Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economic

Bachelor Thesis

Financial analysis of selected company

Zuzana Surovčíková

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Zuzana Surovčíková

Business Administration

Thesis title

Financial analysis of selected company

Objectives of thesis

The aim of this work is to evaluate the economic situation of company Hermitage Holding s.r.o. in the period from 2009-2017. It will be used regular methods to evaluate the company and from the result will be found out financial health and predicted the company future.

Methodology

In this thesis will be used methods of analysis of balance sheet and profit and loss statement, especially horizontal, vertical and index analyses. For detailed view at company health will be used financial ratios. Another group consists of bankruptcy models, the first to focus on Altman's indexes. The IN95, IN99, and IN05 indicators will be used, too.

The proposed extent of the thesis

40 – 60 pages

Keywords

financial anallysis, method, index, company

Recommended information sources

HELFERT, E A. *Techniques of financial analysis.* Homewood: Irwin, 1987. ISBN 0-256-03625-.

HNILICA, J. – KISLINGEROVÁ, E. *Finanční analýza : krok za krokem.* Praha: C.H. Beck, 2005. ISBN 80-7179-321-3.

KATY BALCH Business Finance for Accountants

NORDHAUS, W D. – SAMUELSON, P A. *Economics.* Boston: McGraw-Hill Irwin, 2010. ISBN 9780073511290.

SEDLÁČEK, J. *Finanční analýza podniku.* Brno: Computer Press, 2007. ISBN 978-80-251-1830-6.

STÁROVÁ, M. – ČESKÁ ZEMĚDĚLSKÁ UNIVERZITA V PRAZE. KATEDRA OBCHODU A FINANCÍ. *Accounting theory : lectures and seminars.* V Praze: Česká zemědělská univerzita v Praze, 2017. ISBN 978-80-213-2745-0.

VYSOKÁ ŠKOLA EKONOMICKÁ V PRAZE. FAKULTA FINANCÍ A ÚČETNICTVÍ, – HOLEČKOVÁ, J. – GRÜNWALD, R. *Finanční analýza a plánování podniku.* V Praze: Oeconomica, 2006. ISBN 80-245-1108-8.

Expected date of thesis defence

2018/19 SS – FEM

The Bachelor Thesis Supervisor

Ing. Jiří Mach, Ph.D.

Supervising department

Department of Economics

Electronic approval: 11. 3. 2019

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 11. 3. 2019

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 14. 03. 2019

Declaration

I declare that I have worked on my bachelor thesis titled "Financial analysis of selected company" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 14.03. 2019 _____

Acknowledgement

I would like to thank Ing. Jiří Mach and all other persons, for their advice and support during my work on this thesis.

Financial analysis of selected company

Abstract

The thesis is focused on the financial health of the selected company. I am applying several mathematic methods to indicate enterprise financial situation at the years 2013-2017. In selected methods is described the calculation of methods and the important reasons to know the actual situation of the enterprise for owners and potential investors.
The bachelor thesis is divided into a theoretical part and practical part. Theoretical part as arranged detailed description of using formulas methods, history, and mathematical calculation. Such as Altman's method, indexes of Trust, Vertical analysis, Horizontal analysis and comparison with the Czech market.

At a Practical part are monitored individual part of the business. As a first analyze, which I made in this work is an analysis of absolute indicators. By the Horizontal, an analysis was found out that total assets are reacted flexibly to the economic situation. In contrast, at Vertical analysis, total liabilities reacted differently. In the next step, I use Altman's formula for the Czech economy. The results show that the business maintained good financial health in 2013-2017. Business credit score was higher, as the Z score was higher than 2,6 and almost tripled in the year 2014. When I was applying the indexes, whether the enterprise value, it was clear that in 2014 to 2017 it created another value.
At the last part, I made a short comparison of three types of profitability with the Czech market at section accommodation, catering, and hospitality. All testing parameter except one (ROA= Return on assets) were profitable. In general, I can conclude that the company Hermitage Holdings s.r.o. is at a very good financial situation**.**

Keywords: Financial analysis, vertical analysis, horizontal analysis, method, calculations, Index, ratio indicators, company, enterprise

Finanční analýza vybrané společnosti

Abstrakt

Tato práce je zaměřena na finanční zdraví vybraného podniku. V této bakalářské práci využívám několik matematických metod k označení finanční situace podniku v letech 2013–2017. Ve vybraných metodách je popsán výpočet metod a důležité důvody, které jsou důležité znát pro situaci podniku pro vlastníky a potenciální investory. Bakalářská práce je rozdělena na teoretickou a praktickou část. V teoretické části je zpracován podrobný popis použití vzorcových metod, historie a matematické výpočty. Jako jsou např. Altmanova metoda, indexy důvěryhodnosti, Vertikální a Horizontální analýza.

V praktické části jsou sledovány jednotlivé části podniku. První analýzou, kterou jsem v této práci provedla, je analýza absolutních ukazatelů. Horizontální analýzou bylo zjištěno, že celková aktiva reagují pružně na ekonomickou situaci. Naproti tomu při vertikální analýze celkové závazky reagovaly odlišně. V dalším kroku používám Altmanovu formulaci pro českou ekonomiku. Výsledky ukazují, že podnikání si v letech 2013–2017 udrželo dobré finanční zdraví. Obchodní úvěrové skóre bylo vyšší, protože Z skóre bylo vyšší než 2,6 a téměř se ztrojnásobilo v roce 2014. Když jsem aplikovala indexy, na hodnotu podniku, bylo jasné, že v roce 2014 až 2017 společnost vytvořila další přidanou hodnotu.

V poslední části jsem provedla krátké srovnání tří typů ziskovosti s českým trhem v sekci ubytování, stravování a pohostinství. Všechny testovací parametry kromě jednoho (ROA = Rentabilita aktiv) byly ziskové. Obecně mohu konstatovat, že společnost Hermitage Holdings s.r.o. je ve velmi dobré finanční situaci.

Klíčová slova: Finanční analýza, metody, výpočty, Index, ukazatele absolutních hodnot, společnost, podnik

Table of content

1. Introduction

In the work I will apply some basic methods to evaluate the economic situation of Hermitage Holdings s.r.o. First of those method I will use the financial analysis.
I will take it from view of potential investor. Every entrepreneur should know health of company, which can be find out from well-developed financial analysis.

With the aid of those result of analysis is company able to make flexibles changes in potential issues and eliminate possible damages, which could happen without know these analyses. Financial analysis is belong to one of basic thing what should companies apply. Financial analysis is important factor use for appreciate the company.

Financial analysis is another tool to help entrepreneur in making decisions what will be following development in company. It is important to build the analysis objectively and correctly. As one of the most important aspect of well build analysis is business accounting and financial statement. In these statement we can include balance sheet, profit and loss statement or cash flow. We can also use external data from many other resources as Czech national bank or Czech statistics office. By creating this financial analysis, we provide information needed for banks, potentials investors or business partners. Sense of this work is build the financial analysis from investor point of view.

2. Objective of work

Objective of this work is evaluate the economic situation of company Hermitage Holding s.r.o. in the period from 2009-2017. It will be use regular analytical methods to evaluate the company and from the result find out financial health and give some recommendation for the company future.

3. Theoretical part

In this part I will take a look into theoretical knowledge which I will use for create the financial analysis of this company. Theory I will apply for Hemitage Holding s.r.o. company in second or respectively application part of bachelor work. Data about the company needed to create this work I gain from balance sheet and profit and loss statement which were allocate to me.

3.1. Financial analysis

The financial analysis we can describe as complex of activities due to we can find out financial situation of the company. The analysis evaluate economic activities and because of the result we can predict following productivity of company. At the same time we use this statement to see what the company achieved till the present. It is the main tool for financial management.

,, Financial analysis is consider as method to evaluate financial economic activities of the company in which gain data. Data are separate, measure against the other data, data are quantity between them. They are looking for causal connection between the data and determine their development. By this is increasing testify of ability in process of data and also is increasing their information value. " (Sedláček, 2013 str. 3)

The principal aim at build the financial analysis is according to Mark (2007) ability to show the financial and property of company. And not only for management for making decision in running the company, but also for stakeholders who can be all interest persons and institutions. Here we can call for example: stockholders, state, suppliers, creditors, employers or customers. We build the financial analysis also for prove the potential of company or threats:

- internal materials for future decision about the firm
- for make decision for bank institutions about providing credits

- potential appreciate of company in fusion or sale

- in processing materials for statistics

3.2 Persons interesting in financial analysis of companies

Many different subjects has interest about financial facilities. For example when a potential investor is taking decisions to invest into company. At that moment he check profitability and risk which the company undergo. But also a suppliers makes careful decision of choosing a company to deliver their goods with expectations to paid well and in time for their goods. For everybody is important so that the company is stable on market and the firm makes riskless decisions. (Grünwald, Holečková: 2009)

Users are divide into two elementary groups. First group are called external users.
From external user point of view will be analyse chosen company. Second group are called internal users.

