# Czech University of Life Sciences Prague Faculty of Economics and Management

# **Department of Economics**



# **Diploma Thesis**

**Economic Analysis of Chosen Brewery** 

Bc. Ilya Pavlov

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#### CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

# **DIPLOMA THESIS ASSIGNMENT**

Ilya Pavlov

**Economics and Management** 

Thesis title

**Economic Analysis of Chosen Brewery** 

#### **Objectives of thesis**

The main goal of the diploma thesis is to evaluate the economic analysis of the Kynšperk brewery in the period 2011-2015. The most important findings concerning the economic situation of the brewery are summarized in the end and made some recommendations, which should lead to improvements of this business entity.

#### Methodology

The theoretical part will be based mainly on studied special/scientific literature and sources, that should summarize the basic and necessary information about methods used, history of brewing and the current situation on the Czech beer market.

In the practical part the current situation of this business entity will be analysed through the application of selected economic and financial methods, using the annual financial statements – balance sheets from years 2011-2015.

#### Will be sused:

- Financial analysis methods
- Internal documents analysis
- Study of scientific literature

#### The proposed extent of the thesis

60 - 80 pages

#### Keywords

: Economic analysis, financial analysis, horizontal analysis, financial ratios, brewery, Kynšperk brewery, vertical analysis.

#### **Recommended information sources**

COLLET, Nick; SCHELL, Charles. Corporate Credit Analysis. 2nd ed. Euromoney Books, 1996. ISBN 185564303

FABOZZI, Frank J, PETERSON DRAKE, Pamela and HABEGGER, Wendy D. Financial management and analysis. 2nd edition. Hoboken: Wiley, 2003. ISBN 04-714-7761-3.

Goldhammer, Ted (2008), The Brewer's Handbook, 2nd ed., Apex, ISBN 978-0-9675212-3-7.

JACKSON, Michael. World guide to beer. 1st edition. New York: Random House Incorporated, 1978, ISBN 978-034-5274-083.

Ted Goldammer (2000). The Brewers Handbook. Apex Pub. ISBN 0-9675212-0-3

WAHLEN, James M., BAGINSKI, Stephen P., BRADSHAW, Mark T., and STICKNEY, Clyde P. Financial reporting, financial statement analysis, and valuation: a strategic perspective. 7th edition. Mason, Ohio: South-Western Cengage Learning, 2011, ISBN 978-0324789-416.

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#### The Diploma Thesis Supervisor

Ing. Tomáš Maier, Ph.D.

#### **Supervising department**

**Department of Economics** 

Electronic approval: 28. 3. 2017

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 28. 3. 2017

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 30. 03. 2017

Declaration
I declare that I have worked on my diploma thesis titled "Economic analysis of chosen brewery" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any their person.
In Prague on 31 <sup>st</sup> March 2017

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# **Economic analysis of chosen brewery**

# Summary

The diploma thesis deals with the economic analysis of the Kynsperk brewery in the period 2011 to 2015.

The thesis is divided into two parts, theoretical and analytical. The theoretical part describes the brewing industry in the Czech Republic, production of beer, its history, economic analysis, financial analysis methods and characteristics of the industry.

The analytical part deals with the Kynsperk brewery. That part describes a brief history of the brewery and analyzes the current situation and business activities of the brewery. To assess the economic performance of the company are used methods of financial analysis: horizontal and vertical analysis of financial statements, calculation of absolute indicators, ratios, financial ratios and Altman Z-score model.

The most important findings concerning the economic situation of the brewery are summarized in the end and made some recommendations, which should lead to improvements of this business entity.

**Keywords:** Economic analysis, financial analysis, horizontal analysis, financial ratios, brewery, Kynšperk brewery, vertical analysis.

# Economická analýza vybraného pivovaru

#### Souhrn

Diplomová práce se zabývá ekonomickou analýzou Kynšperského pivovaru v období 2011 až 2015.

Práce je dělena na dvě části, teoretickou a analytickou. Teoretická část popisuje pivovarský průmysl v České Republice, výrobu piva, jeho historii a postavení, východiska ekonomické analýzy a metody finanční analýzy, a charakteristiku odvětví

Analytická část práce se zabývá Kynšperským pivovarem. Tato část zachycuje stručný přehled historie pivovaru a analyzuje současnou situaci a podnikové aktivity pivovaru. K posouzení ekonomické výkonnosti podniku jsou využity metody finanční analýzy a to pomocí horizontální a vertikální analýzy účetních výkazů, výpočtů poměrových ukazatelů, finančních ukazatelů a Altman Z-score modelu.

Na základě zjištěných výsledků jsou v závěru shrnuty nejpodstatnější poznatky týkající se ekonomické situace pivovaru a navržena doporučení, která by měla vést ke zlepšení zjištěného stavu.

**Klíčová slova:** Ekonomická analýza, finanční analýza, horizontální analýza, finanční ukazatele, pivovarnictví, Kynšperský pivovar, vertikální analýza.

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#### 1. Introduction

The main aim of every enterprise is to transform inputs into outputs. Inputs are the external environment, which converts into everyday life of the company. It consists of people, capital, managerial and technical skills and knowledge. The analysis is an important part of all phases of the management process, particularly in planning and controlling, nalysis can reveal in what situation the business is now, what was the previous development, or what problems it faces. On that basis, you can use trends to predict in what direction further development of the subject will go.

All enterprises operate in a competitive environment in which they must operate not only with trade but also with finance. To have it all under the controll is necessary to have good accounting system, that could tell all about the financial situation of the entity, its revenues and expenses, expenditures, assets etc. Accounting, particularly for external users, serves as the basis for preparation of financial analysis basis to carry out financial decisions that concern such a changes as in the structure of assets, inventory management or finance management.

Business owners, managers, business partners, investors, government agencies, banks, foreign institutions, employees, competitors, brokers, auditors use financial analysis as a basis for assessing the status of the company and also for decision making.

Information for decision making and analysis gives us the financial analysis by processed results, methods or ratios. It is desirable to compare the obtained values of the indicators in time in order for the numbers of results to be more informative. The essence of financial analysis is not an application of all possible methods, analyzes and indicators, but such a combination of them, that brings the most informative value to company's management.

In that diploma thesis is a financial analysis and evaluating of the results of the selected company from the Karlovarsky region, which is the Kynsperk Brewery. This company belongs to small breweries whose production volume not exceed 10 ths. hl of beer per year. Evaluation of the current situation of the Kynsperk brewery and determine how such a small brewery could operate within suc a competitive beer market, which belongs particular to the four largest breweries.

Evaluation period for the company is 2011 to 2015. Economic analysis is done from the perspective of an external analyst, analysis is done according to available data, in particular the basic financial statements and other public resources.

# 2. Objectives and Methodology

The aim of the thesis, that is based on selected methods of economic, especially financial analysis, to get information of recent developments and the current economic situation of the selected company in brewing industry, which is the Kynsperk brewery from Kynšperk nad Ohří, and after the application of financial analysis and comparison of the results with the industry follows the evaluation of the economic situation . It also includes suggestions and following recommendations for improving the financial situation of the selected brewery.

The diploma thesis is divided into two main parts, the theoretical part and analytical part. The theoretical part summarizes all the necessary information that is useful for the part that follows. The basis for the theoretical part was special literature.

In the theoretical part is introduced economic analysis, including economic/financial indicators. Here are the definitions of selected financial analysis, complemented by its overall interpretation. Than the methods of economic analysis are specified. There are described all ratios necessary for analysis - absolute, differential and financial ratios, and bankruptcy model - Altman Z-Score model. Within different methods are given the necessary formulas. Than the whole beer industry is characterized.

In the analytical part development of the Kynsperk brewery and the current situation of that business entity are analyzed. Analytical, compative and syntetic methods are mainly used. Analytical part of the diploma thesis outlines the profile of the analyzed company, the basic information - its history and present situation, product portfolio.

Than there is an analysis of the balance sheet, profit and loss through the analysis of absolute indicators. Here are also analysed the results of the financial analysis. For the diploma thesis elaboration the main sources of information are the "Situáční a výhledová zpráva: chmel a pivo" by the Ministry of Agriculture of the Czech Republic, Brewing Calendars by the Research Institute of Brewing and Malting, Annual reports of the Kynsperk brewery and other relevant literature.

#### 3. Literature review

#### 3.1. Absolute ratios

Among the most common tools in financial analysis are horizontal and vertical analysis.

#### Horizontal analysis

Performing horizontal analysis or other words time series analysis we can follow the development of the examined variables over time, particularly in relation to the previous period and make a comparison. Application of the differences we can get answers to questions about in how many percent compared with last year have changed the balance of individual items (in case of indexation) or in absolute terms (in case of difference).

Due to the greater explanatory power will be used a chain index, which expresses the change in the individual items of a given year to the previous year.

#### Vertical analysis

Vertical analysis technique or percentage analysis explore the structure of the balance sheet, income statement and statement of cash flows related to a variable. Performing vertical analysis is calculated as a percentage of the balance sheet items on total assets and items from income statement. Vertical analysis is not affected by inflation.<sup>2</sup>

Selecting the amount depends on the subject of analysis. When analyzing the balance sheet will be chosen the individual balance sheet items, that will reflect how many percent will participate in total assets.

 $^1$  KISLINGEROVÁ, Eva. Finanční analýza: krok za krokem. 1. vyd. Praha: C.H. Beck, 2005. C.H. Beck pro praxi. ISBN 80-717-9321-3.

<sup>&</sup>lt;sup>2</sup> VOCHOZKA, Marek a Pavel MARINIČ. Metody komplexního hodnocení podniku: jak měřit, vyhodnocovat a využívat informace o podnikové výkonnosti. 1. vyd. Praha: Grada, 2011. Finanční řízení. ISBN 978-80-247-3647-1.

#### 3.2. Differential ratios

Net working capital is a calculation of liquidity, which measures the firm's ability to pay its current liabilities with current assets. This measurement is necessary, important to the management, suppliers, because it shows the company's short-term liquidity, as well as management's ability to effectively utilize their assets.

NWC focuses on short-term liabilities, such as trade debts, obligations and notes contractor, which must be repaid in the current year. It only makes sense to suppliers and creditors wanted to see how much long-term assets, assets that are expected to be converted into cash in the current year are available to pay for obligations that become due in the next 12 months.

If the company can not meet its current obligations with its current assets, it will be forced to use it long-term assets or income producing assets to pay off its current liabilities. This may result in reduced operations, sales, and may even be indikátorem serious organizational and financial problems.<sup>3</sup>

#### 3.3. Financial ratios

Financial indicators are a mathematical comparison of the financial statements of accounts or categories. These relationships between accounts in the financial statements to help investors, lenders and the company's internal management, to understand how well the company performs and areas in need of improvement.

Financial indicators are the most common and widely used tool for analyzing the business financial position. The coefficients are easy to understand and easy to calculate. They can also be used to compare different companies in different industries. As the ratio is simply mathematically based on a comparison of proportions, large and small Enterprises can work relationships to compare their financial information. In a sense, financial indicators do not take into account the size of a company or industry. Only raw calculations of financial position and performance.

Coefficients allow you to compare companies in all industries, large and small, to determine their strengths and weaknesses. Financial indicators are often divided into seven

<sup>&</sup>lt;sup>3</sup> PALEPU, Krishna G. and HEALY, Paul M., Business analysis: using financial statements. 4th edition. Mason, Ohio: South-Western Cengage Learning, 2008, ISBN 03-2430292-4.

main categories: liquidity, solvency, efficiency, profitability, market development prospects, investment of borrowed funds and coverage.

#### 3.3.1. Profitability ratios

Profitability ratios are ratios of the final effect achieved by the company as the output, to comparative basis as the input. The basis can be either asset, liability or others.

To identify and measure the profitability are used following ratios:

#### ROA = Net income/ Total assets (3.1)

This indicator measures the gross production power of company's assets before taxes and financial costs. It is useful when comparing companies with different tax conditions and with different proportions of debt in financial resources<sup>4</sup>.

#### ROE = Net income/ Equity (3.2)

The relative indicator of the effectiveness of the activity. One of the financial ratios that is included in the group of coefficients of profitability. Shows the return on investment of shareholders in terms of accounting profit.

#### ROS = Net income/ Sales (3.3)

Return of sales is an indicator of the company's pricing policy and its ability to control costs. Differences in competitive strategies and product lines cause a significant variety of sales profitability values in various companies. It is often used to assess the operating efficiency of companies. However, it should be borne in mind that with equal values of revenue, operating costs and profit before tax for two different firms, the profitability of sales can vary greatly, due to the impact of interest payments on net profit.<sup>5</sup>.

<sup>&</sup>lt;sup>4</sup> PALEPU, Krishna G. and HEALY, Paul M., Business analysis: using financial statements. 4th edition. Mason, Ohio: South-Western Cengage Learning, 2008, ISBN 03-2430292-4.

<sup>&</sup>lt;sup>5</sup> PALEPU, Krishna G. and HEALY, Paul M., Business analysis: using financial statements. 4th edition. Mason, Ohio: South-Western Cengage Learning, 2008, ISBN 03-2430292-4.

# 3.3.2. Liquidity ratios

An economic term that denotes the ability of assets to be quickly sold at a price close to the market price. Liquid - circulating in money.

Usually distinguish highly liquid, low liquid and illiquid values (assets). The easier and faster it is possible to exchange an asset taking into account its full value, the more liquid it is. For the goods, liquidity will correspond to the speed of its sale at a nominal price, without additional discounts.

