
Sales from production and services	121 171	135 774	111 008	79 000
Output consumption	107 356	125 112	94 039	66 400
Value added	14 109	10 662	16 969	12 600
Personal expenses	14 516	12 032	11 661	11 127
Taxes and fees	29	21	24	26
Depreciation of long-term assets	1 046	637	498	600
Sales from long-term assets and material	438	436	246	513
Residual value of sold material and long-term assets	498	436	103	192
Change in correcting items in operational area	4 958	-1 320	-1 395	86
Other operational revenues	2 254	437	92	441
Other operational expenses	2 507	263	8	94
Operational economic result	-6 753	-504	6 408	1 429
Interest revenues	20	11	4	5
Interest expenses	338	284	718	590
Other financial revenues	1 022	97	257	51
Other financial expenses	835	856	930	742
Financial economic result	-131	-1 032	-1 387	-1 276
Taxes for current period	-19	172	0	-86

Economic result of current period	-6 865	-1 708	5 021	239
Economic result of accounting period	-6 865	-1 708	5 021	239
Economic result before taxes	-6 884	-1 536	5 021	153

Source: annual accounting of INSTASTAV Helán (2016).

Attachment 3: Vertical analysis of a company

	2008	2009	2010	2011	2012	2013	2014
Total assets	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %
Long-term assets	4,44 %	2,69 %	4,54 %	5,24 %	3,69 %	4,48 %	4,89 %
Buildings	0,23 %	0,19 %	0,17 %	0,18 %	0,10 %	0,10 %	0,07 %
Moveable property	4,22 %	2,51 %	4,37 %	5,07 %	3,59 %	4,37 %	4,82 %
Current assets	94,19 %	96,35 %	91,92 %	93,35 %	96,04 %	87,67 %	90,45 %
Inventories	1,83 %	2,38 %	4,54 %	14,30 %	7,55 %	7,32 %	0,43 %
Long-term receivables	19,74 %	21,46 %	17,47 %	20,38 %	15,46 %	20,86 %	16,84 %
Short-term receivables	59,63 %	57,64 %	59,86 %	53,50 %	48,84 %	47,49 %	69,84 %
Short-term financial property	12,99 %	14,88 %	10,05 %	5,18 %	24,19 %	12,00 %	3,34 %
Accruals of assets	1,36 %	0,96 %	3,54 %	1,40 %	0,27 %	7,86 %	4,66 %
	2008	2009	2010	2011	2012	2013	2014
Liabilities and equity	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %
Equity	22,95 %	22,54 %	21,80 %	26,65 %	18,49 %	22,61 %	17,48 %
Registered capital	0,30 %	0,28 %	0,26 %	0,30 %	0,20 %	0,23 %	0,17 %
Capital funds	0,63 %	0,59 %	0,54 %	0,63 %	0,42 %	0,49 %	0,37 %
Funds from profit	0,29 %	0,27 %	0,25 %	0,29 %	0,19 %	0,23 %	0,17 %
Economic result of previous periods	19,50 %	20,25 %	19,66 %	24,10 %	16,88 %	20,76 %	16,28 %
Economic result in current period	2,23 %	1,14 %	1,09 %	1,34 %	0,81 %	0,91 %	0,48 %
Liabilities	76,70 %	76,74 %	77,88 %	73,35 %	81,00 %	77,31 %	81,93 %
Long-term liabilities	6,57 %	6,13 %	10,01 %	9,89 %	6,12 %	8,26 %	9,14 %
Current liabilities	54,06 %	60,81 %	58,87 %	52,75 %	62,98 %	42,30 %	33,21 %
Bank credit	16,08 %	9,80 %	9,00 %	10,72 %	11,89 %	26,76 %	39,59 %
Accruals of Liabilities and equity	0,35 %	0,72 %	0,33 %	0,00 %	0,51 %	0,07 %	0,59 %

Source: Own construction based on annual accounting of THERMOTEMP (2016).