3.2.1. External users

- Investors

- Creditors and banks

- Competitors

- State

- Sale subjects (suppliers, customers)

a) a) Investors:

As investors we can consider just themselves and as well as partners, stockholders, owners of firms or members of cooperative. For subject which already invested capital into company are important result from the financial analyse. Because of this they can see if the capital increase the value or decrease the value and watch if is the risk is increasing. Also for potential investors is important to find out financial situation of company before they invest their money. (Grünwald, Holečková: 2009)

b) Creditors and banks:

Banks are taking decision mainly according the result from financial analyse before they provide credit to company. For example a company which is very successful but his property is created mainly from foreign capital so the bank consider this company under big risk. Because of this will the bank ask for higher interest or will not borrow money at all. Some banks ask for those data regularly not only when a companies ask for credit. (Kislingerová, 2004)

c) Competition: High prices of products or goods is comparing on market with competing firms, which do same business. Competing firms make advantage of foreign financial analysis and make comparing with their own financial analysis. They are looking for quantity of stocks, profitability capital, profit or loss. (Grünwald, Holečková: 2009)

d) State: State is taking care of financial analysis mainly because of taxes. They are strictly controlling selection taxes to not cause tax evasion. On other side the state can provide grant, subvention or other financial help. (Kislingerová, 2004)

e) Commercial subject: In this section belong mainly customers and suppliers. For suppliers is important to know if the company is able to pay his liabilities. Suppliers are taking care if the company has constant production or enough of store. To not get time delay. (Grünwald, Holečková: 2009)

3.2.2. Internal users:

In this section we can put for example: own leading company, who are mainly managers, employers or unions.

- Managers: they need to know the information from financial analysis. According the financial analysis they can determine visons and aims of company and build strategy or operating plans. (Grünwald, Holečková: 2009)

- Employers: for employers is the most important firm profitability to not put his salary in danger. Also for not lost their job and good environment at work. It is important to increase employers productivity and motivation

3.3. Sources for build the financial analysis

High- quality input information are the most important and the most basic conditions to build successful financial analysis. Information should be verify from more then one source because of taking information from wrong source could cause distortion results. This information are for future prediction of enterprise absolutely inadequate.

Enterprises in last day of accounting period are completing proper closing balance sheet. By this day the close ledger and outputs and information from this file the use for calculation for income tax. Some expert literature is called final balance sheet. Which are creating by followingfinancial statement:

Balance sheet

Income statement (statement of Profit or Loss, Profit/Loss Account)

Statement of cash flow

Attachment with Financial Statement (Vochozka, 2011)

3.3.1. Balance sheet

The balance sheet sets out the financial position of the business at a chosen point in time. It is the date to which the Income Statement (Profit and Loss Account is made. The balance sheet can also be called Statement of Financial Position. It is a statement of total assets, equity and liabilities of an entity on particular date, usually the last day of the accounting period. The most common accounting date is the end of the calendar year (31 December). Every Balance sheet is creating by two parts. The first part (left side) of the statement lists the fixed and current assets, whereas the second part (right side) shows they have been financed , fro own sources (equity) or from sources of somebody else (liabilities). The totals for each part must be equal. (M. Stárová 2017)

1) Assets

Assets are probable future economic benefits obtained or controlled by a particular entity as a results of past transaction. Assets is any object, tangible or intangible, that is of value to its possessor. Assets are of many types. In most cases it either is cash or can be turned into cash: exceptions include prepayments, which may represent payments made for rent, rates, or motor licence, in case in which time paid for has not expired. Another is accounts receivable. Account receivable is an assets created by selling products (final products, merchandise, material eventually) or services on credit, to customers. Assets also can be intangible rights such as those granted by a patent or copyright. (Marta Stárová, 2017)

2) Fixed assets (Non-current assets)

Fixed assets are not held for sale to customer. A noncurrent asset is typically expected to be of use to the business for more than one financial year, hence the term ‘noncurrent’. Additionally, noncurrent assets are resources that are acquired for productive use within the business rather than for the purpose of being sold (Smith 2010). Fixed assets a firm (company) purchases and retains to help carry on the business. It is not intended to sell fixed assets in the ordinary course of business and it is expected that the bulk of their value will be used up as the results of contributing to trading activities. A characteristic of fixed assets is that they usually remain in the business for long periods of time and will only be sold or scrapped when they are of no further (Marriott, Edwards and Mellett, 2002)

According to Tracy and Tracy (2013), fixed assets are divided into two groups: ‘ Long-term Operating Assets’ and ‘Other Assets’. Broadly speaking, Long-term Operating Assets fall into two groups: tangible and intangible assets. Tangible assets have physical existence, bur they are legally protected rights (such as patents and trademarks), or they are such things as secret processes and well-known favourable reputations that give business important competitive advantages. Generally intangible assets are recorded only when the assets are purchased from a source outside the business.

3) Orbit assets

Orbits assets are inseparable part of evaluating liquidity of company. It is necessary for build financial analysis take care of every field. Especially deps and financial assets

because of this fields we can specify and can be more concrete for liquidity of firm. Orbital assets are very non-fictional from financial point of view for companies. Certain size of those assets are necessary for normal running of company. (Růčková, 2011)

4) Liabilities

Liabilities represent an amount owed to creditors, usually arising from purchase of merchandise or materials and suppliers, not necessarily due or past due (oxford University, 2005). Liabilities are claims on the assets that will be later converted into cash will be used to pay the liabilities to pay its liabilities). Clearly, all liabilities of a business should be reported in its balance sheet to give a complete picture of the financial condition of business. Liabilities are also sources of assets. For example, cash increases when a business borrows money. Inventor increases when a business buys goods on credit and incurs a liability that will be paid later. Also, typically a business has liabilities for unpaid expenses and has not yet used cash to pay these liabilities (Tracy and Tracy), 2013). (M. Stárová 2017).

5) Equity (Capital)

Equity (Capital) is the owner's claim against the assets of an entity, it is the ownership interest. Equity is defined as the residual interest in the assets of an entity remains after deducting its liabilities. Equity is the value of an ownership interest in property, including shareholders' equity in a business. Equity can be also called net assets.

Own equity is shown on balance sheet as first part in liabilities. Base of own equity is elemental capital. It is created mainly by business companies and according to law č. 513/1991 Sb., commercial code as amended by latter regulations. For some companies is a base capital obligatory field.

In case is it limited company we are talking about 5000 CZK as minimum. For limited liability company is need at least 200 000 CZK, Joint-stock company is need 2 mil. CZK as minimum and for company found with public offers of stock is needed 20 mil. CZK as base capital. Following field are called capital's funds which contains emission agio. In a conclusion we could called result from economic activities from previous years (unpaid

loss or not divided profit) and economic results from normal accounting period. (Vochozka, 2011)

6) Foreign sources

Foreign sources we could define as sources, which were borrowed from other natural or legal persons. Lending this capital is allow for fix period and a company is paying a price for it as is it called interest. Due to company is creating new operating cost, which was made by using foreign sources. (Vochozka 2011)

3.3.2. Income statement (Profit/Loss Account)

the income statement summarize sales revenue and expenses for a period of time-one year. All the money units amounts reported in this financial statement are cumulative totals for the whole period. Difference between revenues and expenses will shows us profit or loss for certain period, which indicate us result of economic situation. Income statement is important mainly for managers for to know if they did right decisions and if expenses are not high. The income statement can shows in two ways: species or clause of purpose (Grünwald, Holečková: 2009)

3.3.3. Cash flow

A cash flow statement is a financial statement that provides aggregate data regarding all cash inflows a company receives from its ongoing operations and external investment sources, as well as all cash outflows that pay for business activities and investments during a given period.

Cash Flows From Operations

This is the first section of the cash flow statement and includes transactions from all operational business activities. The cash flows from operations section begins with net income and then reconciles all noncash items to cash items involving operational activities. For example, accounts receivable is a noncash account. If accounts receivable go up during a period, it means sales are up, but no cash was received at the time of sale. The cash flow statement deducts receivables from net income because it is not cash. The cash flows from

operations section can also include accounts payable, depreciation, amortization and numerous prepaid items booked as revenue or expenses but with no associated cash flow.