#### **Current ratio = Current assets/ Current liabilities** (3.4)

The ratio reflects the company's ability to repay current (short-term) liabilities at the expense of only current assets. The higher the indicator, the better the solvency of the enterprise. Taking into account the degree of liquidity of assets, it can be assumed that not all assets can be realized as a matter of urgency. Normal is the value of the coefficient from 1.5 to 2.5, depending on the industry. The value below 1 indicates a high financial risk associated with the fact that the company is unable to sustainly pay current accounts. A value of more than 3 may indicate a non-rational structure of capital.

# Quick ratio = (Current assets – Inventory)/ Current liabilities (3.5)

A financial ratio, that equals to the ratio of highly liquid current assets to short-term liabilities (current liabilities). The source of the data is the balance sheet of the company similarly to the current liquidity, but the inventory does not take into account the inventories, since when they are forced to sell, the losses will be the maximum among all working capital.<sup>6</sup> A financial ratio equal to the ratio of highly liquid current assets to short-term liabilities (current liabilities).

Cash ratio = (Cash + cash equivalents + invested funds)/ Current liabilities (3.6)

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<sup>&</sup>lt;sup>6</sup> GRAHAM, John and SCOTT, Smart. Introduction to corporate finance. 3rd edition. Mason, Ohio: South-Western Cengage Learning, 2012, ISBN 978-111-1222-284.

Financial ratio, that equal to the ratio of cash and short-term financial investments to short-term liabilities (current liabilities). The source of the data is the company's balance sheet similarly, both for current liquidity.<sup>7</sup>.<sup>8</sup>

#### 3.3.3. Activity ratios

Activity ratios measure the firm's ability to convert different accounts into its balance sheets into cash or sales. Activity ratios measure the relative effectiveness of a firm based on the use of its assets, leverage or other similar balance sheet items and are important in determining whether the company's management is doing a fairly good job of generating revenue and cash from its resources.

#### Total assets turnover = Total sales/ Total turnover (3.7)

The Assets turnover ratio, or resource return, is an indicator that reflects the efficiency of the use of assets. It is used to analyze how effectively an enterprise manages its assets, whether the total number of assets in the firm's balance sheet is sufficient, large or small, relative to current or projected sales volumes.

In the case of insufficient investment in assets, as a rule, sales volumes are reduced, which also reduces free cash flow and stock prices<sup>9</sup>.

#### Inventory turnover = (Inventory/ Total sales)\*365 (3.8)

The inventory turnover ratio is the ratio of the cost of production sold during the reporting period to the average value of reserves in this period. This factor shows how many times the average inventory of the enterprise is sold over a certain period of time <sup>10</sup>.

#### Average collection period = (Total recievables/ Total sales)\*365 (3.9)

<sup>&</sup>lt;sup>7</sup> GRAHAM, John and SCOTT, Smart. Introduction to corporate finance. 3rd edition. Mason, Ohio: South-Western Cengage Learning, 2012, ISBN 978-111-1222-284.

<sup>&</sup>lt;sup>8</sup>Liquidity ratios. Avaliable at: http://www.investopedia.com/university/ratios/liquidity-measurement/ <sup>9</sup> FABOZZI, Frank J, PETERSON DRAKE, Pamela and HABEGGER, Wendy D. Financial management and analysis. 2nd edition. Hoboken: Wiley, 2003, ISBN 04-714-7761-3.

<sup>&</sup>lt;sup>10</sup> FABOZZI, Frank J, PETERSON DRAKE, Pamela and HABEGGER, Wendy D. Financial management and analysis. 2nd edition. Hoboken: Wiley, 2003, ISBN 04-714-7761-3.

The average collection period is an approximate period of time during which an enterprise should receive payments in terms of receivables. The average collection period is calculated by dividing the total receivables by the total net sales for the period and multiplying by 365 -days in a year.

#### Creditors payment period = (Cuttent liabilities/ Total Sales)\*365 (3.10)

The indicator measures the average time that is necessary to the company to settle debts with suppliers (accounts payable). Thus, among other things, gives information about payment habits, as well as whether the business is making full use of available trade credit. In other words, if we do not pay too early<sup>11</sup>.

#### 3.3.4. Debt ratios

The debt ratio is a financial ratio that shows the percentage of the company's assets that are provided through debt. This ratio of total debt (the amount of current liabilities and long-term liabilities) and total assets (the amount of current assets, fixed assets and other assets, such as "goodwill").

#### Debt ratio = Total liabilities/ Total assets (3.11)

Is the ratio of total debt to equity, measures the percentage of funds provided by creditors. Usually, when calculating this ratio, the total amount of liabilities is considered, which includes both short-term liabilities and long-term liabilities. Sometimes only the amount of long-term liabilities are used<sup>12</sup>.

#### **Interest covarage period = EBIT/ Interest expense** (3.12)

The interest coverage ratio is a debt ratio and profitability ratio used to determine how easily a company can pay interest on outstanding debt. The interest coverage ratio may be calculated by dividing a company's earnings before interest and taxes (EBIT)

<sup>&</sup>lt;sup>11</sup> GRAHAM, John and SCOTT, Smart. Introduction to corporate finance. 3rd edition. Mason, Ohio: South-Western Cengage Learning, 2012, ISBN 978-111-1222-284.

<sup>&</sup>lt;sup>12</sup> HEITGER, Dan L, M MOWEN, Maryanne and HANSEN, Don R. Fundamental cornerstones of managerial accounting. Mason, Ohio: Thomson/South-Western, 2008, ISBN 978032-4378-061

during a given period by the amount a company must pay in interest on its debts during the same period<sup>13</sup>.

# 3.4. Bankruptcy model

Bankruptcy models are designed to inform the user of the financial analysis of whether the company in the foreseeable future threats bankruptcy. It comes from the fact that the company, which is in bankruptcy threat, has a certain amount of time before that symptoms, that are typical for bankruptcy, have happen. The most common problems include problems with liquidity, with the amount of net working capital and the profitability of the total invested capital. To a group of bankruptcy models, for example, include the Altman Z-score model and model Taffler IN - Index credibility.<sup>14</sup>

#### 3.4.1. Altman Z-Score

The Altman Z-model (Altman Z-score) is a financial model (formula) developed by the American economist Edward Altman, designed to predict the probability of bankruptcy of an enterprise.

The formula is based on a combination of 4-5 key financial ratios, characterizing the financial position and performance of the enterprise. Initially, the formula was proposed by Altman in the 60s of the last century. Later, the author proposed variations of this formula, taking into account the branch features of the organizations<sup>15</sup>.

The 4-factor Altman Z-model is used for non-production enterprises (whose shares are not quoted on the exchange). The formula for the four-factor model is as follows:

$$Z-score = 6.56T1 + 3.26T2 + 6.72T3 + 1.05T4$$
 (3.13)

Where,

**T1** = Working Capital / Assets

**T2** = Retained earnings / Assets

<sup>13</sup> Covarage ratio. Avaliable at: http://www.investopedia.com/terms/i/interestcoverageratio.asp

<sup>14</sup> RŮČKOVÁ, Petra. Finanční analýza: metody, ukazatele, využití v praxi. 3d edition. Praha: Grada Publishing, 2010. ISBN 978-80-247-3308-1.

<sup>&</sup>lt;sup>15</sup> WAHLEN, James M., BAGINSKI, Stephen P., BRADSHAW, Mark T., and STICKNEY, Clyde P. Financial reporting, financial statement analysis, and valuation: a strategic perspective. 7th edition. Mason, Ohio: South-Western Cengage Learning, 2011, ISBN 978-0324789-416.

T3 = EBIT / Assets

**T4** = Equity / Liabilities

#### Interpretation of the result:

- From 1.1 and less "Red" zone, there is a probability of bankruptcy of the enterprise;
- From 1.1 to 2.6 "Gray" zone, border state, the probability of bankruptcy is not high, but not excluded;
- ➤ 2.6 and more "Green" zone, low probability of bankruptcy<sup>16</sup>

For production enterprises (shares of which are not listed on the stock exchange) 5-factor Altman Z-model is used. The formula of the five-factor model of Altman is this:

Z-score = 0.717T1 + 0.847T2 + 3.107T3 + 0.42T4 + 0.998T5 (3.14)

Where.

**T1** = Working Capital / Assets

**T2** = Retained earnings / Assets

T3 = EBIT / Assets

**T4** = Equity / Liabilities

T5 = Revenue / Assets

#### <u>Interpretation of the result:</u>

- From 1.23 and less "Red" zone, there is a probability of bankruptcy of the enterprise;
- From 1.23 to 2.9 "Gray" zone, border state, the probability of bankruptcy is not high, but it is not excluded;
- From 2.9 and more "Green" zone, low probability of bankruptcy

The reliability of the indicator

Altman's know-how consists in the selection of indicators and, most importantly, the weights (coefficients) for which these factors and the resulting value estimates are multiplied in the formula. Altman made his conclusions on the basis of an analysis of American enterprises over a number of years. In addition, there are excellent models for companies whose shares are quoted on the exchange, and for non-public companies.

<sup>&</sup>lt;sup>16</sup> Altman Z-score. Avaliable at: https://www.readyratios.com/reference/analysis/altman\_z\_score.html

Due to industry specific differences in the economies of different countries, the Altman model should be used with caution, without placing great hopes on it. It is recommended to draw conclusions about the financial situation and the likelihood of bankruptcy of the organization, not only on the basis of this indicator, but on the results of an analysis of a wider range of indicators <sup>17</sup>. <sup>18</sup>

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<sup>&</sup>lt;sup>17</sup> WAHLEN, James M., BAGINSKI, Stephen P., BRADSHAW, Mark T., and STICKNEY, Clyde P. Financial reporting, financial statement analysis, and valuation: a strategic perspective. 7th edition. Mason, Ohio: South-Western Cengage Learning, 2011, ISBN 978-0324789-416.

<sup>&</sup>lt;sup>18</sup> Altman Z-score. Avaliable at: https://www.readyratios.com/reference/analysis/altman\_z\_score.html

# 3.5. Characteristics of beer industry

What is beer? The authors in the literature define this beverage in different ways. For example is the claim that beer is a synthetic drink, where there is alcohol, which is the result of fermentation of sugars in malt<sup>19</sup>.

The author of this definition also inclined. However, it must be said that every author takes a certain attitude and perspective on the definition the beer itself.

# 3.5.1. The history of beer production

The history of beer production has a long tradition. Early production are not entirely clear, there is no historical evidence, that wil told us when and where the beer originated. Probably that drink will dates back to the Neolithic period.

"Fermented cereal beverage could arise with help of rain water and dish from the kitchen with grains of wild crop harvested by people, which probably belonged to the meal of that people. Later that dish/plate was found by accident, and fermented bevarege with pleasant and intoxicating taste was than discovered . "<sup>20</sup>

The brewer of all brewers and inventor of beer worldwide could have been Gambrinus,

Brabant monarch. Origin of name Gambrinus has no clear explanation yet.<sup>21</sup>

The probable cradle of beer production is Mesopotamia, where the Sumerians and Assyrians in the seventh millennium BC. n. l. had already cultivating various cereals, including barleyand others.

The real written reports of beer originated from the period of approximately three thousand years BC. n. l. in Babylon.<sup>22</sup>

On the territory of today's Czech Republic first brewers were Celts, but beer including hop is attributed to the Slavs.

The first extant document of beer is the document of the first Czech king Vratislav II. from 1088, which allocates the canons of tithe from hops.

Probably in Bohemia beer was brewed before this year. Mainly women did this. Beer was brewed in a houses and fermented in so-called beer chamber pots.<sup>23</sup>. Every

<sup>20</sup> BASAŘOVÁ, Gabriela; HLAVÁČEK, Ivo. České pivo. Pacov: Nuga, 1999. ISBN 80-85903-10-5

http://www.pratelepiva.cz/svet-piva/ceske-pivo-historie-asoucasnost/historie-a-soucasnost/

<sup>&</sup>lt;sup>19</sup> Zýbrt, V.: Velká kniha piva - Vše o pivu, Rubico, 2005, ISBN 80-7346-054-8.

<sup>&</sup>lt;sup>21</sup> CHLÁDEK, Ladislav. Pivovarnictví. Praha: Grada Publishing, a. s., 2007. ISBN 978-80-247-1616-9

<sup>&</sup>lt;sup>22</sup> České pivo – historie a současnost. Sdružení přátel piva. © 2009 Avaliable at:

citizen had the right to brew beer (Brewing right), this right in royal towns confessed a King, in feudal towns suzerain. There was also the right, which prohibited the import beer into towns within a radius to ten kilometers. That was done to shelter local manufacturers from competition. That is why than local breweries were built.

In 1517 the rules for beer production were specified in Svatováclavský contract. By this time everyone could establish a brewery regardless to the state.

At the end of the 18th century materials for beer production was not wheat, but barley and Czech hops.

Beer, the malt and hops are considered typical products of the Czech Republic. Czech

beer is renowned throughout the whole world. That product is better than anywhere else. Czech big breweries mainly produce draft beers, lagers and special/limitted beers. Small and micro breweries produce more special ones than big breweries, for which the interesting from specials to brew non-alcoholic beer, diabetic beer or gluten free beer. Special beers are enerally more attractive for small breweries, as f.e. Ale, Stout, Porter, fruit beers. esp. top fermented beers. <sup>24</sup>

One of the most famous and very old Microbrewery is Brewery u Fleků (founded in 1499), where is still brewed 13° Černý Ležák – Dark Lager, production of which requires six weeks.