Attachment 4: Vertical analysis of company ZahradnikZ

	2011	2012	2013	2014
Total assets	100,00 %	100,00 %	100,00 %	100,00 %
Long-term assets	2,60 %	2,43 %	4,32 %	2,50 %
Long-term tangible assets	2,60 %	2,43 %	4,32 %	2,50 %
Current assets	96,83 %	97,34 %	95,40 %	97,06 %
Inventories	3,52 %	4,49 %	2,01 %	8,12 %
Long-term receivebles	0,00 %	0,00 %	0,00 %	0,00 %
Short-term receivebles	90,65 %	84,59 %	86,29 %	82,47 %
Short-term financial property	2,66 %	8,26 %	7,10 %	6,47 %
Accruals of assets	0,57 %	0,23 %	0,28 %	0,44 %

	2011	2012	2013	2014
Liabilities and equity	100,00 %	100,00 %	100,00 %	100,00 %
Equity	22,18 %	24,08 %	39,50 %	24,97 %
Registered capital	0,20 %	0,22 %	0,26 %	0,16 %
Capital funds	0,00 %	0,00 %	0,00 %	0,00 %
Funds from profit	0,02 %	0,02 %	0,03 %	0,02 %
Economic result of previous periods	15,91 %	24,00 %	28,15 %	24,30 %
Economic result in current period	6,04 %	-0,16 %	11,06 %	0,49 %
Liabilities	77,82 %	75,57 %	58,70 %	74,15 %
Long-term liabilities	0,31 %	0,00 %	0,00 %	0,00 %
Current liabilities	77,51 %	75,57 %	58,70 %	74,15 %
Bank credit	0,00 %	0,00 %	0,00 %	0,00 %
Accruals of Liabilities and equity	0,00 %	0,35 %	1,81 %	0,89 %

	2011	2012	2013	2014
Sales from production and services	100,00 %	100,00 %	100,00 %	100,00 %
Output consumption	74,29 %	74,09 %	76,60 %	80,18 %
Value added	25,71 %	25,91 %	23,40 %	19,82 %
Personal expenses	18,35 %	21,88 %	15,65 %	17,78 %
Taxes and fees	0,17 %	0,09 %	0,06 %	0,06 %
Depreciation of long-term assets	0,94 %	1,26 %	0,99 %	0,79 %
Sales from long-term assets and material	3,69 %	0,05 %	0,09 %	0,04 %
Other operational revenues	3,52 %	0,00 %	0,14 %	0,12 %
Other operational expenses	0,44 %	2,24 %	0,43 %	0,57 %
Operational economic result	6,06 %	0,49 %	6,50 %	0,78 %
Interest revenues	0,00 %	0,01 %	0,01 %	0,00 %
Interest expenses	0,11 %	0,02 %	0,00 %	0,00 %
Other financial revenues	0,08 %	0,03 %	0,06 %	0,01 %
Other financial expenses	0,25 %	0,20 %	0,12 %	0,17 %
Financial economic result	-0,28 %	-0,18 %	-0,05 %	-0,15 %
Taxes for current period	1,14 %	0,45 %	1,24 %	0,21 %
Economic result of current period	4,64 %	-0,14 %	5,21 %	0,42 %
Economic result of accounting period	4,63 %	-0,14 %	5,23 %	0,41 %
Economic result before taxes	5,77 %	0,32 %	6,47 %	0,62 %

Source: Annual accounting of ZahradnikZ (2016).

Attachment 5: Vertical analysis of INSTASTAV Helán

	2011	2012	2013	2014
Total assets	100,00 %	100,00 %	100,00 %	100,00 %
Long-term assets	4,83 %	3,16 %	4,48 %	5,88 %
Long-term non-tangible assets	0,08 %	0,04 %	0,04 %	0,04 %
Long-term tangible assets	4,75 %	3,13 %	5,85 %	4,43 %
Current assets	94,97 %	96,36 %	95,34 %	93,72 %
Inventories	13,17 %	11,82 %	5,35 %	7,03 %
Long-term receivebles	34,46 %	22,97 %	28,14 %	18,76 %
Short-term receivebles	42,30 %	58,23 %	57,66 %	64,28 %
Short-term financial property	5,04 %	3,34 %	4,19 %	3,65 %
Accruals of assets	0,20 %	0,47 %	0,18 %	0,39 %