Cash Flows From Investing

This is the second section of the cash flow statement and can include cash spent on property, plant and equipment. This is where analysts look to find changes in capital expenditures (CAPEX). While positive cash flows within this section can be considered good, investors would prefer companies that generate cash flow from business operations, not investing and financing activities. Companies can generate cash flow within this section by selling equipment or property.

Cash Flows From Financing

Cash flows from financing is the last section of the cash flow statement. The section provides an overview of cash used in business financing. Analysts use the cash flows from financing section to determine how much money the company has paid out via dividends or share buybacks. Cash obtained or paid back from capital fundraising efforts, such as equity or debt, is listed here, as are loans taken out or paid back. (M. Stárová 2017)

Methods to count Cash Flkow

The indirect method

while preparing the cash flow Statement as per the Indirect Method, the net Profit/Loss for the period is used as the base and then adjustments are made for items that affected the income Statement but did not affect the Cash.

Preparing the Cash Flow Statement as per the indirect method, Non Cash and Non Operating charges in the Income Statement are added back to the Net Profits while Non-Cash and Non-Operating Credits are deducted to calculate the Operating Profit before Working Capital Changes.

The indirect Method is a partial conversion of actual basis profit to Cash basis profit. Further, necessary adjustments are made for Increase/Decrease in Current Assets and Current Liabilities to obtain Net Cash Flows from Operating Activities as per the Indirect Method.

Direct Method

while preparing the Cash Flow Statement as per Direct Method, Actual Cash Receipts from Operating Revenues and Actual Cash Payments for Operating Activities are arranged and presented in Cash Flow Statement. The difference between Cash Receipts and Cash Payments is the Net Cash Flow from Operating Activities under the Direct Method. In other words, it is a Income Statement (Profit and Loss A/c) prepared on Cash Basis under the Direct Method.

3.3.4. Financial Statement

Financial statement summarize entity activities over a period time. They are the set of standardized reports which review the performance and the status of an entity. Financial statement are issued at least annually. The annual financial statement summarize the entity's activities over the last year. (M. Stárová 2017)

Financial statement is the most important source for build the financial analysis. For companies whose assets are bigger than 40 million CZK is obligatory by law make financial statement and public the financial statement regular. Also it is necessary for firm whose turnover is higher than 80 million CZK or if the firm have more than 50 employees. Fundamental legal regulations of a financial accounting are according Act No 563/1991 Coll and it is composed of balance sheet, Profit and Loss Statement and attachment. It is public and everyone can read it on website [1]

3.4. Method of financial analysis

We can understand financial analysis as set of activities and on the base of those sources we can evaluate the financial position of the company. Due to the financial analysis we can find out the financial health of company. On condition of objective and qualitative processing data is possible eliminate weaknesses of company or support strengths. Every financial analysis should have according Sedláček (2011) two connected parts:

1. Quantitative = fundamental analysis. This analysis create experienced experts and it is based on their subjective estimations. Their contents is processing lot of qualitative aspects and the results help us to identify in which situations is the company. It is about external and internal analysis of company environment. Phases of life's company, which are actually processing or analysis of business goals. For those we need verbal evaluations,

one of the most popular is SWOT analysis, Analysis of the portfolio of two dimensions, critical factors od success or Argentin's model. (Sedláček 2011)

2. Qualitative = technical analysis: This analysis is composed mainly of mathematical and statistic methods which are divide into those phases: characteristic of environment and sources of data, choosing the method, processing of data and purposes to achieve goals. Analysis is divide into two groups:

Analysis of absolute data:

- analysis of trend (horizontal analysis)
- percentage analysis (vertical analysis)

Analysis of ratios:

- profitability
- activities
- indebtedness and financial structure
- indebtedness and financial structure
- liquidity
- capital market
- operational activities
- cash flow

Taffler Index

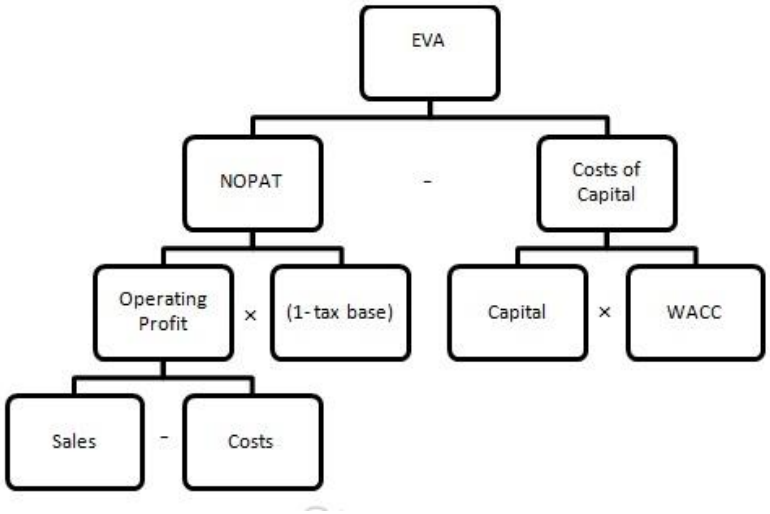
This index, like others, is among bankruptcy models that can calculate probability bankruptcy of the enterprise. The most important factor in this analysis is the liquidity

indicator. Points to the ability of an enterprise to meet its payables or the ratio of assets to total foreign resources.(Sequens, 2007)

Added Value (EVA)
This indicator is very often used by potential investors and shareholders operating on the market with securities. Investors are coming to the market to maximize the deposit, so it is for them important to know the financial health of the business they invested in.
(Marinič, 2008)
EVA added value can be divided into EVA entities and EVA equity.

EVA entity
defines this indicator as operating profit, which is reduced by the cost of total capital used for profit generation. The structure of the EVA indicator is three basic elements. This is the so-called NOPAT, Capital and WACC. The basic formula for calculating EVA is located in the following picture

Decomposition of indicator EVA:



Source: managementmania.com

EVA equity (Neumaier)

EVA equity= (ROE – r) x VK

The added value of EVA equity can be defined according to Neumaier (2002) as a tool serves to assess the economic outcome and the magnitude of the risk. This method is often used at Business valuation. By applying this method, it is possible to determine the difference between net operating profit, total costs and foreign capital. EVA is specific because it is not based on estimates, but it is based on real analyzes of the monitored enterprise.

4. Methodology of work

In this part I will describe how I will proceed when applying the theoretical part to the application. Next, I will highlight what results can be achieved and how these can be achieved interpret the results. The entire financial analysis will be compiled for the reporting period since 2006 until 2010.

4.1 Description of the monitored enterprise

First of all, I will describe the business in detail and present its business subject, legal form business and other requirements. To this section I will mainly use Internet resources such as portal justice

4.2 Balance Sheet Analysis and Profit and Loss Statement

As a first analysis, I will use the analysis of absolute indicators, which allows us to examine the balance sheet enterprise and the profit and loss account. Absolute indicators are divided into vertical and horizontal.

In the first part or vertical, I apply this analysis to total assets, total liabilities and statements profit and loss. To do this I will use the input data from the company's financial statements. Individual developments will be with the help of graphical depiction described in detail. Similarly, the horizontal indicators will be analyzed.

4.2.1 Bankruptcy models

Another group consists of bankruptcy models, the first to focus on Altman's indexes. For this company will use the Altman index, which is adapted to the Czech economy and the Altman model 1968.

First of all, I calculate the individual pointers I will load for a better overview of the table. Apply the resulting values to a defined formula and write the result of the equation again into the same table.

The individual results of these equations over the reference period are based on defined intervals help enterprise rank. The results are three and define the business as a credit or business, which is located in the gray zone and lastly as a bankruptcy. Other indices use IN indices. For our needs, we will use IN95, IN99 and index IN05. Indeed, indices are based on ratios. Results of ratios are multiplied by the assigned weight and their products are added together. Result we apply it to prepared intervals to interpret it. By this, we will proceed with all three indexes. Based on the results we will be able to evaluate the financial health of the enterprise.