<sup>24</sup> České pivo – historie a současnost. Sdružení přátel piva. © 2009. Avaliable at: http://www.pratelepiva.cz/svet-piva/ceske-pivo-historie-asoucasnost/historie-a-soucasnost/

<sup>&</sup>lt;sup>23</sup> České pivo – historie a současnost. Sdružení přátel piva. © 2009. Avaliable at: http://www.ceske-pivo.cz/historie-ceskeho-pivovarnictvi-data-fakta

#### 3.5.2. **Brewing in the Czech Republic**

Historically, the best and most successful year for the Czech malting and brewing industry was in 2007. A large share of this result is primarily a production volume of malt produced by Czech Malthouse and also also the amount of produced beer in the Czech Republic.<sup>25</sup>

Conversely problematic year for the Czech brewing industry was 2009, which was affected by the global economic crisis, which has significantly impacted the overall demand for beer. Under the influence of this crisis changes have occurred also in the behavior of beer drinkers. Breweries, which are grouped in the Czech Beer and Malt Association in 2010 produced 7.9% less than in 2009. The decline in production was mainly due to reduced demand for draft beers. Breweries produced about 13% less draft beers.

Drinks as well as food must comply in terms of health and consumer information legal requirements. There are many rules that manufacturing companies must follow.

Each entity is required to pay income tax. Since 2010, income tax has stood at 19% level. For beer sales has been specified indirect tax - excise duty on beer. Law no. 353/2003 Coll., about excise duties sets out five groups according to the size of production in hectoliters annually with their excise tax (a small independent brewery with a production of up to 200 000 hectoliters got rate 28.80 CZK per 1 hl. of beer produced for 2016). Basic rate for other breweries is 32 CZK per hectolitre<sup>26</sup>.

The Czech Republic's beer production is significant. Beer consumption in the Czech Republic still the first in the world. From the graph below we can see that consumption of beer in liters per capita in the period 1999-2015 has a decreasing trend. After 2010 we can assume the growth in consumption of beer per capita. This trend is shown on Graph No. 3. Without any doubts we can now assume, that beer production is therefore associated with exports, which covers a broad number of breweries. The main exporters within Czech beer market are Pilsner Urquell, Inc. and Budweiser Budvar, n.p.<sup>27</sup>

<sup>&</sup>lt;sup>25</sup> www.cspas.cz

<sup>&</sup>lt;sup>26</sup> Business.center.cz. ©1998-2017. Avaliable at:

http://business.center.cz/business/pravo/zakony/spotrebnidan/cast2.aspx

<sup>&</sup>lt;sup>27</sup> Panorama zpracovatelského průmyslu ČR 2015. Ministerstvo průmyslu a obchodu. Avaliable at: http://www.mpo.cz/assets/cz/prumysl/zpracovatelsky-prumysl/panorama-zpracovatelskehoprumyslu/2016/11/Panorama\_CZ\_internet\_komplet.pdf

# 3.5.3. Beer production, consumption

World production of beer, according to data of companies Hopsteiner and Barth increased since the 1990s until 2008. After a decline in 2009, beer production increased again, especially in Asia, South America and Africa, the fall was recorded also in Europe. Overall in the world in 2014 was produced 1 983.3 mil. hectoliters of beer. According to statistics of the Barth company the Czech Republic takes 22nd place in beer production worldwide. Asia is the largest producer, than followed by America and Europe.<sup>28</sup>

After a deep slump in 2010, total beer production in the Czech Republic slightly rises, but still below the level of 2009. The increase in 2014 is mainly due to booming exports, both within the EU and to countries outside Europe – third countries. In 2014 was total produced over 19.6 mil. hectoliters of beer. Beer consumption per capita was 147 1/yearthe same as 2013. According to the Czech statistical office, with in terms of pure alcohol.<sup>29</sup>

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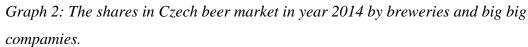
<sup>&</sup>lt;sup>28</sup> Situační a výhledové zpravy. Avaliable at: http://eagri.cz/public/web/mze/zemedelstvi/publikace-a-dokumenty/situacni-a-vyhledove-zpravy/rostlinne-komodity/chmel-a-pivo

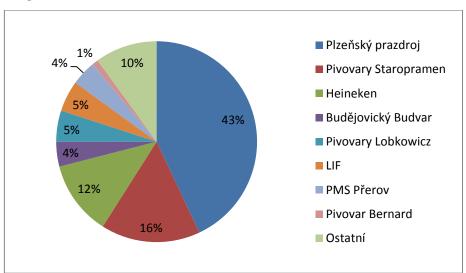
<sup>&</sup>lt;sup>29</sup> Český statistický úřad. Spotřeba potravin 2015. Avaliable at: https://www.czso.cz/csu/czso/spotreba-potravin-2015

20076 19877 19648 19216 19205 18624 18098 2009 2010 2011 2012 2013 2014 2015

*Graph 1: Beer in ths. hl. produced in the Czech Republic from 2009 till 2015.* 

Source: own processing 30 31





Source: own processing.<sup>32</sup>

<sup>&</sup>lt;sup>30</sup> Český sváz pivovarů a sladoven.Hospodařské výsledky oboru za 2014. Avaliable at: http://www.ceskepivo.cz/sites/default/files/soubory\_k\_clankum/2015\_zprava\_hospodarske\_vysledky\_oboru\_za\_2014\_final\_ 20150410.pdf

<sup>&</sup>lt;sup>31</sup>Český statistický úřad. Produkce vybraných průmyslových výrobků. Avaliable at: https://vdb.czso.cz/vdbvo2/faces/cs/index.jsf?page=vystup-objektvyhledavani&vyhltext=pivo&bkvt=cGl2bw..&katalog=all&pvo=PRU07

<sup>&</sup>lt;sup>32</sup> Pivovar.cz české pivo a pivovary ©2000-2017 . Avaliable at http://www.pivovar.cz/top-25/

In the Czech Republic there are 6 large brewing companies, 29 independent breweries and approximately 215 micro-breweries and micro-breweries. In the Czech market, three or four manufacturers predominate. We can see this in the graph above. According to this information, the largest market share belongs to Pilsner Urquell than the group of the Staropramen, Heineken and Budweiser Budvar breweries, which sold less than half of the beer produced in the Czech Republic.<sup>33</sup>

The competitive advantage manufacturers receive the mark of the EU Protected Geographical Indication (PGI) Czech beer, which was registered in 2008. That guarantees consumers that they would get a quality product, protect manufacturers against unfair competition and guarantees steady demand to suppliers of raw materials. Characteristic properties of Czech beer defines the specifications published in the EU Official Journal 2008 / C-16/05. The designation has more than 70 brands of beer<sup>34</sup>.

Total beer production in 2014 grew by 2.3% to 19.7 mil. Hl. That has happened because of increasing exports, which grew by 8.3%. In contrast, a significant drop of 43.3% of import recorded in 2014, mainly from Poland, Hungary and Slovakia.

Total beer consumption in liters includes draft beer, lager, special beers, porters. In total consumption is light and dark beer, bottled, in cans and in KEGs. Beer consumption in the Czech Republic stagnated at 16.3 mil. Hl. Constantly increasing consumption of lager in 2014 reached 43.9%. Also growing consumption of other beers (low-alcohol and specials), while decreasing consumption of draft beer at the 50.6% level of 2013. Consumption of non-alcoholic beers stabilized at 3.1% of total consumption.

Malt production increases, as well as beer production and it is obviously is due to exports. In 2014 28 domestic malt manufacturers produced approximately 540 ths. tones of malt, which showed an increase of 1.9% in comparison with a year 2013.

Business malting manufacturers produced 77% of the total production of malt in the Czech Republic, breweries the remaining 23%. To a foreign countries exported 268,980

at: http://www.ceskeminipivovary.cz/proc-vyrabet-ceske-pivo-v-ceskem-pivovaru/

<sup>&</sup>lt;sup>33</sup> Lidovky.cz - zprávy z domova i ze světa 2017. Avaliable at: http://byznys.lidovky.cz/pivovarsti-obriztraceji-zakazniky-rostoumensi-vyrobci-p3p-/firmy-trhy.aspx?c=A140221\_155252\_firmy-trhy\_jzl <sup>34</sup> Proč lze vyrábět české pivo jen v originálním českém pivovaru? Czech Minibreweries. 2012. Avaliable

tons, which is 50% of the total malt production in the country. Export increased by 2% compared to 2013. Traditionally the major purchasers of malt from the Czech Republic are Poland, Germany, and in recent years, the UK and Hungary.

170 165 160 155 150 145 140 135 130 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Graph 3.: Development of average beer consumption in liters per capita from 1999 till 2015 with in terms of pure alcohol

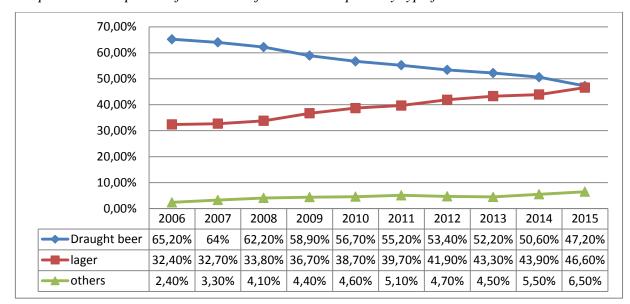
Source: own processing<sup>35,36</sup>

The highest edge of beer consumption was achieved in 2005, and it was 163.5 liters. Besides decrease in production of beer in the Czech Republic even so Czech stand among the most traditional consumers and occupie the first place in the consumption of beer per capita per year.

<sup>&</sup>lt;sup>35</sup> Češi pijí pivo stále nejvíce na světě, jejich chutě se ale mění. Investičníweb.cz. 2016 [2017-02-20]. Avaliable at: http://www.investicniweb.cz/2014/5/12/trh-s-pivem/

Avaliable at: http://www.investicniweb.cz/2014/5/12/trh-s-pivem/

<sup>36</sup> Český statistický úřad. Spotřeba potravin 2015. Avaliable at: https://www.czso.cz/csu/czso/spotreba-potravin-2015



Graph 4.: Development of the share of beer consumption by type from 2006 till 2015

# Source:own processing<sup>37</sup>

In 2014 there was an increase in consumption of beer, both cans and PET bottles by 11%. Consumption of bottled and keg beer sligtly decreased, the index reached 99% the previous year. The consumption of flavored beers stood at the level of 300 thousand. hl per year and it's popularity continues to grow. In 2014 were produced 301 ths. hl of flavored beer.

Production of lager beer grow at the expense of draft beer. Draft beer still has a leading position(the largest share of production) among other kinds of beer. We can see it on the graph, that follows.<sup>38</sup>

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<sup>&</sup>lt;sup>37</sup> Hospodářské výsledky z oboru. Avaliable at: http://www.ceskepivo.cz/sites/default/files/soubory\_k\_clankum/2015\_zprava\_hospodarske\_vysledky\_oboru\_za\_2014\_final\_ 20150410.pdf

<sup>&</sup>lt;sup>38</sup> Situační a výhledová zpráva. Chmel, pivo. Ministerstvo zemědělství. 2014-12 [2017-03-05]. Avaliable at: http://eagri.cz/public/web/file/443706/SVZ\_Chmel\_2015.pdf

# 3.5.4. Export and import of Czech beer

Despite the rise of microbreweries in 2014-2016, the structure of production of beer in the Czech Republic remains the same in volume of beer produced. The total number of microbreweries exceeded the number 350 and it is expected that in five years it could cross the border of 1000th. Total amount of breweries in the Czech Republic exceeded in 2016 the number 400.<sup>39</sup>

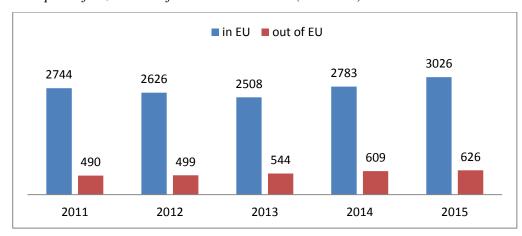
In 1948 in the Czech Republic only drank 76.2 liters of beer/per capita/year. The highest border of consumption of beer per capita has reached in 1992, when the Czech people drank 166.8 liters /per capita/year. In the following years, beer consumption declined and in 2011 was only 142.5 liters/per capita/year, which is mainly attributed to the economic crisis and also due to increase of taxes.

In years, 2009 and 2010 recorded a decrease. According to Ex-Director of Czech Beer Ing. Jan Vesely, in the year 2010 recorded the worst result since 1989. The main reason, according to him, the decline in exports to the country, where Czech exports (Mostly the EU). Than less tourists have came to the Czech Republic.

Their consumption was a part of domestic consumption, and could be more than a fifth part of the country's consumption. Also decreased the consumption of beer of native people, because of the impact of the economic crisis and the increase in excise taxes by one-thirdin 2010.<sup>40</sup>

<sup>40</sup>Výroba piva. Avaliable at:http://www.radio.cz/cz/rubrika/ekonomika/vyroba-piva-v-cesku-lonidramaticky-klesla

 $<sup>^{39}</sup>$  Počet minipivovaru. Avaliable at: http://ekonomika.idnes.cz/pivovarnici-pocet-minipivovaru-se-do-5-let-ztrojnasobi-na-1000-plk-/ekonomika.aspx?c= $A161003\_134742$ \_ekonomika\_rts



Graph 5: Export of Czech beer from 2011 till 2015 (in ths.hl.)