	2011	2012	2013	2014
Liabilities and equity	100,00 %	100,00 %	100,00 %	100,00 %
Equity	32,58 %	24,59 %	33,65 %	33,95 %
Registered capital	0,16 %	0,13 %	0,14 %	0,14 %
Capital funds	0,00 %	-0,35 %	0,00 %	0,00 %
Funds from profit	0,05 %	0,05 %	0,05 %	0,05 %
Economic result of previous periods	43,04 %	26,99 %	26,42 %	33,42 %
Economic result in current period	-10,67 %	-2,21 %	7,04 %	0,33 %
Liabilities	65,49 %	75,23 %	66,35 %	66,05 %
Long-term liabilities	-0,49 %	-0,19 %	-0,21 %	0,00 %
Current liabilities	54,32 %	70,63 %	56,50 %	56,01 %
Bank credit	11,66 %	4,79 %	10,06 %	10,04 %
Accruals of Liabilities and equity	1,93 %	0,18 %	0,00 %	0,00 %

	2011	2012	2013	2014
Sales from production and services	100,00 %	100,00 %	100,00 %	100,00 %
Output consumption	88,60 %	92,15 %	84,71 %	84,05 %
Value added	11,64 %	7,85 %	15,29 %	15,95 %
Personal expenses	11,98 %	8,86 %	10,50 %	14,08 %
Taxes and fees	0,02 %	0,02 %	0,02 %	0,03 %
Depreciation of long-term assets	0,86 %	0,47 %	0,45 %	0,76 %
Sales from long-term assets and material	0,36 %	0,32 %	0,22 %	0,65 %
Residual value of sold material and long-term assets	0,41 %	0,32 %	0,09 %	0,24 %
Change in correcting items in operational area	4,09 %	-0,97 %	-1,26 %	0,11 %
Other operational revenues	1,86 %	0,32 %	0,08 %	0,56 %
Other operational expenses	2,07 %	0,19 %	0,01 %	0,12 %
Operational economic result	-5,57 %	-0,37 %	5,77 %	1,81 %
Interest revenues	0,02 %	0,01 %	0,00 %	0,01 %
Interest expenses	0,28 %	0,21 %	0,65 %	0,75 %
Other financial revenues	0,84 %	0,07 %	0,23 %	0,06 %
Other financial expenses	0,69 %	0,63 %	0,84 %	0,94 %
Financial economic result	-0,11 %	-0,76 %	-1,25 %	-1,62 %
Taxes for current period	-0,02 %	0,13 %	0,00 %	-0,11 %

Economic result of current period	-5,67 %	-1,26 %	4,52 %	0,30 %
Economic result of accounting period	-5,67 %	-1,26 %	4,52 %	0,30 %
Economic result before taxes	-5,68 %	-1,13 %	4,52 %	0,19 %

Source: Annual accounting of INSTASTAV Helán (2016).

Attachment 6: Horizontal analysis of THERMOTEMP company in absolute numbers

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
Total assets	2 427	3 163	-5 403	16 967	-7 461	14 204	23 897
Long-term assets	-517	803	-10	109	60	873	1 318
Buildings	-8	0	-8	-7	-7	-6	-36
Moveble property	-509	803	-2	116	67	879	1 354
Current assets	3 056	1 324	-4 485	17 194	-10 764	14 045	20 370
Inventories	239	915	3 023	-978	-663	-2 900	-364
Long-term receivebles	1 093	-870	29	976	1 167	665	3 060
Short-term receivebles	736	2 686	-5 363	6 724	-4 220	19 528	20 091
Short-term financial property	988	-1 407	-2 174	10 472	-7 048	-3 248	-2 417
Accruals of assets	-112	1 036	-908	-336	3 243	-714	2 209