4.3 Analysis of absolute indicators

Analysis of absolute indicators is key element to build financial analysis. They provide clear summarize of an overview of the business from the point of view of finance and economic activities. (Kislingerová 2010) Primary data for absolute aspects are financial statement. Those statements are divide into two parts: status reports and flow report. Status reports include for example balance sheet, because it is about collecting data for certain period. In second case we discuss quantities which were reach for certain period. To be concrete we are talking about Profit/Loss account or Cash Flow. Those indicators we use mainly for investigate every change in individual items of the financial statements (horizontal analysis) and for investigating difference between those accounting items financial statements for total value. (vertical analysis) (Hrdý,Horová, 2009)

4.3.1 Horizontal analysis

This analysis investigate size of change reporting values for two consecutive accounting periods or generally in the time horizon. With assistance basic or chain index we can find the level of change against previous period. It is important know the data for several periods. We are trying to find data of balance sheet or Profit/Loss statement. Level of value we can express in percentage or in absolute value. (Hrdý, Horová, 2009)

(Absolute value = Value t – Value t-1) (1)

($X_{t+1/t} = X_{t+1} - X_t / X_t \cdot 100$ [%]) (2)

(Xt + 1 / t = change expressed in%) (3)

(Xt = value in the previous period) (4)

(Xt + 1 = value in the current period) (5)

4.3.2. Vertical analysis

At this analysis we describe individually structure of assets and liabilities of company. When we use vertical analysis we are calculating every single percentage component from the top down in columns and not trough partial years. The base is the percentage field of turnover and in the balance sheet figure total value of company assets.

(Sedláček: 2011, page 17)

Balance rules

In this two analysis (horizontal and vertical) we can add 3 balance rules. Balance rules does not have the form of indicators, because they are using mainly as recommendation as should take the form structure of capital.

1) The golden rule of funding says, long-term liabilities should be source of long-term assets. The rule can be justified by that short-term liabilities are financially demanding and they are available only for shorter, limited time.

2) The risk-balancing rule recommends smaller share foreign capital in firm. The more the foreign capital appears the less creditors are willing borrow another money. From other side if the company does not have so much foreign capital, it is not possible use so-called

financial levers. Because of this the own capital becomes more expensive than the company would borrows money.

3) Gold rule is coming from the gold rule funding. Is therefore the opinion that fixed assets should be financed only by own capital and orbit capital by foreign capital. Own capital is for company the most demanding. Because of this reason should be the own capital financed well. (Sedláček, 2011)

4.4. Analysis of ratios

Ratios are main methodical tool for set the financial analysis. It is about numerical relationship between indicators. In real life we calculate it by dividing one or more item, which has correlation from accounting statement between them. Proportional indicators are using mainly because of not time-consuming for creating. Due to those indicators we can compare different enterprises and create an imagine about their competitiveness. Beside that is also use as indicator for predict a development of company and for find out possible weakness which

could cause failure of enterprise. Ratios we can divide into indicators of profitability, liquidity, activity and indebted. (Srpová 2009)

4.4.1 Profitability indicators

Indicator of profitability or profit rate shows us an amount of company profit, which the company approached due to size of sources. It can be done by calculation as the ratio of the gain or loss to a particular quantity, due to this particular quantity was achieved profit like assets, profits or expenditures. This ratio belongs to the most of observing indicators in real life respectively for external users (potential investors), which presents information about a performance of company and his own compering with competition. The ratio inform about the effect, which was approached by force invested capital. The most general type of the pointer is the share income and paid-up capital. However is really important to watch consistency between those quantities. (Růčková 2001)

The most frequent terms for types of earnings:

- EBIT (earnings before interest taxes)- concrete enterprise does not have chance to influence limit of taxes and interest rate
- EBT (earnings before taxes) – management of a company can influence financing which is tied up with level of interest paid, this method surveys the overall management performance
- EAT (earnings after taxes) – management of company has opportunity to influence paying taxes (Fotr, 2011)

a) Return of assets (ROA)

For this quantity is use shortcut ROA (Return of assets) and it is expressing what earnings would be achieved from total assets.

Important criterion is that a numerator should include total amount of earnings. Whereas the total assets include equity and foreign capital, together with tax liability to the state, earnings in numerator should contain yield for owners, creditor and state as well.

Those earnings is characterized by shortcut EBIT. Assuming to achieved the net profit, result would be highly influenced by structure of financing. (Kislingerová 2008)

Formula 1: Calculation of profitability yield

$$\left(\text{ROA} = \frac{earnings\ before\ interest\ taxes\ (EBIT)}{total\ assets} * 100 \right) \qquad (6)$$

Source: Vochozka. 2011, own interpretation

b) Return of equity (ROE)

Indicator of return of own equity shows equity valuation, which was insert into business shareholders or shareholders. Those aspects you can use at capital market, where the investors consider profitability against a risk. Value of the indicator should be at least 10%. (Fotr, 2011)

Formula 2: Calculation return of equity

$$\left(\quad ROE = \frac{Revenue\ (EAT)}{Equity} \quad * 100 \right) \tag{7}$$

Source: Vochozka, 2011, own interpretation

c) Return on sales (ROS)

Return of sales shows the ratio between the net profit and sales. It is concept, which define what value of net profit belongs for a unit of revenue.

Formula 3: Calculation Returns of sales

$$\left(ROS = \frac{Revenue\ (EBIT)}{Sales} \quad * 100 \right) \tag{8}$$

Source: Vochozka, 2011, own interpretation

Shortcut ROS is coming from English return on sales. In the numerator according to Vochozka (2011) is located the profit and in the denominator is located sales company revenue. According this indicator is possible to measure business margins and there is difference according the company revenues.

4.4.2 Activity indicators

Those indicators says what manner company effort activities and if this manner is effective

Enterprises, which buys more supplies than is needed or sell act ineffectively because for a enterprises is very important conversion of inventory for cash. The most frequent we can see according (Růčkková 20111) those indicators:

- Inventory turnover time- it measures days, when the inventory is close tied with company
- Receivables turnover time- it indicates for how long the receivables are paid

- Debt turnover time- it shows when the liability in average are pay out
- Current assets turnover time- it is period before a capital will change from current assets to sales.
- Long term assets turnover time- it measures efficient use long term assets

4.4.3 Indebtedness indicator

Primarily shows rate of utilization of foreign capital in financing the operation of an enterprise and they are mainly focusing on longer time horizon then indicators of activities or liquidity. This indicator are watching mainly a banks, which makes decisions to whom will provide credit. At the same time we can use it as a indicator, on a basement in which we can define level of the risk. Those risk can arise with certain structure of equity and foreign sources. (Růčková, 2011)

4.4.4 Liquidity indicator

Liquidity indicator are significant for enterprises, whereas to point out how they are able to pay liability in the future. Firms, which has good level of liquidity, will have easier purchase conditions. The most enjoyable according Kislingerova (20001) are those indicators:

- **Normal liquidity**: it expresses covering 1KCZK liability current assets and ability to satisfy the creditors, when would be changed at that time the current assets to cash at one day
- **Prompt liquidity** : it measures again ability pay the liability, but currents assets are without the assets with low liquidity, for example supplies. It is mainly about the finances and receivables.
- **Immediate liquidity**: liabilities are immediately paid from a money on an account, out of cash desk or for example due to cheques.

4.5 Credit and Bankruptcy model

Those models are makes for find out if the company is stable and free risk. Due to comparatively analytical methods are able to predict financial health of company. We use for it credit and bankruptcy models.

Mainly bank's institutions are expect responsibility of those analysis for a make a decision if it is not a risk to lend certain capital. Because of this reason are already exist the rating's agencies, which makes evaluation of firms and most of the cases they use Altman's model bankruptcy.