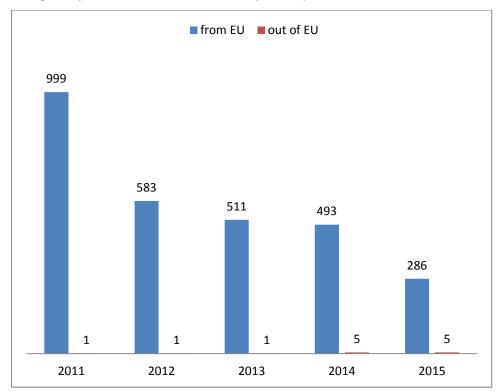
Source: Situation and Outlook Report hops and beer, own processing<sup>41</sup>

In 2009, was recorded a decrease in exports of Czech beer. That decline of interest in Czech beer abroad was reflected first of all to the economic crisis. Most of exported beer goes to Germany, and approximately equals to 34.3% of beer exported in 2010. In 2010 were exported 1,129 thousands hl. of beer to Germany, than follows Slovakia with 21%, Sweden with 6.8%, the UK with 6.6% and Russia with it's 6.6%. Least amount imported were into Finland and Italy. Most exported beer type is Czech lager. The biggest exporters are Pilsner Urquell, a. s., Heineken Czech Republic, a. s. and Breweries Staropramen, a.s. 42

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<sup>&</sup>lt;sup>41</sup> Situační a výhledová zprava. Chmel a pivo. Avaliable at: http://eagri.cz/public/web/mze/zemedelstvi/publikace-a-dokumenty/situacni-a-vyhledove-zpravy/rostlinne-komodity/chmel-a-pivo/

<sup>&</sup>lt;sup>42</sup> Situační a výhledová zprava. Chmel a pivo. Avaliable at:http://eagri.cz/public/web/mze/zemedelstvi/publikace-a-dokumenty/situacni-a-vyhledove-zpravy/rostlinne-komodity/chmel-a-pivo/p. 61, 2011



Graph 6: Import of Czech beer in thousands of hl. in years

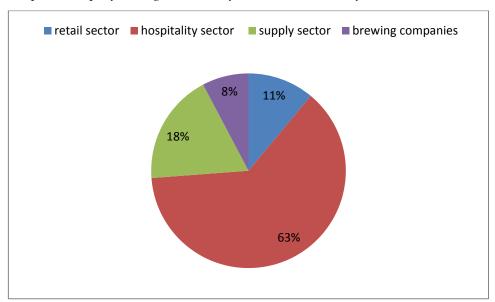
Source: Czech Association of Breweries and Malt producers<sup>43</sup>

In 2015 there was a significant decline in import of beer by 42% to a total of 291,000 hectoliters. Most declined imports from Poland, Hungary and Slovakia. In contrast, exports of Czech beer abroad last year grew by 8%. The most important export territory in 2015, as in previous years, remained in Germany. The highest increases were for exports to Slovakia (22.8%), followed by Poland (12.3%) and France (17.8%). The biggest fall recorded the contrary, exports to Ukraine (37.3%) and Belarus (29.2%). By far the most exported lagers, which accounted for 74% of beer exported. According packaging materials predominates beer bottles (47%) and the bulk (28%).

<sup>&</sup>lt;sup>43</sup> Výsledky z oboru z roku 2014. Avaliable at: http://www.ceskepivo.cz/sites/default/files/soubory\_k\_clankum/2015\_zprava\_hospodarske\_vysledky\_oboru\_za\_2014\_final\_ 20150410.pdf

# 3.5.5. Employment generated by the beer sector

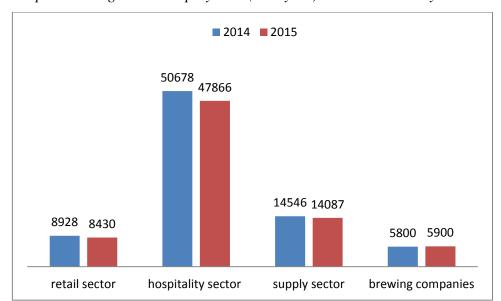
Employees associated with beer in the Czech Republic in 2015 amounted to about 76,000 people, which represents a moderate drop since 2014. The largest share of this overall impact on employment was in the hotel sector - restaurants, bars, etc., which accounted for 63% of the total. Employment declined from 2014 to 2015 in all segments, except for the brewing sector itself



Graph 7: Employment generated by the beer sector in year 2015

Source: own processing<sup>44</sup>

<sup>&</sup>lt;sup>44</sup> The national brewers association. The Contribution made by beer to the European economy. Czech Republic. Avaliable at: http://www.brewersofeurope.org/uploads/mycms-files/images/2016/publications/economic-report-countries/czech\_republic.pdf



Graph 8: Change in the employment (emloyees) in beer sector in years 2014 -2015

#### Source:own processing<sup>45</sup>

The largest contribution to employment was in the services sector, the media, marketing and other services. At the same time, there was also a great contribution to employment in the labor-intensive agricultural sector.

Anyway, the graph 9 show us how changed sectors associated with beer. All of them, besides brewing companies, in 2015 got less workers, than year before. The main reason here could be in modernization of the whole processes, as for example, in hospitality sector could be used so called "mobile waiter" – an application, that a waiter can use, ordering people, when order in one click goes to kitchen or to bar. Less employees – less costs (payroll). Nevertheless the amount of employees, working in brewing companies raised, as, the number of minibreweries operating in the Czech Republic from 2014 till 2015 grew by 49.

<sup>&</sup>lt;sup>45</sup> The national brewers association. The Contribution made by beer to the European economy. Czech Republic. Avaliable at: http://www.brewersofeurope.org/site/countries/figures.php?doc\_id=672

#### 3.6. Minibreweries

Graph 9: New minibreweries opened from 1991 till 2016 by years.

Source: own processing 46

Minibreweries capacity already reached a quarter of a million hectoliters, which is like a medium-sized brewery. Some have become so successful that he slowly got into the category of industrial brewery. The annual production of 10,000 hectoliters should be overcomed. Such a breweries are Kacov or Chotěboř. Conversely, for example, a brewery Herold Březnice, which in the past was brewed around 30,000 hectoliters per year in now is ina minibrewery category.

The rule is a good place and strategy, and of course a good product. More and more breweries have built with its own restaurant, but the key is to find a place/barwhere to sell your beer. One of the main opportunity is that minibreweries have reduced excise duty.

The big breweries do not compete

The return on such investments is generally about seven years. And according to our graph 9 it's a relatively safe investment as every year more and more breweries are opened and since 1990 went bankrupt a few of such a breweries.

<sup>46</sup> Přehled zakládaní minipivovarů po roce 1989. Avaliable at: http://www.pivovary.info/view.php?cisloclanku=2014120002

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The popularity of small breweries forced big players to improve their production. Nowdays domestic beer producers managed to sell more expensive and better beer than it was in the past.

## 3.7. Brewing process

### Malt preparing

The raw material for brewing requires pretreatment, which consists in converting it into brewing malt. The process involves germination of cereals (most often barley), drying and cleaning from germs. When germinating, starch in grains is split into sugars. A different degree of malt drying is used to prepare malt of different types - light, dark, black.

To obtain dark and especially caramel varieties, malt is roasted. The more malt is fried, the more sugars caramelize in it. The most dark varieties of malt can not be used alone without light varieties, as during fermentation enzymes necessary for saccharification of the wort are lost.

Malt processing can be done both at the brewery and at a separate enterprise (malt factory).<sup>47</sup>

#### Mashing

Depending on the recipe, at the beginning of the direct preparation of beer, a mash is prepared - a mixture of crushed grain products (various types of malt and other required ingredients) intended for mashing with water. When mixed with water, a gruel is obtained, which has a sweetish taste from dissolved malt sugars.

During mashing is used a gradual heating with the so-called "Temperature pauses", that is necessary for the action of various enzymes. There are several such pauses in modern breweries:

- 1. 50-52 degrees for 10-15 minutes (protein pause (for the cleavage of proteins)),
- 2. 62-63 degrees 15-30 minutes (beta-amylase enzyme, which breaks down starch and dextrines into small fragments oligosaccharides, maltose),
- 3. 70-72 degrees 30 minutes (alpha-amylase, crushing starch on large fragments dextrins).
- 4. The end of the process of saccharification is determined by iodine breakdown (drops of iodine should not turn blue). Then, the wort is heated to 78 degrees (to inactivate the enzymes and reduce viscosity), and fed to filtration.

<sup>&</sup>lt;sup>47</sup> Goldhammer, Ted (2008), The Brewer's Handbook, 2nd ed., Apex, ISBN 978-0-9675212-3-7

There are technologies of mashing with boils, when part of the mash boils. Usually this method is used when raw materials are used - barley, rice, corn, and also in the production of dark beer varieties.<sup>48</sup>

### Lautering

Lautering is the separation of the wort (the liquid containing the sugar extracted during mashing) from the grains. This is done either in a mash tun outfitted with a false bottom, in a lauter tun, or in a mash filter. Most separation processes have two stages: first wort run-off, during which the extract is separated in an undiluted state from the spent grains, and sparging, in which extract which remains with the grains is rinsed off with hot water.

#### Boiling

The wort is prepared for 1-2 hours with hops and other necessary ingredients. During the boiling, the aromatic and bitter ingredients of the hop dissolve, imparting the flavor characteristic taste and aroma to the beer. At the same time, protein substances coagulate and precipitate, and some aromatic components that adversely affect the taste of beer are evaporated.

#### Whirpool

The wort is pumped into a whirlpool to separate insoluble barley and hop remnants. These remnants, under the action of the frictional force of the layers of liquid, collected in the center of the bottom of the whirpool. After 20-30 minutes of settling, the wort is separated from the insoluble residue.<sup>49</sup>

#### Cooling and aeration of wort

The wort is pumped into the fermentation tank. During pumping it is cooled and saturated with oxygen, necessary for the reproduction of yeast.

#### Fermentation

Under the influence of the yeast, fermentation takes place, in which the simplest sugars contained in the wort turn into alcohol and carbon dioxide. The duration of fermentation and the temperature of the process depend on what kind of yeast was given and what kind of beer is going to be - top or bottom fermented. In the last case, the product obtained at this stage (the so-called "young beer") is then placed in the tanks for ageing.

<sup>&</sup>lt;sup>48</sup> Goldhammer, Ted (2008), The Brewer's Handbook, 2nd ed., Apex, ISBN 978-0-9675212-3-7

<sup>&</sup>lt;sup>49</sup> Ted Goldammer (2000). The Brewers Handbook. Apex Pub. ISBN 0-9675212-0-3.

The purpose of ageing is to improve the organoleptic properties of the drink, the cleavage of diacetyl, esters. For this process, widespread so-called Cylinder-conical fermentation tanks (CCT), in which the processes of basic fermentation and fermentation take place continuously, without pumping, in a single place.<sup>50</sup>

#### Beer filtration

Then the beer is filtered from the yeast residues. Filtration is usually used in industrial brewing. Used in-line filters, ceramic filters, presses, and separators. Some filtration methods destroy the microflora of beer and increase the shelf life of the beer.

#### Pasteurization

Some types of beer are subjected to pasteurization - heating to a temperature of about 68-72 ° C to increase shelf life. It is believed that pasteurization deteriorates the taste.<sup>51</sup>

## Requirements for quality of raw materials

Water for brewing must have the qualities of drinking water in accordance with the current regulations for drinking water, that is, satisfy all the organoleptic, physicochemical, microbiological and chemical requirements for drinking water. In addition, it must comply with a number of specific requirements for the brewing industry, compliance with which has a positive effect on the process of making beer.<sup>52</sup>

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<sup>&</sup>lt;sup>50</sup> Goldhammer, Ted (2008), The Brewer's Handbook, 2nd ed., Apex, ISBN 978-0-9675212-3-7

<sup>&</sup>lt;sup>51</sup> Ted Goldammer (2000). The Brewers Handbook. Apex Pub. ISBN 0-9675212-0-3.

<sup>52</sup> The brewing process. Avaliable at: http://www.thebeerstore.ca/beer-101/brewing-process

#### 3.8. Classification of beer

At present, there is no single system for classifying beer in all its diversity. The opinions of American and European authors are somewhat divergent; nevertheless, there are some signs on which the classification can be carried out.

### On the composition of the raw materials

In the European tradition, the main raw material for the beer is barley. Sometimes barley malt is partially replaced by other grains (malt or unprocessed grains). For example, wheat beer is brewed with the addition of wheat malt or wheat (up to 50%).

## Beer can be based on other cereal crops:

- ➤ Rice (for example, Japanese sake)
- Corn (for example, tesguino, happoshu)

Also known Beverages made according to brewing technologies, but not entirely on the basis of cereals (eg banana beer, milk based Bilk, herbal beer (gruyte), potato, vegetable and fruit beer). Of course, from a traditional European point of view, it's hard to call it beer.

Sometimes in everyday life the following concepts could be met:

<u>Hybrid styles</u> - their preparation is associated with the combination of ingredients and technologies characteristic of different types of beer.

<u>Special styles</u> - usually in that category include unusual types of beer, as well as beer with various additives or beer related beverages based on fermentation, for example, root beer.<sup>53</sup>

<sup>&</sup>lt;sup>53</sup> JACKSON, Michael. World guide to beer. 1st edition. New York: Random House Incorporated, 1978, ISBN 978-034-5274-083.

#### By Color

The color of the finished beer naturally depends on the composition of the raw material, namely the presence of dark malt in the initial wort, and in its presence - the amount and degree of frying of the latter. Distinguish between light, dark, red, white and mixed beer. Mixed beer is the result, above all, of the Czech beer consumption culture. It turns out after mixing dark and light beer.