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
Liabilities and equity	2 427	3 163	-5 403	16 967	-7 461	14 204	23 897
Equity	409	424	448	407	390	276	2 354
Registered capital	0	0	0	0	0	0	0
Capital funds	0	0	0	0	0	0	0
Funds from profit	0	0	0	0	0	0	0
Economic result of previous periods	744	409	424	448	407	389	2 821
Economic result in current period	-335	15	24	-41	-17	-113	-467
Liabilities	1 875	2 870	-5 724	16 305	-7 628	13 623	21 321
Long-term liabilities	3	1 703	-583	-221	461	1 675	3 038
Current liabilities	3 725	1 167	-5 229	14 114	-13 593	809	993
Bank credit	-1 853	0	88	2 412	5 504	11 139	17 290
Accruals of Liabilities and equity	143	-131	-127	255	-223	305	222

Source: Annual accounting of THERMOTEMP (2016).

Attachment 7: Horizontal analysis of a company in relative numbers

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
Total assets	7,29 %	8,85 %	-13,89 %	50,67 %	-14,79 %	33,04 %	71,18 %
Long-term assets	-34,96 %	83,47 %	-0,57 %	6,21 %	3,22 %	45,37 %	102,75 %
Buildings	-10,67 %	0,00 %	-11,94 %	-11,86 %	-13,46 %	-13,33 %	-61,27 %
Moveble property	-36,25 %	89,72 %	-0,12 %	6,84 %	3,70 %	46,78 %	110,67 %
Current assets	9,74 %	3,85 %	-12,55 %	55,01 %	-22,22 %	37,27 %	71,10 %
Inventories	39,18 %	107,77 %	171,37 %	-20,43 %	-17,41 %	-92,18 %	188,31 %
Long-term receivebles	16,63 %	-11,35 %	0,43 %	14,30 %	14,96 %	7,42 %	42,39 %
Short-term receivebles	3,71 %	13,05 %	-23,04 %	37,54 %	-17,13 %	95,65 %	109,77 %
Short-term financial property	22,84 %	-26,48 %	-55,64 %	604,27 %	-57,75 %	-62,98 %	424,26 %
Accruals of assets	-24,67 %	302,92 %	-65,89 %	-71,49 %	2420,15 %	-21,14 %	2539,88 %

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
Liabilities and equity	7,29 %	8,85 %	-13,89 %	50,67 %	-14,79 %	33,04 %	71,18 %
Equity	5,35 %	5,27 %	5,29 %	4,56 %	4,18 %	2,84 %	27,49 %
Registered capital	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Capital funds	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Funds from profit	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Economic result of previous periods	11,46 %	5,65 %	5,55 %	5,55 %	4,78 %	4,36 %	37,35 %
Economic result in current period	-45,03 %	3,67 %	5,66 %	-9,15 %	-4,18 %	-28,97 %	-78,00 %
Liabilities	7,34 %	10,47 %	-18,90 %	66,39 %	-18,67 %	40,99 %	87,62 %
Long-term liabilities	0,14 %	77,76 %	-14,98 %	-6,68 %	14,92 %	47,18 %	118,35 %
Current liabilities	20,70 %	5,37 %	-22,84 %	79,92 %	-42,78 %	4,45 %	44,81 %
Bank credit	-34,62 %	0,00 %	2,51 %	67,22 %	91,73 %	96,83 %	223,68 %
Accruals of Liabilities and equity	124,35 %	-50,78 %	-100,00 %		-87,45 %	953,13 %	839,25 %

Source: Annual accounting of THERMOTEMP (2016).