1) Creditworthy models

This model it is belongs to the groups of analysis, which is it use retrospectively and it is makes service to search causes, which were leads to actual state of a company. There is nothing to change, and therefore it is more theoretically we use it to compare with other businesses. (Sedláček, 2001)

2) Bankruptcy models

In other hand those models can predict certain treaty and therefore warn us beforehand. We create an analysis, which can predict approximate development in the next 3-5 years. We calculate them according real date from companies, which have gone bankrupt or were very successful. It is assumed that we can see some obvious symptoms of decline several years before happened the bankruptcy. Because of those symptoms managers can capture a situation of a company. (Sedláček, 2011)

a) one dimension-model: Those models are very quick and simply to create. Only is needed to choose certain ratios. Next step is take a value and transfer on quantity of points, from which we calculate weighted sum. There are exist scale point, which were create by experts and according them we arrange points. Typical example of this model is Kralick test.

b) multidimensional models: to their calculation we need more complicate mathematical and statistical methods for e.g. discriminatory analysis. The most

famous models created by this manner are Altman's index, Index of creditworthiness, Taffler's index or IN indexes. (Sedláček, 2011)

4.5.1 Creditworthy models

Kralick quick test

Kralick quick test is use for fast evaluation of company to reach as accurate as possible result. We have to choose only the indicators, which are not subject of distracting influences and they represents all balance sheet together with statement of profit and loss. Because of this reason we choose one of the four indicators (stability, profitable, liquidity and profit) to create balanced analysis both through the financial analysis and the revenue side of the company. (Kislingerová, 2001)

The result is determining by that every indicator classified according reached results. The final mark is determining as arithmetic mean from each mark from all indicators. (Sedláček, 2011)

Grűnwald model

This model belongs to creditworthy models and it is describing a company if there will be profitability in future. Enterprise is examined on basement of indicators of liquidity and financial stability. (Grűnwald, 2001)

Calculation of individual ratio according Grűnwald (2001) is following:

- Profitable of total capital: (ROA= EBIT/Total assets) (9)
- Profitable of equity: (ROE= EAT/ equity) (10)
- Operational ready liquidity:

  $$\left(\text{PPL}=\frac{(\textit{short term supplies}+\textit{short term financial assets})}{\textit{short term liability}+\textit{short term credit}}\right) \quad (11)$$

- Covering reserves by working capital:

  (CRWC= net working capital/reserves) (12)

- Covering net debts:

$$(\text{CND}= \frac{(EAT)+depreciation}{foreign\ sources-reserves-shorterm\ financial\ equity}) \quad (13)$$

- Interest coverage: (IC= EBIT/ Interest expense) (14)

- Tax rate: (TR= u . (1- d)) (15)

- Financial score= $\frac{1}{6} . (\frac{ROA}{KPH\ roa} + \frac{ROE}{KPH\ roe} + \frac{PPL}{KPH\ ppl} + \frac{CRWC}{KPH\ crwc} + \frac{CND}{KPH\ cnd} + ICKPHIC)$

(16)

4.6 Bankruptcy models

4.6.1 Altman's bankruptcy formula (Z score)

Sometimes is also called this method as Altman's index, which was built on basement discriminatory analysis for which the professor Altman chosen 33 bankrupt companies and 33 unbanked companies. Another step which the Allman made is that he assumed 5 ratios for two variants and he called them as Z score model. It is exist several types of formation of this formula, for example parameters of original Z score 1968 are different from the parameter of the score for limited liability companies. It is calculated according the equation mentioned below and the result is evaluated according the rating scale. (Dluhošová, 2006

Table 1: Altman's Z-score Model 1968

Equation for Altman's Z-Score Model (1968):

$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1X_5$

X_1 = Working Capital / Total Assets

X_2 = Retained Earnings / Total Assets

X_3 = Earnings Before Interest & Tax (EBIT) / Total Assets

X_4 = Market Capitalisation / Total Liabilities

X_5 = Sales / Total Assets

Source: Researchgate.com, Foo See Liang, 2018

4.6.2 Altman's formula of bankruptcy

Table 2: Altman's model for Czech companies

Where:	A = Profit / total assets
	B = Sales / total assets
Zi=3,3*A + 1*B + 0,6*C + 1,4*D + 1,2*E + 1*F	C = Registered capital / total liabilities
	D = Retained earnings / total assets
	E = Net working capital / total assets
	F = Liabilities after a deadline / total assets

Source: Own interpretation

Table 3: The results are compared according to the evaluation Z score criteria table

Altman Z-score	Meaning of the cut-off points
$Z'' \in < 2,6 ; \infty)$	Non- Distress Zones
$Z'' \in (1,1 ; 2,6)$	Grey Zones
$Z'' \in (-\infty; 1,1 >$	Distress Zones

Source: (Vochozka, 2011)

4.6.3 Basic Altman's calculation

Table 4: Basic Altman's formula and parameters

Zi = 0,717*A + 0,847*B + 3,107*C + 0,42*D + 0,998*E	A = (Current assets –sh. term liab. / total as.
	B = Retained earning / total assets
	C = EBIT / Total assets
	D = Registered capital / long + short term liab.
	E = Sales / total assets

Source: Own interpretation

Table 5: Evaluation criteria for basic Altman model

Z ∈ > 2,9	the business is in a good situation
1,2 ∈ < 2,9	gray zone of unresolved results
Z ∈ < 1,2	enterprise is folling to bankruptcy

Source: (Vochozka, 2011)

4.7 Index IN = Trust Index

These IN models were compiled on the basis of an examination of 100 Czech enterprises according to statistical-mathematical methods. They were created by the spouses Inka and Ivan Neumaier, according to them, they also have an abbreviation IN and the number by year when they were created. Also like Altman's bankruptcy formula and IN indices are according to the ratios of activity, yield, debt and liquidity. (Sedláček, 2007)

Index IN95

This index ranks among bankruptcy models and does not work at all with the market value of a firm, so it can be used for the situation of a low-liquid capital market. The Czech economy shows a high level insolvency, and hence the so-called liabilities after maturity are included in this index. This reduces the result of the index and therefore has much more accurate proofing ability estimates of company solvency. (Neumaier, Neumaier, 2002)

Scales W1 to W6 are calculated according to weighted averages by industry type.

IN95 = W(1)*A + W(2)*B + W(3)*C + W(4)*D + W(5)*E - W(6)*F

Table 5: Parameters calculations for IN indexes

A = assets/foreign capital	D = sales/total assets
B = EBIT/interest expense	E = current assets/current liabilities
C = EBIT/total assests	F = liabilities beyond the due date/ Sales

Source: Own calculation

An index that matches the weight of the Czech economy:

$$IN95 = 0{,}22*A + 0{,}11*B + 8{,}33*C + 0{,}52*D + 0{,}10*E - 16{,}80*F$$

Table 6: Evaluation intervals for Index IN95

IN > 2	satisfactory financial situation
1 < IN ≤ 2	gray zone of unmatched results
IN ≤ 1	the company is threatened by serious financial problems

Source: Dluhošová, D.: Finanční řízení a rozhodování podniku: Praha, Ekopress, s.r.o. 2006, ISBN 80-86119-58.0

Index IN99

The IN99 index belongs to creditworthy models that are calculated by the owner. Again, it was used discriminatory analysis that revises the weights of the IN95 index for the Czech economy. Economic gain should only show positive values. Variables A, B, C, D are the same as for index IN99.

$$IN99 = - 0.017 * A + 4.573 * B + 0.481 * C + 0.015 * D$$

Table 7: Evaluation intervals for Index IN99

Evaluation intervals for Index IN99	
IN99 ∈ < 2,070 ; ∞)	Enterprise is profitable
IN99 ∈ (1,590 ; 2,070)	Enterprise is still profitable
IN99 ∈ (1,220; 1,590 >	Gray Zone
IN99 ∈ (–0,684; 1,220 >	Enterprise stagnates
IN99 ∈ (–∞; 0,684 >	Enterprise is not profitable

Source: Vochozka, 2011

Intervals vary: if the result of the equation is higher than 2.07, it means that the company is creating new ones alues for its owners. When the value comes out in the range of 0.684 - 2.07, then this enterprise will not evaluate. But if the result goes below 0.684, it will happen when an enterprise does not make a value for their owners or even destroy them. This index is even more effective than IN95. (Neumaier, 2002)

Index IN01

Index IN01 is based on credit and bankruptcy models and was built on the basis of discriminatory analyzes that included businesses as forming value, just before or after bankruptcy.