The range of colors of different kinds of beer is infinitely great. The first system for determining the color of beer was invented by the English brewer Joseph Williams Lovibond <sup>54</sup>in 1883. The color of the beer was determined in comparison with the colored glasses and the so-called. The color degree of Lovibond. Over time, the Lovibond system was found to be imperfect, since the main role in determining the color was played by the sight of a particular person. In the middle of the 20th century, a spectrophotometer was invented. In 1950, the American Society of Chemists from the Brewing Industry (ASBC) introduced a reference table method (SRM) to determine the color of beer. At the same time, European brewers developed for the same purpose the so-called. European Brewing Convention (EBC). Initially, to determine the color, European brewers used a visual comparison. 25 years later they also started using a spectrophotometer, but different from the American one.

#### By the method of fermentation.

In the USA and most European countries, the main classification of beers is just this. According to it, there are two basic types distinguished: top and bottom fermented beer.<sup>55</sup>

**Bottom fermented beer** has a fermentation process at relatively low temperatures (4-9 ° C). This method has become the most common in modern brewing. Almost all beer obtained by this method using cultured brewer's yeast is called a lager. However, the Belgian beer of spontaneous fermentation Lambik, although fermented using the same

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<sup>&</sup>lt;sup>54</sup> Ted Goldammer (2000). The Brewers Handbook. Apex Pub. ISBN 0-9675212-0-3.

<sup>&</sup>lt;sup>55</sup> Ted Goldammer (2000). "Chapter 13: Beer Fermentation". The Brewers Handbook. Apex Pub. ISBN 0-9675212-0-3.

technology, but without the use of cultural yeast with the help of microorganisms present in the wort itself and falling into it from the air.<sup>56</sup>

**Top fermentation process** occurs at a relatively high temperature (15-25  $^{\circ}$  C). Before bottom fermentation process has found, almost all beer was produced by this method. The most famous representatives of beer produced in this way are ale, porter, stout, wheat beer.

Sometimes both methods are used in various combinations. Thus, during the producing of Hefeweizen – "a south German style of wheat beer (weissbier) made with a typical ratio of 50:50, or even higher, wheat. A yeast that produces a unique phenolic flavors of banana and cloves with an often dry and tart edge, some spiciness, bubblegum or notes of apples. Little hop bitterness, and a moderate level of alcohol. The "Hefe" prefix means "with yeast", hence the beers unfiltered and cloudy appearance. Poured into a traditional Weizen glass, the Hefeweizen can be one sexy looking beer"<sup>57</sup>, add bottom fermentation yeast to the beer for fermentation in the bottle after basic fermentation.

There is no dependence between the color of beer and the method of fermentation: the dark can be both ale and lager. White usually means wheat beer.

### By alcohol volume

Volume of alcohol (that is, the volume fraction of ethyl alcohol) is characterized by the percentage of alcohol in the finished product. For most types of beer, the alcohol content is within 3-5.5%. There are also stronger varieties of beer with a content of 6-8%. There are slightly alcoholic and nonalcoholic variants of beer beverages containing typically less than 0.5%.<sup>58</sup>

<sup>&</sup>lt;sup>56</sup> Goldhammer, Ted (2008), The Brewer's Handbook, 2nd ed., Apex, ISBN 978-0-9675212-3-7

<sup>&</sup>lt;sup>57</sup> Beeradvocate. Beer. Styles. Hafeweizen. Avaliable at: https://www.beeradvocate.com/beer/style/89/
<sup>58</sup> JACKSON, Michael. World guide to beer. 1st edition. New York: Random House Incorporated, 1978, ISBN 978-034-5274-083.

# 4. Kynsperk Brewery

## 4.1. History of the Kynsperk Brewery

### <u>1595</u>

In 1579 Monarch Rudolf II gave to the town Kynsperk the permission to brew the beer. The year 1595 could be considered as the year of the beginning of brewing in the Kynsperk town.

### <u>1620</u>

On the place of the old former brewery was built the modernized one, including new malt house, that gave an opportunity to raisen up a production of beer in Kynsperk.

## <u> 1840</u>

From the year 1840 the new owners have came to Kynsperk - Germans Haas from Hasenfesl, which from that period of time had owned the brewery till the end of the Second World War.

### The second half of the 19th century

In the second half of the 19th century the brewery was enlarged und equipped with the drive mechanism. Brewery in that period could produce more than 10.000 hl. of beer a year. The beer was delivered to distanced places by train. Because of the new equipment of Kynsperk brewery small breweries near Kynsperk (Mostov, Litov, Katserhov), which couldn't meet a competition, were closed.

#### At the turn of 19th and 20th century

At the beginning of the 20th century the Kynsperk brewery was completely reconstructed. "The brewery corresponded to the industrial architecture of those times. Nowadays you can also see some its elements. Brewery had modern manufacturing equipment. Brewhouse consisted of six vessels and a steam boiler. In 1911 brewery was connected to the water supply system. They supposed that the capacity of modernized brewery would be 80 000 hectolitre of beer a year."

#### The first half of the 20th century

It is an obvious thing, that during the first World War the beer capacity produced in the Kynsperk brewery decreased by ten times. After the first World War at the end of the twenties it reached the level, that has reached at the beginning of 20th century. Before the Second World War the Kynsperk brewery was modernized again. There were installed such a things as an innovative draught beer line.

### The second half of the 20th century

After 1945 the brewery was expropriated. The production varied within 30000 hl. of beer. In 1947 the brewery was placed under control to the National District Department in the town Sokolov as Kynsperk District Brewery. In 1951 was made decision about its liquidation. On 30th December 1951 the brewery, except the malting house, was closed.

#### The new chapter of the Kynsperk brewery

After sixty years without beer in Kynsperk, the renewed brewery have started to brew its own beer. The brewery have been reconstructed into the complex named "Kynsperk yard" which include the following facilities:

Brewery now has the ability to produce 10.000 hl. of beer per year. The brewery has now its own restaurant with 200 seats in the former malt house and with 48 seats in the winter garden. The beer hotel with the relaxing zones, Spa and beer baths is starting to prepare. <sup>59</sup>

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<sup>&</sup>lt;sup>59</sup> Historie pivovaru Kynsperk. Avaliable at: http://pivovar-kynsperk.cz/index.php/cz/historie-pivovaru

## 4.2. Product portfolio

# 4.2.1. Kynsperk beer – "Kynšperský Zajíc"

Beer from the Kynsperk brewery is unique thanks to using high-quality products as well as all small breweries now in the Czech Republic using, delivered from specially chosen regions, using well-known technology, thaditional production process.

To vary the production in the Kynsperk brewery are produced not only classical types of beer but also some special kinds of beer, which completes the offer, as that kinds were brewed according to original recipes of Kynsperk brewery and the previous owners..

#### 10° draft beer

- Light, draught, unfiltered beer
- Composition: drinking water, malt from Pilsen, hop, hop extract, beer yeast
- Content of alcohol is 4.0%
- Triple hop boiling

#### 12° light lager

- Light, lager, unfiltered beer with the rich taste, distinctive bitterness
- Composition: drinking water, malt from Pilsen, hop, hop extract, beer yeast
- Content of alcohol is 5.2%
- Triple hop boiling

### 12° semi-dark lager

- Semi-dark special, unfiltered beer, prepared according to the old receipt of baron Haas.
- Composition: drinking water, malt from Pilsen, malt, Bavarian malt, hop, hop extract, beer yeast
- Content of alcohol is 5.2%
- Triple hop boiling

### 12° Dark lager

Brown, special, unfiltered beer with the perfect, balanced, pleasant taste and caramel aroma.

- Composition: drinking water, malt from Pilsen, and Munich, caramel and coloured hop, hop extract, beer yeast
- Content of alcohol is 5.2%
- Triple hop boiling

## 12° Green lager

- Special unfiltered beer brewed only once a year during the harvest of green hop.
- Ingredients: drinking water, Pilsner malt, green hops, hops extract, beer yeast
- Alcohol content 5.2%

### Vienna's special

- Unfiltered beer with a distinctive structure of the Vienna malt and a pleasant bitterness.
- Ingredients: drinking water, malt Vienna, Czech malt, Munich malt, hops and hop extract, beer yeast
- Alcohol content 5.3% <sup>60</sup>

*37* 

<sup>60</sup> Kynsperk beer. Avaliable at: http://pivovar-kynsperk.cz/index.php/cz/kynsperske-pivo

■ 10° draught
■ 12° light lager
■ Semi-dark lager 12°
■ Dark lager 12°
■ 12° green lager
■ Vienna's special 13°

3%
9%

14%

27%

Graph 10.: Beer by % by kinds of total selling of year 2015.

Source: Own processing by annual report of the Kynsperk brewery.

Kynsperk Brewery is a small independent brewery, that employs only 20 employees, with theoretikal maximum annual production volume of around 10.000 hectoliters of beer per year.

Assortment of brewery formed under the brand Kynspersky Zajic. There are light draught beer 10°, light 12° lager, 12° semi-dark lager, 12° dark lager, 12° green lager (seasonal beer) and 13% Special Vienna's beer.

The brewery got in touch with new foreign partners, namely Germany, Italy, Russia, Hong Kong.

All six types of beer produced at the Kynsperk brewery are made on the basis of the technological process, that is called bottom fermentation process.

The Kynsperk Brewery serves traditional unpasteurized pilsner beers, without chemical additives. These properties make Kynsperk beer to be competitive on the Czech

beer market. As well as that their products were the winners in Karlovarský region in years 2013 and 2016

- In category alcoholic and non-alcoholic products in 2013 for their 12° light lager (12° Kynšperský Zajíc),
- In category alcoholic and non-alcoholic products in 2016 for their nonalcoholic hop-based lemonade called "Chmelonáda".

Nevertheless, it – pasteurization – involves certain restrictions on entering foreign markets, as it is unpasteurized beer and its shelf life is shorter. In the process of pasteurization beer undergoes rapid thermal shock at a temperature exceeding 80 ° C, the main aim of that process is to kill microorganisms. The advantage of pasteurized beer, although its long-term durability, but the downside is the loss of the traditional character of the Czech beer.

## 4.2.2. Other products

To be more interesting for a such a comlicated market as the Czech beer market is, the managemet of the brewery started from the beginning of the 2014 to produce new products, such as:

- Beer spirits "pivovice"
- Beer cosmetics
- Non-alcoholic lemonades
- Hop-based lemonade "Chmelonáda" in 2016
- Souvenirs

That all help the brewery to raise up its revenue in 2014 compared to the year 2013 by six times.

## 4.3. Horizontal and vertical analyses

In chapter "Horizontal analysis" examined the development of financial items in absolute and relative change – in time. Liabilities and asets here are eximined.

## 4.3.1. Horizontal analysis of assets

Total assets for the whole observed period had the growing trend, except the year 2014, where total assets were by 721 thousands CZK less than in observed year 2013. The reason for such a decrease was in decrease of current financial assets and also, the main reason, decrease of accruals by 1015 thousands of CZK.

Table 1: Absolute change of the assets of the Kynsperk brewery from 2011 till 2015 in ths. of CZK.

Assets	2012/2011	2013/2012	2014/2013	2015/2014
Total assets TA	106	2608	-721	1203
Long-term assets	-88	-8	284	141
Tangible assets	-88	-8	284	141
intangible assets	0	0	0	0
financial investments	0	0	0	0
current assets	140	1674	10	1062
inventory	120	1157	499	-51
long-term receivables	0	5	-5	0
current receivables	30	164	-83	1037
current financial assets	-10	348	-401	76
accruals	54	942	-1015	0

Source: Annual report of the Kynsperk brewery. Own processing.

The reason of that might have happened because in our case accruals were incurred expenses, that got an impact on overall balance sheet and income statement as well. What could reflect such a thing.

Accrual involving an expense could be an employee bonuses, that were earned in 2014, but will not be paid until 2015. The 2014 financial statements need to reflect the bonus expense and the bonus liability. As soon as it will be paid in the new year, the liability will be as a result eliminated, and the cash remains reduced.

The total assets in the year 2013 increased by 440% that was the highest increase in the whole observed period. Increase of assets in other years of the observed period were smaller, the decrease in the year 2014 is 21%. The same as it was shown in the absolute changes, the relative changes show the decrease in assets between years 2014 and 2013 caused by the decrease of accruals.

Table 2: Relative change of the assets of the Kynsperk brewery from 2011 till 2015 in ths. of CZK.

Assets	2012/2011	2013/2012	2014/2013	2015/2014
Total assets TA	1.16	4.40	0.78	1.45
Long-term assets	0.74	0.96	2.12	1.26
Tangible assets	0.74	0.96	2.12	1.26
intangible assets	-	-	-	-
financial investments	-	-	-	-
current assets	1.47	4.86	1.004	1.50
inventory	2.11	6.07	1.36	0.97
long-term receivables	-	-	0	-
current receivables	1.35	2.43	0.70	6.31
current financial assets	0.90	4.82	0.086	3
accruals	3.84	13.90	0	-

Source: Annual report of the Kynsperk brewery. Own processing.

The growth of assets in the year 2012 was 16% and in the year 2015 was 45%. In the year 2012 the inventory increased by 211%. That could have caused by purchasing a lot of malt and hops with a sale for beer producing in a new year and 200 liters of beer destilate. Inventory decreased in the year 2015 by 2%. In the year 2015 total assets increased by 45% to the previous year, the reason was in the current receivables, that increased by 631%.