Attachment 8: Horizontal analysis of income statement of THERMOTEMP in relative numbers

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Sales from production and services	30,86 %	-20,33 %	-17,26 %	81,88 %	-15,34 %	-2,39 %
Output consumption	39,03 %	-20,43 %	-20,09 %	100,88 %	-16,99 %	-8,07 %
Value added	-2,09 %	-19,79 %	-1,18 %	-5,51 %	0,77 %	43,42 %
Personal expenses	-0,84 %	-16,00 %	-6,66 %	-1,79 %	20,69 %	-3,98 %
Taxes and fees	-16,00 %	0,00 %	19,05 %	-6,00 %	14,89 %	-1,85 %
Depreciation of long-term assets	37,53 %	-100,00 %	0,00 %	-92,93 %	1157,14 %	64,77 %
Sales from long-term assets and material	-95,31 %	-100,00 %	0,00 %	0,00 %	28,57 %	64,29 %
Residual value of sold material and long-term assets	-100,00 %	0,00 %	0,00 %	0,00 %	28,57 %	340,48 %
Other operational revenues	1889,19 %	-99,00 %	3054,55 %	-95,68 %	3930,00 %	-48,06 %
Other operational expenses	2151,25 %	-94,11 %	708,49 %	-93,70 %	188,89 %	1191,67 %
Operational economic result	-7,46 %	-34,48 %	16,58 %	-6,15 %	-17,69 %	60,57 %
Interest revenues	-5,66 %	-28,00 %	-5,56 %	-11,76 %	-26,67 %	-27,27 %
Interest expenses	-12,91 %	-15,59 %	-38,29 %	35,04 %	56,22 %	71,28 %
Other financial revenues	173,33 %	458,54 %	-79,04 %	-100,00 %	0,00 %	-85,40 %
Other financial expenses	57,98 %	-14,43 %	19,52 %	-32,86 %	-4,50 %	19,50 %
Financial economic result	21,44 %	-43,38 %	48,12 %	-11,43 %	-26,43 %	130,08 %
Taxes for current period	40,47 %	-61,50 %	-34,53 %	40,66 %	-27,34 %	166,67 %
Economic result of current period	-45,03 %	3,67 %	5,66 %	-9,15 %	-4,18 %	-28,72 %
Economic result of accounting period	-45,03 %	3,67 %	5,66 %	-9,15 %	-4,18 %	-28,72 %
Economic result before taxes	-23,08 %	-26,88 %	-4,26 %	-0,74 %	-9,72 %	8,90 %