IN01 = 0.13 * A + 0.04 * B + 3.92 * C + 0.21 * D + 0.09 * E

Where A, B, C, D, and E correspond again to IN95. The result of the equation is compared by interval: if it is higher than 1.77, an enterprise with a probability of 67% creates another value if it is less than 0.75, so the business does not, but rather, destroy the value and 86% probably goes bankrupt. The last is the interval between 0.75 and 1.77 is the so-called gray zone. (Neumaier, Neumaier, 2002)

Index IN05

In 2005, a new update of the IN01 index changed the length of the interval. If the result of the equation is greater than + 6, so it means that the enterprise is another value. For assuming that the result is less than 0.9, it will happen when its value is destroyed. In the range of 0.9 to 1.6, the result is captured by the so-called gray zone. (Sedláček, 2007)

IN05 = 0.13 * A + 0.04 * B + 3.97 * C + 0.21 * D + 0.09 * E
where A, B, C, D, E are the same as IN95:

Table 8: Evaluation intervals for IN05

IN05 > 1,6	Company is creating another value
IN05 < 0.9	Value of the company is decreasing
IN05 ∈ < 0.9 ; 1.6)	Gray zone of unresolved results

Source: Grünwald Rolf, 1995

5.1 Business description

Business firm:	Hermitage Holdings s.r.o.
Headquarters:	Praha 2, Nové město, Svobodova 1961/1, PSĆ 128 000
Identification number:	27146006
Date of issue:	19.04. 2004
Legal form:	Limited liability company
Subject of business:	- Production, trade, services, innkeeper activities - Leas property, commercial premises
Legislative body:	
Executive director:	Richard Henry Stevart Ness
Business partner:	Barry A. Cullen Initial deposit: 80 000 CZK Pay off. 100% Profit share. 82.48%
Equity:	200 000 CZK

Source: Hermitage Holdings s.r.o. [on-line] [cit. 2016-0310] available from: :https://or.justice.cz/ias/ui/rejstrik-$firma?nazev=hermitage+holdings

5.1.2 Company details

Main purpose of business is innkeeper activities and production. Trade and services. Enterprise is after huge reconstruction, where the factory buildings were rebuilt to hotel and residency. It was big printing house before they rebuilt it.to the hotel. Final inspection was in 25.03. 2009 and since that time the hotel has been running. In the year 20019 was created partnership Residence Hermitage, which the company belongs to this group. At the end of the year 2017 the community owned the hotel building and in the residency building three commercial premises.

5.2. Absolute indicators

In this section, I will analyze the balance sheet of an enterprise using horizontal and vertical analysis. I'll be a focus on analyses of assets, indicating links between reporting components. Finally, I will evaluate what affect the final result. These are dates between 2013 and 2017.

5.2.2 Horizontal analysis

Using this analysis, we can clearly demonstrate individual increments and decreases in individual years, we will determine an analysis of measured values trends. I will divide this chapter into two parts, namely analysis of assets and liabilities analysis. Next part, I apply the analysis to the statement profits and losses of Hermitage Holdings s.r.o. The objective of this analysis is to identify the evolution of assets and liabilities in the years 2013 to 2017

Table 9: Horizontal analysis of assets

(in thousands CZK and with inter-annual difference in percentage)

	Total Assets	Fixed assets	Current assets	Inventory	Merchandise	Short. term receivables
2013	716 295	669 517	46 356	1 509	1 509	13 012
△ %	-0,3%	-2,3%	4,3%	18,8%	18,8%	9,3%
2014	716 538	657 558	58 511	1 518	1 518	16 746
△ %	0,03%	-1,78%	26,20%	5,96%	5,96%	28,69%
2015	708 349	644 422	63 834	1 128	1 128	15 781
△ %	-1,14%	-1,99%	9,09%	-25,69%	-25,69%	-5,76%
2016	724 464	635 238	88 480	1 450	1 450	10 941
△ %	2,20%	-1,42%	38,6	29%	29%	-30,66%
2017	706 277	620 851	88 202	1 528	1 528	22 112

Source: Own interpretation

From the table we can see the percentage change calculated for the 2016 and 2017 comparison shows positive numbers. In the coming years, all year-on-year changes are different but most of them are positive which can illustrate getting higher profit after a large loss after the start of business. We can also observe speed of the rate of return. Furthermore, we can observe that the state of inventory is the same as the state of the goods. We can assume that all inventory consists of all the goods of the enterprise. From the table we can see that the biggest portion of the company is consist of the fixed assets even the annual changes are negative.

Considering the current assets they are not the highest part of company but there are increasing in year-on-year percentage changes. The biggest increase was in year 2014 by 26,2 % and hence 15 329 882 CZK. The objective of this analysis is to identify the evolution of assets and liabilities in the years 2013 to 2017.

Horizontal analysis of Liabilities:

Horizontal analysis of Liabilities

Table 10: Horizontal analysis of Liabilities

(in thousands CZK and with inter-annual difference in percentage)

	Equity	Other sources	Trade payables	Payble to partnes
2013	-5 248	712 688	27 543	31 485
Δ %	-51,35	-1,39	25,02%	-84,28%
2014	9 226	698 043	26 886	47 532
Δ %	-275,80%	-2,05%	-2,38%	50,96%
2015	25 592	673 498	35 849	23 887
Δ %	177,30%	-3,51%	33,33%	-49,74%
2016	51 781	662 847	3 680	23 887
Δ %	102,30%	-1,58%	2,65%	0%
2017	83 775	622 125	34 510	21 997

Source: Own interpretation

From the horizontal development of liabilities, we can observe that the highest loss of quantity of liabilities was in the year 2014. However, since that time the amount of liabilities was increasing every single year. With regard that assets are equal to liabilities, it is clear that the evolution of total liabilities will have the same development as that of total assets. The biggest portion of the liabilities are consist, of other sources which are consistently growing up. In other hand we can observe decreasing of the Trade payable and Payable to partners. We can consider the highest increasing in the section Payable to partners by 50,96% and hence 24 203 294 CZK. (see table 4)

Horizontal analysis of Profit/Loss account

Table 11: Horizontal analysis of Profit/Loss account

(in thousands CZK and with inter-annual difference in percentage)

	Trade Margin	Value added	Operating ProfitLoss	Finanacial Profit/loss	Income tax	Profi/loss for the reporting period after taxation
2013	11 082	7 957	20 878	-15 337	0	5 541 000
Δ %	-52,20%	8,44%	38,19%	-7,16%	-100%	-190,50%
2014	28 948	90 729	31 991	-16 766	751	14 474
Δ %	-62%	14%	53,20%	9,31%	0%	2%
2015	32 732	92 736	36 137	-15 455	4 316	16 366
Δ %	-11,20%	2,21%	12,90%	-7,18%	475%	13,10%
2016	52 378	95 750	45 454	-13 465	5 800	26 189
Δ %	-38%	3%	26%	-13%	34%	60%
2017	64 028	97 700	47 525	-7 618	7 893	32 014

Source: Own Interpretation

The horizontal analysis of the profit and loss account shows the lack of funds. This was reflected in the company mainly in 2013, when the profit fell to its minimum. But with 2014, we can see a significant improvement in values and this proves multiple annual increases in year-on-year changes from 2013. Despite the growth rate of 60% of the 2016 profit, the P/L A. is only (26 189), which is almost two times larger than the original value and nearly 5 times greater than the value in 2013 ..

5.2.3 Vertical analysis

In this section, we will prepare a vertical analysis of assets, liabilities and profit and loss. The aim of this analysis is to define the structure of the balance sheet and the P/LA in the period from 2013 to 2017. It is the relative size of the individual items and in other words, is called percentage analysis of components. We will determine it as a percentage of any indicator with respect to the established base. On the balance sheet, it sets the basis as a whole Assets and Profit and Loss Statement we use sales values.

Table 12: Vertical analysis of Assets

(in thousands CZK and with inter-annual difference in percentage)

	2013	Δ %	2014	Δ %	2015	Δ %	2016	2017
Total assets	716 295	100%	716 538	100%	708 349	100%	724 464	706 277
Fixed assets	669 517	0,93%	657 558	91,70%	644 422	90,90%	635 238	620 851
Intagible fixed assets	3 292	0,45%	0	0	0	0	423	461
Tangible fixed assets	669 517	93,47%	657 558	91,77%	644 422	90,90%	634 815	620 390
Current assets	46 356	6,47%	58 511	8,16%	68 834	9,71%	88 480	85 202
Inventory	1 509	0,21%	1 518	0,21%	1 128	0,15%	1 450	1 528
Long-term payables	10 398	1,45%	10 417	1,45%	19 626	2,77%	22 252	11 680
Short-term liabilities	11 902	1,60%	16 746	2,33%	15 781	2,22%	10 941	22 112
Short-term financial a.	20 897	2,92%	29 380	4%	27 299	3,85%	0	0
Accruals	8 855	1,24%	469	0,06%	93 000	13%	746 000	224 000

Source: Own Interpretation

From the table 12 we can see that a vertical analysis is consist of three main parts. The largest part was Fixed assets, which always occupied over 93% of the total of

hundreds of percent, and therefore the chart is at a considerable distance from other assets.

Next part are current assets where the largest field are Long-term payables. It covers 1-4%. The last part missing up to 100% accrued interest, which is the accrued expense or accrued income and in our business occupied a very small part.