## 4.3.2. Horizontal analysis of liabilities

The horizontal analysis of the liabilities is done the same way as the analysis of the assets. The table below shows the absolute changes in time. The table, that follows reflects the relative changes of the liabilities.

Table 3: Absolute change of the liabilities of the Kynsperk brewery from 2011 till 2015 in ths. of CZK.

Liabilities	2012/2011	2013/2012	2014/2013	2015/2014
Total liabilities	106	2608	-721	1203
Own equity	-2069	-2139	-2853	-74
Legal capital	0	0	0	0
capital funds	0	0	0	0
reserves funds	0	0	0	0
retained earnings	-615	-2069	-2139	-2854
net income/loss	-1454	-70	-714	2780
foreign source of capital	2175	4747	2132	1277
reserves	0	0	0	0
long-term liabilities	0	0	6568	819
current liabilities	2175	4747	-4436	-1431
bank loans	0	0	0	1889
accured liabilities	0	0	0	0

### Source: Annual report of the Kynsperk brewery. Own processing.

The liabilities had the growing trend in years 2012, 2013, 2015. The same as assets. During the observed period legal capital remains the same, as t is a small company with the legal capital of 200 thousands of CZK.

In the year 2015 there were an increase in the total liabilities caused more by net income/loss by 2780 thousands of CZK, and loss were only 74 thousands of CZK, that is the best result shown in the whole observed period.

This increase is caused by already mentioned by increase of net income/loss, but also by increase of bank loans statement, as the Kynsperk brewery got that year the new bottling mashine.

The decline in total liabilities was registered in the year 2014 when the TL decreased by 721 thousands of CZK. This decline is correlated with the decline of the current liabilities, decline in own equity and retained earnings.

As it was mentioned above, taht legala capital was not changed at all during the whole observed period. In the year 2013 the retained earnings increased by 436% and total liabilities grew by 440% that year.

Table 4: Relative change of the liabilities of the Kynsperk brewery from 2011 till 2015 in ths. of CZK.

Liabilities	2012/2011	2013/2012	2014/2013	2015/2014
Total liabilities	1.16	4.404	0.78	1.45
Own equity	5.98	1.86	1.61	1.009
Legal capital	1	1	1	1
capital funds	ı	ı	ı	-
reserves funds	ı	1	ı	-
retained earnings	-	4.36	1.79	1.59
net income/loss	3.36	1.03	1.33	0.025
foreign source of capital	3.02	2.46	1.26	1.12
reserves	-	-	-	-
long-term liabilities	-	-	-	1.12
current liabilities	3.02	2.46	0.44	0.59
bank loans	-	-	-	-
accured liabilities	-	-	-	-

## Source: Annual report of the Kynsperk brewery. Own processing.

In the year 2014 the total liabilities decreased by 21% even with an annual increase of the retained earnings by 79%, the net income/loss statement by 33% and the foreighn source of capital by 26%. It was caused by the decline of the current liabilities by 54%.

## 4.3.3. Vertical analysis of the assets

That chapter illustrates us the share of chosen items of the assets in the total assets, or in other words the signifficance of financial items and their development in time.

The vertical analysis of the Kynsperk Brewery illustrates the change of the share of the long-term assets, current assets and accruals. Between 2011 and 2013 the Kynsperk brewery decreased its long term assets on its TA.

The inventory was high in the year 2014 because of limitation of their production volume.

Due to that fact that it is not desirable for the company to hold over 40% of the current assets in form of the inventory than in 2015 it went down again.

Table 5: Vertical analysis of the assets of the Kynsperk brewery in the period 2011 till 2015 in %.

Assets	2011	2012	2013	2014	2015
Total assets TA	100	100	100	100	100
Long-term assets	52.73	33.94	7.47	20.20	17.56
Tangible assets	52.73	33.94	7.47	20.20	17.56
intangible assets	0.00	0.00	0.00	0.00	0.00
financial investments	0.00	0.00	0.00	0.00	0.00
current assets	44.39	56.53	62.45	79.80	82.44
inventory	16.36	29.77	41.05	71.01	47.54
long-term receivables	0.00	0.00	0.15	0.00	0.00
current receivables	12.73	14.88	8.24	7.35	31.95
current financial assets	15.30	11.88	13.01	1.43	2.96
accurals	2.88	9.53	30.08	0.00	0.00

Source: Annual report of the Kynsperk brewery. Own processing.

From that table it could be seen, that almost during the whole observed period the major share of assets got current assets. The highest share of the current assets was in year 2015 and equals 82.44%.

The lowest share, that the current assets got, from the observed period was in the year 2011 and equals 44.39%.

The development of shares of the major assets is giving below.

100% 90% 80% 70% 60% current assets 50% 40% ■ Long-term assets 30% 20% 10% 0% 2011 2013 2012 2014 2015

Graph 6: The development of shares of the assets. In %.

### Source: Annual report of the Kynsperk brewery. Own processing.

From the graph 11 we can see, that current assets have grown from the year 2011, when the brewery was not operating, as the reconstruction of the historical building was held. The main thing, why current assets has grown, was that inventory grew by more than 10 times in two years. The year 2013 is the starting poin of the brewery's beer production. That means, that there were a necessity to buy yeasts, malt, hop etc.

# 4.3.4. Vertical analysis of the liabilities

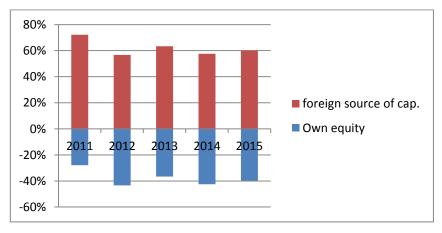
*Table 7: Vertical analysis of the liabilities of the Kynsperk brewery in the period 2011 till 2015 in %.* 

Liabilities	2011	2012	2013	2014	2015
Total liabilities	100	100	100	100	100
Own equity	-62.88	-324.28	-137.02	-281.79	-195.80
Legal capital	30.30	26.11	5.93	7.54	5.19
capital funds	0.00	0.00	0.00	0.00	0.00
reserves funds	0.00	0.00	0.00	0.00	0.00
retained earnings	0.00	-80.29	-79.55	-181.79	-199.09
net income/loss	-93.18	-270.10	-63.40	-107.54	-1.89
foreign source of cap.	162.88	424.28	237.02	381.79	295.80
reserves	0.00	0.00	0.00	0.00	0.00
long-term liabilities	0.00	0.00	0.00	247.57	191.57
current liabilities	162.88	424.28	237.02	134.23	55.24
bank loans	0.00	0.00	0.00	0.00	48.99
accured liabilities	0.00	0.00	0.00	0.00	0.00

Source: annual report of the Kynsperk brewery. Own processing

The major share within total liabilities has the foreign source of capital. From the beggining of the observed, from 2011, period major share in the foreign source of capital got current liabilities, than the situation has changed, as long-term liabilities from the year 2014 got the major share in foreign source of capital. That all means that the Kynsperk brewery uses mainly foreign resources of capital to fund its activities.

*Graph 12: The structure of the total liabilities in years 2011 to 2015 in %.* 



Source: Annual report of the Kynsperk brewery. Own processing

## 4.4. Analysis of the differential ratios

#### 4.4.1. NWC

The NWC – net working capital - is one of the most commonly used differential ratios. The size of the NWC is a significant indicator of the balance of payments of the every company.

Table 8: NWC for 2011-2015 in ths.CZK

	2011	2012	2013	2014	2015
CA	293	433	2107	2117	3179
CL	1075	3250	7997	3561	2130
NWC	-782	-2817	-5890	-1444	1049

Source: own processing. Annual reports of Kynsperk brewery.

From 2012 till 2013 NWC has a decreasing trend as a result in 2013 NWC is the lowest in the observed period. The highest NWC was in the year 2015.

From the values of NWC from 2011 till 2015 it is clear, that the brewery would not be able to cover its financial liabilities from 2011 till 2014. Even in 2015 it would not be able to do this, as TL in the year 2015 were 3856 of CZK.

#### 4.4.2. NMF

The table 11 consist of the current assets, inventories and current liabilities of the Kynsperk brewery for years 2011 till 2015, all the data necessary to calculate the net monetary funds.

Table 9: NMF for 2011-2015 in ths.CZK

	2011	2012	2013	2014	2015
CA	293	433	2107	2117	3179
Inv.	108	228	1385	1884	1833
CL	1075	3250	7997	3561	2130
NMF	-890	-3045	-7275	-3328	-784

Source: Annual report of the Kynsperk brewery. Own processing.

The highest indicator was in year 2015, where the CA reached the highest amount, among all others periods, of -784 ths. of CZK that. The lowest was in the year 2013. In 2013 the current liabilities were the highest, as the brewery started to brew, so that is why inventory grew up by 4 times.

## 4.5. Analysis of the financial ratios

## 4.5.1. Profitability ratios

Return on assets is the ratio that measure the impact on a unit of property, which contributes to economic activity of an entity. Based on this indicator is easy to evaluate whether the company manages its fixed assets and inventory good, as well as its other resources involved.

ROA formula and its evaluation to the Kynsperk brewery is given below.

ROA = Net income/ Total assets (4.1.)

Table 10: ROA for Kynsperk Brewery for years 2011-2015 in ths.CZK.

	2011	2012	2013	2014	2015
Net income	-615	-2069	-2139	-2853	-73
TA	660	766	3374	2653	3856
ROA	-0.93	-2.70	-0.63	-1.07	-0.018

Source: Annual report of the Kynsperk brewery. Own processing.

The results of the ROA are not satisfactory for the brewery. During the whole period from 2011 till 2015 the indicator return on assets was negative. Nevertheless there was a positive tendency, as the highest value was in the last year -0.018%.

That indicator show us, that every 100 CZK invested in the Kynsperk brewery, unfortunately, brought so far loss, that is 0.018 CZK.

Because of the loss during the whole observed period from 2011 till 2015 the ROA was also negative.

For this indicator we can assume, among other things, that if the company wanted to got a foreign capital or a loan, it could have been a problem in obtaining it at local banks.

### ROE = Net income/ Equity (4.2.)

Table 11: ROE for Kynsperk Brewery for years 2011-2015 in ths.CZK.

	2011	2012	2013	2014	2015
Net income	-615	-2069	-2139	-2853	-73
Equity	-415	-2484	-4623	-7476	-7550
ROE	1.48	0.83	0.46	0.38	0.01

Source: Annual report of the Kynsperk brewery. Own processing.

The ROE indicator does not reach the results, that could satisfy investors. The highest result it has reached was in the year 2011 with the value of only 1.48%. which means, that from 100 CZK of the equity brought 1.48 CZK.

Because of the own equity decreased from 2011 till 2015, with net income/loss achieving the boarder of "0" it influenced the ROE indicator, that decreased. The lowest value was in year 2015 when it was 0.01%. For sure it could have discourage the owners from investment into their brewery. It can therefore be assumed that the owners can not be satisfied with the current situation.

$$ROS = Net income/ Sales$$
 (4.3.)

This indicator reflects the financial efficiency of the company. The calculated value tells us how high a profit on 1 CZK on sales. If the resulting value is negative, the company is at a loss.

Table 12: ROE for Kynsperk Brewery for years 2011-2015 in ths.CZK.

	2011	2012	2013	2014	2015
Net Income	-615	-2069	-2139	-2853	-73
Sales	0	0	2413	12944	8781
ROS	0	0	-0.88	-0.22	-0.008

Source: Annual report of the Kynsperk brewery. Own processing.

From the table no. we can see, that the Kynsperk brewery in the last two years of observed period improving the efficiency of production and profitability thanks to that sales grew.

The same to the previous indicators the net income influence the ROS. From 2011 till 2012 there were no sales at all, as the building of the Kynsperk brewery is from the past century, that is why it got them a time to reconstruct it and there were no space for equipment instalation. In the years 2013 - 2015 the ratio was negative, because of net income was negative. The less loss generated by 100 CZK of sales was in the year 2015 when the ROS reached the value -0.008%. However even that value is not a satisfied result.

In the year 2013 every hundred CZK of sales led to 0.886 CZK of loss. In the year 2014 the return on sales reached the value – 0.22%, meaning that every 100 CZK of sales resulted in a loss of a value 0.22 CZK.

## 4.5.2. Liquidity ratios

## **Current ratio = Current assets/ Current liabilities** (4.5.)

*Table 13: The Current ratio for the Kynsperk brewery in 2011-2015, in ths.CZK.* 

	2011	2012	2013	2014	2015
CA	293	433	2107	2117	3179
CL	1075	3250	7997	3561	2130
CR	0.27	0.13	0.26	0.59	1.49

Source: Annual report of the Kynsperk brewery. Own processing.

The current ratio is used to show the ability of the brewery to pay back its liabilities in case that all current assets will be immediately turned into cash. The current ratio can be used like a measurement of the company's financial health.

According to the current ratio in years 2011-2015 we can assume, that the brewery was not able to pay back its liabilities in the period 2011-2014.

Table 14: The Quick ratio for the Kynsperk brewery in 2011-2015, in ths. CZK.

	2011	2012	2013	2014	2015
CA	293	433	2107	2117	3179
Inventory	108	228	1385	1884	1833
CL	1075	3250	7997	3561	2130
QR	0.17	0.06	0.09	0.06	0.63

Source: Annual report of the Kynsperk brewery. Own processing

This indicator is used to determine short-term liquidity. Quick ratio reflects the company's ability to meet its short-term liabilities with the most liquid assets. For this reason, this ratio does not involve inventory from current assets. From the obtained results

we can see, that by subtracting of the company's inventory, the quick ratio is lower than the current ratio, in some cases in more than two times.