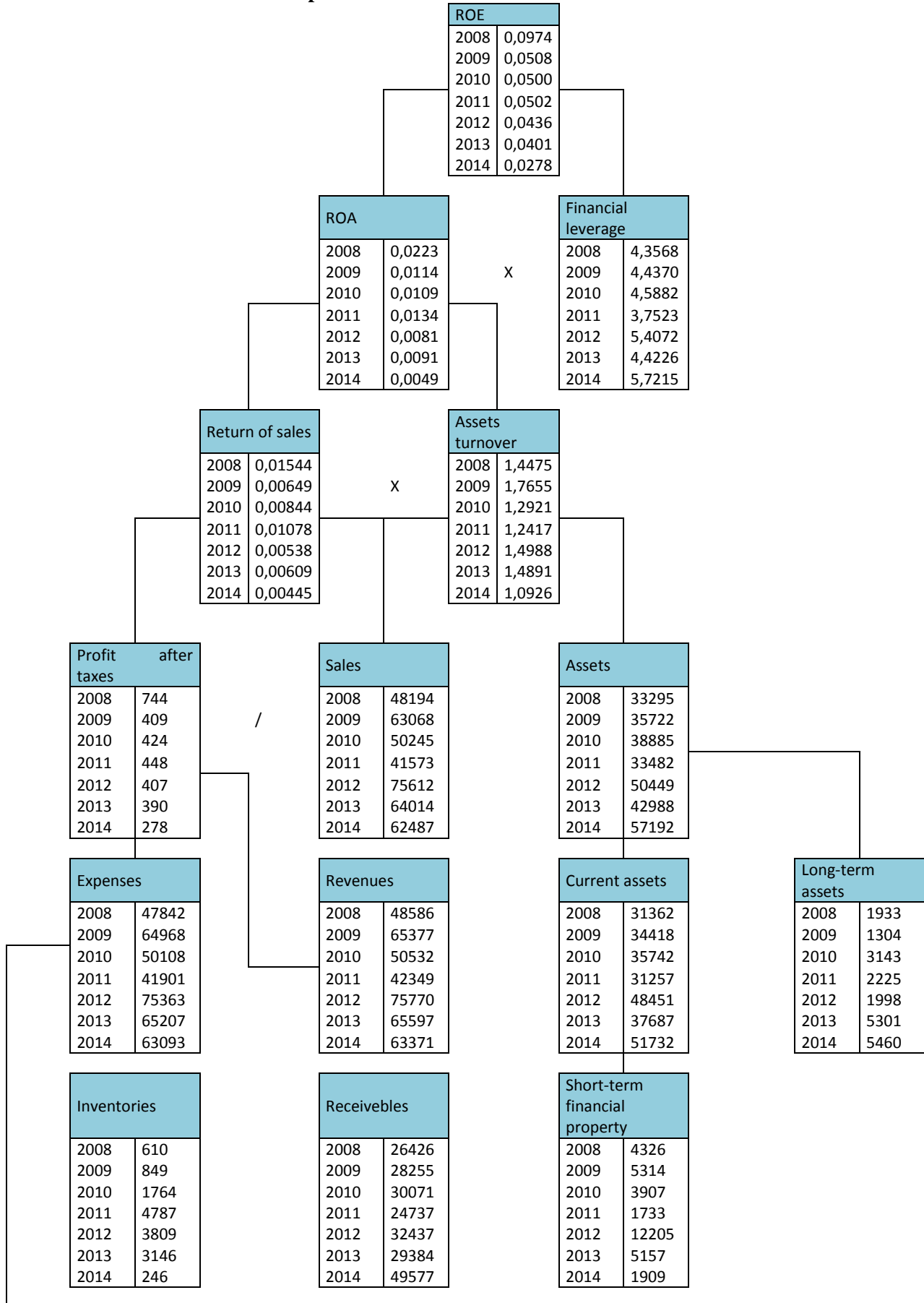
Source: annual accounting of THERMOTEMP (2016).

Attachment 9: Horizontal analysis of income statement of THERMOTEMP in absolute numbers

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Sales from production and services	14 874	-12 823	-8 672	34 039	-11 598	-1 527
Output consumption	15 074	-10 969	-8 583	34 448	-11 652	-4 597
Value added	-200	-1 854	-89	-409	54	3 070
Personal expenses	-65	-1 229	-430	-108	1 224	-284
Taxes and fees	-8	0	8	-3	7	-1
Depreciation of long-term assets	173	-634	99	-92	81	57
Sales from long-term assets and material	-203	-10	0	98	28	81
Residual value of sold material and long-term assets	-12	0	0	98	28	429
Other operational revenues	2 097	-2 186	672	-664	1 179	-581
Other operational expenses	1 721	-1 695	751	-803	102	1 859
Operational economic result	-115	-492	155	-67	-181	510
Interest revenues	-3	-14	-2	-4	-8	-6
Interest expenses	-39	-41	-85	48	104	206
Other financial revenues	26	188	-181	-48	226	-193
Other financial expenses	178	-70	81	-163	-15	62
Financial economic result	-116	285	-179	63	129	-467
Taxes for current period	104	-222	-48	37	-35	155
Economic result of current period	-335	15	24	-41	-17	-112
Economic result of accounting period	-335	15	24	-41	-17	-112
Economic result before taxes	-231	-207	-24	-4	-52	43

Source: annual accounting of THERMOTEMP (2016).

Attachment 10: DuPont decomposition



Depreciation	
2008	461
2009	634
2010	0
2011	99
2012	7
2013	88
2014	145

Interest expenses	
2008	302
2009	263
2010	222
2011	137
2012	185
2013	289
2014	495

Taxes	
2008	257
2009	361
2010	139
2011	91
2012	128
2013	93
2014	248

Other expenses	
2008	46822
2009	63710
2010	49747
2011	41574
2012	75043
2013	64737
2014	62205

Source: Annual accounting of THERMOTEMP (2016).