Vertical analysis of Liabilities

Table 13: Vertical analysis of Liabilities

(in thousands CZK and with inter-annual difference in percentage)

	2013	Δ %	2014	Δ %	2015	Δ %	2016	Δ %	2017
Liabilities	716 295	100%	716 538	100%	708 349	100%	724 464	100%	706 277
Equity	-5 248	-73,27%	9 226	1,28%	25 592	3,61%	51 781	7,14%	83 775
Registered Capital	200	2,79%	200	0,02%	200	0,02%	200	0,02%	180
Share p. and capital funds	0	0%	0%	0%	0%	0%	83 999	11,59%	83 999
Profit/loss previous year	-1 412	-19,71%	89 447	12,40%	-74 973	-10,50%	16 366	2,25%	-32 418
Profit/loss current year	5 541	77,36%	14 474	2,01%	16 366	2,31%	26 189	3,61%	32 014
Other sources	712 688	90,60%	698 043	97,40%	673 498	95,07%	662 847	91,40%	622 125
Rezerves	15 339	2.14%	20 385	2.84%	24 567	3,48%	25 571	3,52%	36 000
Long-term payables	31 901	4,45%	47 953	6,69%	37 011	5,22%	566 681	78,20%	510 406
Short-term payables	50 765	7,08%	32 822	4,58%	49 337	6,96%	70 595	9,70%	75 719
Bank loans	614 683	85,80%	596 883	83,30%	562 583	79,40%	0	0%	0
Accruals	8 855	1,23%	9 269	1,29%	9 259	1,30%	9 327	1,28%	377

Source: Own interpretation

The structure of liabilities is made up of two components: equity and foreign sources. As we can see in table 7. From the same table we can observe that the Other sources were always higher than Equity and part of the Other sources are Reserves, Long-term payables, Short-term payables and bank loans. Banks loans accumulate in the year 2013 value 614 683 000 CZK (see table 8) and it shows 85,8 % from all Liabilities.

Vertical analysis of Profit and loss statement (in thousands CZK)

Profit and Loss statement	2013	2014	2015	2016	2017
Total revenues	133 684	145 374	154 694	165 457	187 402
Total expenses	128 143	133 090	138 328	139 286	155 888
Profit or Loss for the entity	5 541	14 474	16 366	26 189	32 014

Source: Own interpretation

5.3. Altman calculation for Z-score

Table 13: Calculation of Altman's Z- score formula

Year	2013	2014	2015	2016	2017
Profit/ assets	0,30	2,02	2,31	3,61	4,53
Sales/assets	1,84	0,24	0,22	0,23	0,25
Registered c./ Other sources	-0,06	0,11	0,30	0,08	0,14
Retained earnings/assets	0,00	0,01	0,01	0,01	0,01
Net working capital/assets	-0,01	0,04	0,02	0,00	1,34
Liabilities after a deadline/assets	0,08	0,03	0,03	0,02	0,12
Zi	2,87	7,06	8,09	12,23	17,04
Results	Non-distress Zones	Non-distress Zones	Non-distress Zones	Non-distress Zones	Non-distress Zones

Source: Own interpretation

For this calculation it was necessary to know all the above parameters, which I then put into equation for Czech companies. The resulting values have always been higher than the 2,6 rating criterion, (see the table 3) and therefore for all years we can say that this was a creditworthy business. Of course, the return on investments after the hotel was down in 2009, which contributed to Zi score, was reduced to zero. But the result of the Zi Score is still more than 0.27 than the benchmark, so there is no threat that the business could fall into the so-called gray zone. Since the post-term commitments are internal. I could replace them short-term liabilities. From the table, we can also track the development of the share of foreign and equity, which was initially at a minus value, but since then the rising yields have been rising. Due to Altman's formula Z score I can conclude that the company is creditworthy in all periods. Unfortunately, the unpaid liabilities can not be distinguished from the balance sheet. For this reason, I used short-term commitments. The company achieved the highest credit ratings in 2017, at (17,04) On the contrary, the closest gray zone was once again in the weakest year of the company, namely in 2013.

5.3.1 Altman's basic calculation

Table 14: Altman's basic calculation

Indicator year	2013	2014	2015	2016	2017
cur. A. - shr. t liab. / total assets	0,00	0,03	0,01	0,00	0,01
Retained earnings/assets	0,00	0,01	0,01	0,01	0,01
EBIT / total assets	1,30	2,02	2,31	3,61	4,53
RC / long + short t. liab.	-0,03	0,05	0,39	0,03	0,06
Sales / total assets	0,18	0,24	0,22	0,23	0,25
Zi	1,45	2,34	2,94	3,88	4,86
Results	Gray zone of unmatched r.	Gray zone of unmatched r.	Good situation	Good situation	Good situation

Source: Own interpretation

The resulting index is compared to the values of the (table 5). Based on the Altman Index for Limited Liability Companies, we came to the conclusion that the company is in good standing because the resulting values are higher than 2,9. However, the exception remains the year 2013 and 2014 when the company reached the lowest values of 1,45 and 2,34 was located in the so-called gray zone.

6. Indexes IN

6.1. Index IN95

Parameters for Index IN95

Indicator / year	2 013	2 014	2 015	2 016	2 017
Asset / other sources	1,01	1,03	1,05	1,09	1,14
EBIT / interes expense	0,43	1,09	1,69	3,18	4,20
EBIT/ assets	0,01	0,02	0,03	0,04	0,06
Sales/ assets	0,18	0,24	0,22	0,23	0,25
Current a. /sales	0,91	1,78	1,29	0,98	1,13
IN95 result	2,54	4,16	4,28	5,52	6,78
Total evaluation	satisfactory situation	satisfactory situation	satisfactory situation	satisfactory situation	satisfactory situation

Source: Own interpretation

This is a bankruptcy model, there is no indicator in which would be the market value of the firm. So we can evaluate it under conditions of little liquidity capital market. For the evaluation of intervals see the (table 6). From the table above the IN95 index is in a satisfactory financial position in all years. It follows that the intervals in all periods are higher than value 2. We can conclude that none of the year tend to follow to serious financial problems.

6.2. Index IN99

Parameters for Index

Indicator /year	2 013	2 014	2 015	2 016	2 017
Assets/ other s.	-0,02	-0,02	-0,02	-0,02	-0,02
EBIT / assets	0,01	0,02	0,03	0,04	0,06
Sales / assets	0,84	1,08	0,99	1,03	1,16
Current l. / shr. ter. l.	0,44	0,86	0,62	0,47	0,54
IN99 result	**1,27**	**1,94**	**1,63**	**1,53**	**1,74**
final evaluation	Grey zone	Enterprise is still profitable	Enterprise is still profitable	Enterprise is still profitable	Enterprise is still profitable

Source: Own interpretation

In the result above we can observe that the enterprise is almost in same position as in IN95 except the year 2013. (compare the results with table 7). From my point of view the year 2013 fell in Grey zone because of low amount of earnings and high amount of total liabilities.

6.3. Index IN05

Parameters for index IN05

Indicator / year	2013	2014	2015	2016	2017
Assets / other s.	0,13	0,13	0,14	0,14	0,15
EBIT/ interes expense	0,02	0,04	0,68	1,27	1,68
EBIT / assets	0,03	0,08	0,12	0,18	0,22
Sales / assets	0,39	0,05	0,05	0,05	0,05
Current as. / short. term l.	0,82	0,16	0,12	0,09	0,10
IN05 result	1,39	0,47	1,09	1,72	2,21
Final evaluation	Grey zone of unrolved resluts	Value of the company is decreasing	Grex zone of unresolved results	Company is creating another value	Company is creating another value

Source: Own interpretation

This is the latest version of the Neumaier index. The index is an improved way to IN01. As the results above there is clear that company was on grey zone in year 2013 and 2015. (see the evaluating criteria in table 8). The enterprise was not competitive too much in the year 2014 mainly because of huge investment to renovate some parts of hotel, purchase of new equipment and payed out liabilities new co-owners. We can also observe from the table above that in the year 2014 the company was not creditworthy but since that time the situation of the company was every single getting better.

7. Comparison of company of three type of profitability with Czech market

I will make short comparison of company Return of assets, Return on equity and Return on Sales. For compared this indicator I selected section accommodation, catering and hospitality. In the following table you can see all three type of Return for the company Hermitage Holdings s.r.o. and Czech market. For the calculations see the equation num. (6), (7), and (8)

Table: 15 (Profitability for the year 2016)

Hermitage Holsings .s.r.o.	2016
ROA	4,40%
ROE	51%
ROS	19,50%

Source: internal information from Company, Own interpretation

Table: 2016 (Profitability for the year 2016)

Czech Market	2016
ROA	21,60%
ROE	32,53%
ROS	46%

Source: Ministersvo průmyslu a obchodu for CR, Own interpretation.