## 4.5.3. Activity ratios

Total assets turnover = Total sales/ Total assets (4.7.)

Table 15: Total asset turnover for the Kynsperk brewery in 2011-2015, in ths.CZK.

	2011	2012	2013	2014	2015
TS	0	0	2413	12944	8781
TA	660	766	3374	2653	3856
TAT	0	0	0.71	4.87	2.27

Source: Annual report of the Kynsperk brewery. Own processing.

The Asset turnover ratio reflects the amount of revenues generated from assets CZK. The total assets turnover ratio is a ratio, that shows us the effectiveness of the formation of assets.

Activity indicators show how good the brewery could use its assets

In 2011 and 2012 the total assets turnover ratio was "0", as there were no sales. Reconstruction of the main building in that years was held. In year 2013 1 CZK from assets brought back 0.71 CZK. In 2014, the indicator increased rapidly by almost 7 times, that was a good progress. That year 4.87 CZK of revenue was generated from 1 CZK of the assets. 2.27 CZK was generated next year.

The inventory turnover ratio shows how many times the average inventory of the enterprise is sold over a certain period of time. The good value of inventory turnover is less than 50 days.

## **Inventory turnover = (Inventory/ Total sales)\*365** (4.8.)

Table 16: Inventory turnover for the Kynsperk brewery in 2011-2015, in ths.CZK.

	2011	2012	2013	2014	2015
Inv.	108	228	1385	1884	1833
TS	108	228	1385	1884	1833
IT	0	0	209.50	53.12	76.19

Source: Annual report of the Kynsperk brewery. Own processing.

In our case it is clear that our ratio ranged from 210 to 54 days. In 2013, the ratio was more than 4 times greater, than optimum point and was 209.5 days. The brewery could have not prepared well after reconstruction and renovations, also that was a problem, due to such a thing, as a lot of new minibreweries established in that period (2011 - 24 minibreweries, 2012 - 24 new minibreweries, 2013 - 49 new ones). In year 2014 the ratio was almost the best during the whole observed period -53.12 days. In 2015 it was 76.19 days. The problem of the growth of the ratio is the increase of storage costs of inventory.

### Average collection period = (Total recievables/ Total sales)\*365 (4.9.)

Table 17: Average collection perod for the Kynsperk brewery in 2011-2015, in ths. CZK.

	2011	2012	2013	2014	2015
TR	84	114	278	195	1232
TS	0	0	2413	12944	8781
ACP	0	0	42.80	5.49	51.21

Source: Annual report of the Kynsperk brewery. Own processing.

The ratio – average collection period of data based on the results listed in Table 28, which reflects the trend of rising. The lowest ratio was in 2014, when it was only 5 days. The longest one was in 2015 - 51 days.

The results show that the payment discipline of their clients in a year 2014 was satisfied. We can assume, that it was because of the payment of invoices in cash, mostly. In

The brewery must pay attention to that ratio in case of its raising, because than could have happen, that the brewery would not have enough finance to cover its obligations.

## Creditors payment period = (Cuttent liabilities/ Total Sales)\*365 (4.10.)

Table 18: Creditors payment period for the Kynsperk brewery in 2011-2015, in ths. CZK.

	2011	2012	2013	2014	2015
CL	1075	3250	7997	3561	2130
TS	0	0	2413	12944	8781
СРР	0	0	1209.65	100.41	88.53

Source: Annual report of the Kynsperk brewery. Own processing.

The year 2013 had the longest creditors payment period when it was for 1209 days. The shortest period was in 2015, when liabilities were not paid for 88 days .

Despite the fact, that the average collection period was in average 33 days during the observed period the brewery was not able to cover its obligatories in relatively short or the same time period.

The brewery in that case is not a reliable business partner.

#### 4.5.4. Debt ratios

**Debt ratio = Total liabilities/ Total assets** (4.11.)

Table 19: The Debt ratio for the Kynsperk brewery in 2011-2015, in ths. CZK.

	2011	2012	2013	2014	2015
TD	1075	3250	7997	10129	11406
TA	660	766	3374	2653	3856
DR	1.62	4.24	2.37	3.81	2.95

Source: Annual report of the Kynsperk brewery. Own processing.

During the whole period – from 2011 till 2015 the indicator was bigger than 1. It mean, that the Kynsperk brewery had more debts than assets that is why the Kynsperk brewery is indebted.

### 4.6. Altman Z-Score

For production enterprises (shares of which are not listed on the stock exchange) 5-factor Altman Z-model is used. The formula of the five-factor model of Altman is this:

**Z-score** = 
$$0.717T1 + 0.847T2 + 3.107T3 + 0.42T4 + 0.998T5$$
 (4.12.)

Where,

**T1** = Working Capital / Assets

**T2** = Retained earnings / Assets

T3 = EBIT / Assets

**T4** = Equity / Liabilities

**T5** = Revenue / Assets

#### Interpretation of the result:

- From 1.23 and less "Red" zone, there is a probability of bankruptcy of the enterprise;
- From 1.23 to 2.9 "Gray" zone, border state, the probability of bankruptcy is not high, but it is not excluded;
- From 2.9 and more "Green" zone, low probability of bankruptcy

Table 20: Altman Z-Score for the Kynsperk brewery:

	2011	2012	2013	2014	2015	Z score mult.
T1	-1.185	-3.678	-1.746	-0.544	0.272	0.717
T2	0.000	-0.803	-0.795	-1.818	-1.991	0.847
Т3	-0.932	-2.701	-0.634	-1.075	-0.019	3.107
T4	-0.629	-3.243	-1.370	-2.818	-1.958	0.420
T5	0.000	0.000	0.715	4.879	2.277	0.998
total	-4.009	-13.071	-3.757	-1.586	-0.100	

Source: annual report of the Kynsperk brewery. Own processing

- ➤ 2011 Red" zone, there is a probability of bankruptcy of the enterprise
- ➤ 2012 Red" zone, there is a probability of bankruptcy of the enterprise
- ➤ 2013 Red" zone, there is a probability of bankruptcy of the enterprise
- ➤ 2014 Red" zone, there is a probability of bankruptcy of the enterprise
- ➤ 2015 Red" zone, there is a probability of bankruptcy of the enterprise

### 5. Conclusion

Production of the Kynsperk Brewery has six different types of beer, but in terms of volume for the brewery's flagship is the 10° light lager. That is more than one third of total production. On second place in terms of volume is 12° light lager, which has in the total production 27 percent.

The main aim of this thesis was to evaluate the economic indicators and financial analysis. Despite the fact that still is economic crisis and competitive breweries could achieve worse results than before, it is a not a satisfied result.

All results from the area of profitability based on a very high standard. If we evaluate the EBIT, we find that in the last three years of observed period it has increased by more than 20 times to loss – 73 ths. CZK. Unfortunately this is not a result of an extremely high level of ROA, ROE and ROS. For all these indicators, it is necessary to designate the value of the return on equity for the years 2011 and 2012, when it reached 1.43 or 0.83. That number means that from 1 out of every CZK owners (investors) gotannual net profit of approximately 1 CZK. But, unfortunatele, we could not speak about that, as the brewery at this year did not operate fully.

For activity indicators, liquidity and stability, we can re-evaluate not such a bad results, taking in consideration the fact, that the brewery is during examined period had been operated for 3 years only, with a historical building reconstructed. In particular indicator of inventory turnover, which value in the last two years are lower than 80. This indicator shows that inventories are tied up in the company less than 80 days.

Likewise, very good values reached the brewery in indicator of the creditors payment period average collection period.

Aggregate index as Altman bankruptcy model confirmed the expected results. Kynsperk Brewery therefore in bad financial health and there is a risk of bankruptcy.

Taking into account both the perspective of evaluation, we can say that the brewery is in not meanwhile in excellent position on the Czech beer market. The brewery do not achieve outstanding financial results, eventhough it is not at the expense of the quality of the beer produced and to consumers.

### 6. Recommendations

Management of the brewery should monitor particularly the inventory area. In this area, it is necessary to understand, whether it is necessary to hold such amount of inventories, and possibly change the way buying. Increasing inventory turnover increases profitability of the brewery and, consequently, they will increase the appreciation of the invested capital.

In order to use the brewery's growth potential preferences of special beers that the brewery is able in a relatively short time bring to the market. Outside the existing activities in the regional markets in the Czech Republic is recommended to check the possibility of entering on thick Prague market, where small regional breweries are very popular. The brewery also has potential for export growth, which may be due to their experience and contacts with fifferents distributors and intermediaries offer interesting export product.

Efficiency of the brewery is dependent on the volume of production and number of employees. Recommendations in this area is to focus on increasing the brewery's production, viz. recommendations above and the use of existing staff and their knowledge and experience. In case of further decline in production it will be need to look for savings and opportunities to streamline production with regard to the number of employees.

Recommendations regarding the profitability indicators are a synthesis of previous recommendations, which aim to improve profit from the brewery's operations, effective inventory management and increased revenue due to higher sales. Appropriate management step is to set goals and take steps to increase profitability. The optimal goal for the management is to set up a level of ROA at a level better, than it has competitors. Steps to increase profitability are cited above, which are increasing sales of own production on the domestic market and abroad, to better utilize the capacity of the brewery and work with the cost side.

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Appendix 4 – Pictures from own collection from the Kynsperk brewery

Appendix 1:
Assets of the Kynsperk Brewery in years 2011-2015.

Assets	2011	2012	2013	2014	2015
Total assets TA	660	766	3374	2653	3856
Long-term assets	348	260	252	536	677
Tangible assets	348	260	252	536	677
intangible assets	0	0	0	0	0
financial investments	0	0	0	0	0
current assets	293	433	2107	2117	3179
inventory	108	228	1385	1884	1833
long-term receivables	0	0	5	0	0
current receivables	84	114	278	195	1232
current financial assets	101	91	439	38	114
accurals	19	73	1015	0	0

Liabilities the Kynsperk Brewery in years 2011-2015.

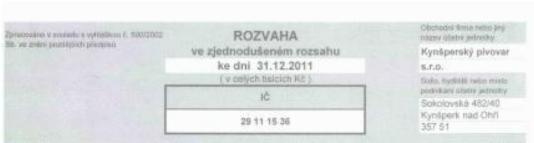
	2011	2012	2013	2014	2015
Total liabilities	660	766	3374	2653	3856
Own equity	-415	-2484	-4623	-7476	-7550
Legal capital	200	200	200	200	200
capital funds	0	0	0	0	0
reserves funds	0	0	0	0	0
retained earnings	0	-615	-2684	-4823	-7677
net income/loss	-615	-2069	-2139	-2853	-73
foreign source of					
cap.	1075	3250	7997	10129	11406
reserves	0	0	0	0	0
long-term liabilities	0	0	0	6568	7387
current liabilities	1075	3250	7997	3561	2130
bank loans	0	0	0	0	1889
accured liabilities	0	0	0		0

Appendix 2:

Income statement the Kynsperk Brewery in years 2011-2015.

	2011	2012	2013	2014	2015
Merchandise revenue	0	0	2413	12944	8781
Cost of merchandise sold	0	0	643	3857	2999
Profit margin	0	0	1770	9087	5782
Internal activities	0	0	4793	3581	6018
Operating and production expenses	299	938	5503	10905	8057
Value added	-299	-938	1060	1763	3743
Payroll	247	995	2945	4156	2768
Taxes and fees	2	12	12	51	58
Amortization	43	88	98	155	239
Reciepts from LLA and Raw materials	0	0	0	1	1
Book value of disposed	0	0	0	0	0
Change in reservs	0	0	0	0	0
Miscellaneous operating revenue	0	5	2	28	340
Miscellaneous operating expenses	18	25	32	396	689
Transfers of op. Revenue	0	0	0	0	0
Transfers of op. Expenses	0	0	0	0	0
Operating income	-609	-2053	-2025	-2966	330
other financial income	0	0	6	150	52
other financial expenses	6	16	120	37	341
transfer of financial expenses	0	0	0	0	0
income/loss of financial operations	-6	-16	-114	113	-342
income tax	0	0	0	0	0
income from ordinary activities	-615	-2069	-2139	-2853	-12
unusual/ extraordinary income	0	0	0	0	0
unusual/ extraordinary expenses	0	0	0	0	61
income tax on unusual income	0	0	0	0	0
unusual income /loss	0	0	0	0	-61
tax income deductible to partners	0	0	0	0	0
Net income/loss for fiscal period	-615	-2069	-2139	-2853	-73
Net income before taxes	-615	-2069	-2139	-2853	-73

## Appendix 3:



označ	AKTIVA	190	Béd	né účetní obdol	61	Min.oc. obdobi
	b		Brutto †	Korekoe 2	Netto 3	Netto 4
	AKTIVA GELKEM ( F, 02 + 03 + 07 + 12 )	001	703	43	680	0
A.	Pohledávky za upeaný záklední kapitál	002	0	0	0	0
6	Dlouhodobý majetek ( ř. 04 až 06 )	003	391	-43	348	0
B. 1.	Dicuhodobý nehmotný majetek	004	0	0	0	0
B. E.	Dlouhodobý hmotoý majetek	005	391	-43	348	. 0
B. III.	Disunodobý finanční majeteli	006	.0	0	.0	. 0
c.	Oběžná aktíva ( ř. 08 až 11 )	007	293	0	293	
c.i.	Zésoby	900	108	0	108	0
C. II.	Dleuhedobě pohledávky	009	0	0	0	0
C III.	Krátkodobě pohledávky	010	84	0	84	0
c. iv.	Kratkodoby finanční majelek	011	101	0	101	0
D. I.	Časová rozlišení	012	10	0	19	0

oznać	PASIVA	faid	Bédné účetní období 5	Minule üčetní období 6
	PASIVA CELKEM (F. 14 + 20 + 25)	013	880	0
A.	Vlastní kapitál (ř. 15 až 19 )	014	-415	0
A. L.	Zikladni kapital	015	200	0
A. II.	Kapitalové fordy	016	0	.0
A. III.	Rezervní fundy, nedělišelný fond a ostatní fondy ze zniku	017	0	0
A. IV	Výsledek hospodaření minulých let	018	0	0
A.V.	Výsledek hospadaření běžného účetního období (+ / -) ( f, 01 - 15 - 16 - 17 - 18 - 20 - 25 )	019	-615	0
В	Cizi zdroje ( ?. 21 až 24 )	020	1 975	. 0
B. L.	Rezervy	021	D	. 0
B. II.	Dlouhodobé závazky	022	0	0
B. III.	Krétkodobé závazky	023	1.075	- 0
B. IV.	Вапкоміі (кубу в уўропосі	024	0	a
C.	Časové rozlišení	025	0	.0

Particular spracticals ACPEAT FM, decreas, scent a austropia Naticelar, distribution TR. Prote 8-Directiv, wine aspectful or 1.1.3

Zpracovina v soutate a vyhtetkov č. 500/2010 So. ve soliki postiljiloh předsiká

## VÝKAZ ZISKU A ZTRÁTY ve zjednodušeném rozsahu

ke dni 31,12.2011 ( v celych tistoich Kč.)