8. Discussion of results

In this bachelor thesis I will conclude results of the financial analysis, which were approached after application of individual analyzes in monitored period 2013 – 2017 at the company Hermitage Holdings s.r.o.

The company has been renovated in this period and it had evidently influence on financial health of the company. All the results of applied analyzes are clearly shows indebted period of the enterprise. It was started after year 2012, when the enterprise begun loose the financial stability and is some part lag behind. In the year 2015 after the period of decline of economic crisis the company started being profitable again. Due to this change there could be some certain actions by owners which they proposed. From the analyzes follows that the company was not significantly ready and by this reason I would recommend to create regular, qualitative financial analyzes. Thanks to financial analyzes will be the enterprise capable predict possible risks, and hence prevent them.

As first analyze, which I made in this work is analysis of absolute indicators. which allows us to examine the balance sheet enterprise and the profit and loss account. We measured those results by the vertical and horizontal analysis, which are part of absolute indicators. By the Horizontal analysis was found that total assets reacted flexibly to the economic situation. Year-on-year additions were both positive and negative but what is important is that the positive year-on-year increments prevailed. If we look at negative year-on-year increases, then in 2016 there was a visible improvement. In contrast, total liabilities reacted differently. For example, foreign capital declined exponentially with the exception of 2014, when there was a turning point and only decreasing since then, while equity did not change between 2013

and 2017 the value and in the meantime we could see a considerable increase, but with the onset of 2014 did not change. The trade payables item had the same growth and decline trend as inventories and goods except for 2015 and 2016 when stocks fell slightly.

Furthermore, I created a table of profit and loss statement, where all monitored indicators gradually increased with the exception of financial result. In 2016, we can see a rebound in profits that were almost 6 times higher than in 2013. By vertical analysis it was found that tangible fixed assets form around 90% of total assets. The missing part of 1 to 10% are current assets. At first, Current assets tended to grow, reaching its maximum of CZK 88,480,000. The next table is the liabilities that it consists of two main groups: own and foreign sources, having both subgroups. As the most significant part of the equity has always been the result of the economic results of temporary years, whose value is between 2% and 4% of total liabilities. On the other hand, foreign capital predominated bank loans with a percentage of 80% to 85%. Throughout the period, equity remained unchanged with the exception of 2017. In 2013, the smallest difference between equity and equity was measured. The last table I created for Vertical Counts was a profit and loss statement in which we could see the size of revenues and costs and after their deduction and profit. In 2013, the values were the lowest and at the same time costs and revenues almost equaled and the profit was only 5 541 000 CZK. In next step monitored the financial health of the company with the help of Altman's formula for the Czech economy. The results show that the company maintained good financial health in 2013-2017. Business the credit score was higher, as the Z score was higher than 2.6 and almost tripled in 2014 and even up to six times in the last period. The worst period was for the enterprise in 2013, but not in the gray zone, for which the value is below 2.6. Business was in the monitored period creditworthy. When we applied the basic Altman formula we came almost same conclusion, except for 2013 and 2014 When the business fell to the so-called gray zone. The company would have had in this period reduce short-term liabilities and increase reserves. Then I analyzed the company using the IN95 index. For all years except for 2013, we came out very satisfactory situation, when the values were higher than the criterion 2 in three and three times in 2017. When applying the IN99 index, which determines whether the enterprise

value, it was clear that in 2014 to 2017 it created another value. However, again as a critical year in 2013, when the company rather value. On the other hand the company did not fall into the criterion in its period, when it is rather destroyed than it is. In the IN05 index, we found that in 2016 to 2017 he company generated another value, however, in 2013 and 2015 the company fell into gray zones. The critical situation was in 2014 when company value was decreasing. This was mainly due to the large renovation of the hotel's premises and the purchase of new equipment. This was largely due to the poor timing and extension of construction work, which then constrained hotel operations in high season.
At the last part I made short comparison of three type of profitability and compared with Czech Market at section accommodation, catering and hospitality. According to Fotr, (2011) the value of the indicator should be at least 10%. All testing parameters except one (ROA) were profitable, mainly the ROE which is higher than profitability in total for Czech market. The ROA indicator had low value due to low amount of trade margin.
In general, I can conclude that the company Hermitage Holding s.r.o. is at very good financial situation. It reached its highest values in 2016 and 2017. Even there was one critical year because of bad setting of time and renovation of hotel building this situation did not have serious impact in the future.

8.1. Solution suggestions

Given that the company achieved relatively good results, I can say that you would the company should maintain its current market position. Therefore, to prevent similar years like the year2013 and 2014, the company should regularly produce a detailed financial analysis. This financially in an undemanding and very effective way, it is possible to prevent risks. Furthermore, I would recommend that the company invest more, for example, in securities of other companies. And make up more reserves because the financial part of some financial results was negative. It may be worth it the result of achieving higher profits, with minimum costs not used for production. I would recommend to the company to increase the amount of equity, since 2013 the values of equity were very low

9. Conclusion

As a goal, I set out to prepare a financial analysis of Hermitage Holdings s.r.o. for which I counted the indicators for the five-year period from 2013 to 2017. In thesis I used the domestic and foreign literature dealing with financial analysis. In theoretical section I have given the definitions and data needed to compile all the partial calculation from which it is composed financial analysis. For analysis calculation I use the source of the input data in which the data was found in balance sheet and income statement.

I put these particular figures into formulas and proceeded accourding to the methods given in the theoretical part and in the work methodology. So I made the practical part financial analysing of Hemitage Holdings s.r.o. First, I determined absolute indicator from the balancer sheet and profit and loss statement, which are mentioned in horizontal and vertical analysis. From these table I could well to deduce percentage increase or on the contrary, year-on-year decreases.

A substantial part of my bachelor thesis consist of bankruptcy and creditworthiness models, thanks to which we can quickly learn about the financial health of the company. As another part I do the calculation Altman index and IN indexes. The last part is a discussion of the results of my bachelor thesis, where I describe the resulting values and propose possible measures for the company, which could lead to reduction of the risk of damage and cost savings, which arise in eliminating unnecessary mistakes. In conclusion. the goal of the work was fulfilled.

7. References

BREALEY, Richard a Stewart Myersa Franklin Allen, 1991, Principles of Corporate Finance -Fourth Edition, New York, NY: McGraw Hill, 978-00-700-7405-7.

RŮČKOVÁ, Petra. Finanční analýza: metody, ukazatele, využití v praxi. 5., aktualizované vydání.Praha: Grada Publishing, 2015, 152 stran. Finanční řízení.ISBN 978-80-247-55342.

RŮČKOVÁ, Petra. Finanční analýza (4. aktualizované vydání)., vydání. Praha: Grada Publishing, 2011, 143 stran. Finanční řízení. ISBN 978-80-247-3916-8.

SCHOLLEOVÁ, Hana. Ekonomické a finanční řízení pro neekonomy. 2., aktualiz. a rozš. vyd. Praha: Grada, 2012, 268 s. Expert (Grada). ISBN 978-80-247-4004-1.

VOCHOZKA, Marek. Metody komplexního hodnocení podniku. 1. vyd. Praha: Grada, 2011, 246 s. Finanční řízení. ISBN 978-80-247-3647-1.

SEDLÁČEK, Jaroslav. Finanční analýza podniku. 2., aktualiz. vyd. Brno: Computer Press,2011. ISBN 978-80-251-3386-6.

MAŘÍK, Miloš. Metody oceňování podniku: proces ocenění - základní metody a postupy. 3., upr.a rozš. vyd. Praha: Ekopress, 2011. ISBN 978-80-86929-67-5.

GRÜNWALD, Rolf. Finanční analýza pro oceňování podniků. Vyd. 1. V Praze: Vysoká škola ekonomická, Institut oceňování majetku-Znalecký ústav, 2004. ISBN 80-245-0700-5.

KISLINGEROVÁ, Eva, Oceňování podniku. 2. přepracované a doplněné vydání. Praha: C.H.Beck, 2001. 367 s. ISBN 80-7179-529-1.

KISLINGEROVÁ, Eva, Hnilica, Jiří, Finanční analýza: krok za krokem, 2. vydání, Praha: C.H.Beck, 2008. 135 s. ISBN 978-80-717-9713-5.

SEQUENS, Luděk. Analýza vlastností Tafflerova bankrotního modelu. Plzeň, 2007. 77 s. Bakalářská práce na Fakultě aplikovaných věd Západočeské univerzity v Plzni. Vedoucí bakalářské práce Ing. Pavel Novy, PhD.