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Osmani fire seta joj otza otta johoby Kynšperský plvovar

Statu. Injulitate netus retus produktare učateli jednostry Solistiovaska 482/40 Kyniliperis raad Ohfi 357 S1

Označeni	TEXT	Ĉisto	Skulledrasst v Dát	tnim olodebi
	2000	radku	aledovienim	ninalim
- 8	- t	-0	- 1	2
1	Tritty za prodej zbodi	81	0	- 0
k.	Nashefy vyneložené na prodoné zboží	02	0	- 5
+	Obchodní marže ( f. 01 - 02 )	69	0	
11.	Výkony	04	0	- 0
0.	Výkonová sgotřoba	05	299	
+	Přístená hodnote ( F. 63 + 64 - 05 )	00	-299	
C.	Csobri politisty.	07	247	
p.	Check a protetry	081	2	
E	Osbey doubeoldens natmomens a renomens majeths	69	43	
is.	Tržby z prodeje dlouhostobiho majetku a materialu.	10	0	- 1
F.	Zústatiová cera prominére rhounoriosáno Wajatko a materialiu	-11	0	- (
a	Zinene stavu recerv a coravných položov v provocel obřatů a kongleurom nakledo přátím umbol ( + i - )	12	0	
. IV.	Ostatní provozní výnosy	13	. 0	- 4
H	Oslabil provized naklady	14	18	- (
V.	Pfevoit provionich výriosů	15	0	
L	Plevud provincech nákladů	16	0	. (
	Provozni výsledek hospodaření (f. 06 - 07 - 08 - 09 + 10 - 11 - 12 + 13 - 14 + (-15) - (-15 ) )	17	-609	-
W.	Trzby z prodes renných papitů a podřů	18	0	
1	Progené cenné papiry a pudity	19	0	
. Will	Výhosy z dlovhodoběho finančního majetku	20	0	. (
VIII	Wyrosy z králkosdobáho finančního majelku	21	0	
K.	Náktady z krunčního májelku.	22	0	- (
IX.	Wyrosy z přecenění cermých prepriú a demoktů	23	- 0	(
t.	Náklady z přejanění pomí jeh popitů a detivátí.	24	0	
M	Změna stavu movní a rezwiných položek va finančel občest (+7+3	25	0	
×	Wynosovit draky	26	0	
N	Nakladové úroky	27	0	

PROTEST ANALYSIS ASPECT INC SOCIAL STORY S AUTHORS ASSESSED DEVIATIONS IN FISH OF CONTROL OF PROTESTS OF

Ophadeni	TEXT	Cleto	Skulečnost v sčetnim obdobi		
	b	ryidku 6	sledovaném	minutén 2	
30.	Ostátní finanční výrtosy	28	10		
0	Ostatrii financini näätasty	29	é é	. 0	
201	Převod (krandných výreasů	30	.0	. 0	
P	Effected financinists ruiklants	31	0		
4	Finantini výsledek hospodařaní ( ř. 18-19+20×21-22×23-24-25+25-27+28-29+(-30)-(-31) )	32	-6		
g.	Deli a příjmů za běžnou činnost	-35	0		
2.0	Výsledek hospodaření za běžnou činnost ( ř. 17 + 32 - 33 )	34	-615		
2011	Mirrofadné výnosy	35	0	0	
R.	Minufache naktudy	36	0		
8.	Dań z prijeró z mimożadne čionosti	37	0	- 0	
4	Mimořádný výsledek hospoduření (7. 35 - 36 - 37)	38	- 6	-0	
T.	Flevod podlu na výsledku hospodalaní spoječníkám (+/-)	29	0	0	
***	Výsledek hospodaření za účetní období (+/-) (7.34+38-39)	40	-615		
+010	Výeledek hospodaření před zdaněním (+/-) ( ř. 40 + 33 + 37 + 39 )	41	-615		

Právní forma účetní jednotky	apolečnost s nučením omezeným
Předmět podníkání nebo jiné činnosti :	physiomictal a sladovnictvi

Control of the Party	Podpiecký znavom sudutaměni organu nebo typona osob plaste jednotkou	Producesy agencies country expressions as pentasses (Costal adultity)	Sestavers'
	All .	W.	31.03.12
	- (1)	Q I	
	- (f)	The state of the s	

Portrall/ zaracovale ASPEN7 rNJ, diatoria, sčetni s audiorska karceliir, čisonorska 32. Plana 5-Drivnov, sveiv augestyvnoz 3./.3 Zpracovam v soubdu s vyhlatkou č.500/2002 St. ve znění poudějších předpad

### ROZVAHA

ve zjednodušeném rozsahu ke dni 31.12.2012

I v celých tisloich Kč

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Obchodné toma nebu pry názáv účetné jednotky

Kynšperský pivovar s.r.o.

flate, bydelf reconstraint potestant utern actiony Sokolovská 482/40 Kynáperk nad Otří 357 51

cznać	AKTIVA	nid	842	nė ūčetní obdo	bi	Min.üč. codobí
	ь	0	Brutto 1	Korekoe 2	Netto 3	Netto 4
	AKTIVA CELKEM ( f. 02 + 03 + 07 + 12 )	001	897	-131	766	680
A	Pohledávky za upsarý základní kapitál	002	0	0	0	- 0
8.	Dlouhodobý majetek ( ř. 04 až 06 )	003	391	-131	280	345
B. I.	Dłoubadobý netrnotní majetek	004	0	.0	0	0
6. II.	Dlouhadobý hmotný majetek	005	391	-131	260	348
B. HI	Dlouhodobý finanční najetsk	006	0	0	0	
C.	Oběžná aktiva ( f. 08 sž 11 )	007	433	0	433	293
C.I.	Zásoby	800	228	0	228	108
C. II.	Diouhodobě pohledávty	009	0	0	0	
с. п.	Krátkodobé potředávky	010	114	0	114	84
C. IV.	Krátkodobý finanční majetek	011	91	0	91	101
0.1.	Časové rozlišení	012	73	0	73	19
oznać	PASIVA	fad	Béžné s	idean	Minulé (	četní

označ a	PASIVA b	fád c	Béżné účetní období 5	Minulé üčetní období 6
	PASIVA CELKEM ( f. 14 + 20 + 25 )	013	766	-860
A:	Vlastní kapitál (ř. 15 až 19.)	014	-2 184	415
A.I.	Základní kapitál	015	200	200
A. II.	Kapitálová fondy	016	0	. 0
A. III.	Rezervní fondy, nedělielný fond a ostatní fondy za získu	017	0	0
A.IV.	Výsledek hospodaření minulých lot	018	-615	0
A. V.	Výsledek hospodařerí trěžného účetního období (+/-) (2. 01 - 15 - 16 - 17 - 18 - 20 - 25 )	019	-2 069	-615
0	Cizi zdroje ( f. 21 až 24 )	020	3 250	1-075
B. I.	Rezervy	021	0	0
8. 11.	Dlouhodobé závszky	022	0	0
B. III.	Krátkodobě závazky	023	3 250	1.075
B. IV.	Bankovní úvěry a výponoci	024	0	0
Ċ.	Časové rozlišení	025	0	0

Formular covaccionale ASPERT HM, statissia, sciatri a auditorana nuncelar. Britatorara 39, Pratra 6-Briestov, viene asperation car

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Zpracováno v soukadu s vyhládkou č. noov2002 Sb. vé znění pozdějších předplaú

# VÝKAZ ZISKU A ZTRÁTY

ve zjednodušeném rozsahu ke dni 31.12.2012 ( v celých tisloich Kč )

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Okchodní firma nebo jiný název účelní jednoky Kynáperský plvovar

s.r.o.

Sids: bysklité rebo místo podníkání účetní jednotny

Sokolovská 482/40 Kynšperk nad Ohři 357 51

Označení	TEXT	Čísto	Skutečnost v úče	tnim obdobi
	19000	//adku	siedovaném	minulém
-	b	C.	1	2
1.	Tržby za prodej zboži	01	0	
Α.	Näklady vyneložené na prodané zboží	02	0	
+	Obchodní marže (ř. 01 - 02)	03	0	
11.	Výkony	.04	0	0
В	Výkonová spotřeba	05	938	299
4	Přídaná hodnota (7. 03 + 04 - 05 )	06	-938	-299
C	Osobni naktady	07	995	247
D.	Dané a poplatky	08	12	2
E.	Odpisy dlouhodoběho zehmotného a hmotného mejelku	09	88	43
III.	Trdby z prodeje dlouhodoběho majetku a materiálu	10	0	0
F.	Zústatková cena prodaného dlouhodobého majetku a marenák;	11	0	0
G.	Změna stavu rezerv a opravných položek v provozní oblasť a komplesních nakladů přištích období ( $+/-$ )	12	0	.0
īV.	Ostatní provozní výnosy	13	5	0
H.	Ostatrii provisini niiklady	14	25	18
V.	Převod provozních výnosů	15	0	0
L.	Převod provozních nákladů	16	0	-0
*	Provozní výsledek hospodaření ( f. 05 - 07 - 08 - 09 + 10 - 11 - 12 + 13 - 14 + (-15) - (-16 ) )	17	-2 053	-609
VI.	Tržby z prodeje cenných papírů a podlů	18	0	0
J.	Prodané cenné paptry a podřy	19	0	0
VII	Výnosy z dlouhodoběho finančního maješku	20	0	0
VIII.	Výricey z krátkoodoběho finančního majetku	21	0	0
K.	Máliledy z finančního majetku	22	0	0
EX.	Výhosy z přecenění cenných papírů a denvátů	23	0	0
_ 1	Mákledy z přecenění cenných papírů a derivatů	24	0	0
M.	Zinéna stavu rezerv a opravných položek ve finanční oblasti ( + / - )	25	0	0
X.	Výnosové ároky	26	0	0
N.	Nakladové úroky	27	0	0

Formulář zpracovala ASPERT HM, dovlová, účetní a audžorská kancalář. Setutorská 39, Praha 6-Dřevnou, seval aspolitim cz 2.13

Označeni	TEXT	Cista	Skutečnost v úče	tnim obdobi
	b	řádku c	sledovaném 1	minulém 2
XI.	Ostatní finanční výnosy	28	0	0
0.	Ostatni finančni naklady	29	16	6
XII	Převod finančních výnosů	30	0	c
P.	Převod finančních nákladů	31	0	0
*	Finanční výsledek hospodaření ( ř. 18-19+20+21-22+23-24-25+26-27+28-29+(-30)-(-31) )	32	-16	-6
Q.	Dań z příjmů za běžnou čínnost	33	0	0
**	Výsledek hospodaření za běžnou činnost (ř. 17 + 32 - 33 )	34	-2 069	-615
XIII.	Mimořádně výnosy	35	0	0
R	Mimofadné náklady	36	0	0
S	Dañ z příjmů z mimořádné činností	37	0	0
	Mimořádný výsledek hospodaření (f. 35 - 36 - 37)	38	0	
T.	Fravod podľu na výsladku hospoduřecí společníkům (+/-)	39	0	0
***	Výsledek hospodaření za účetní období (+/-) (f.34+38-39)	40	-2 069	-615
0101	Výsledek hospodaření před zdaněním (+J-) ( ř. 40 + 33 + 37 + 39 )	41	-2 069	-615

Právní forma účetní jednotky :	společnost s ručením omezeným
Předmět podníkání nebo jiné činnosti :	pivovarnictví a sladovnictví

Okamza: sestaveni	Podpisový záznam ceoby odpovětíné za sestavení účetní závětky	Podpisový záznam statutárního orgánu nebo fyzické osoby, klará je účení jednotkou
03.04.13	HP	41
	4	#/
		Ο. /

Formula! Episcovala ASPEKT HM. dailova, sčetiri a auditorská kancelá! Bělohordká/39. Praha 6 Břevnov, www.aspektim.cz 3/3

Zpracovano v souladu s vyhiliškou č. 500/2002 Sb. ve znění pozdějších předpisů

Časové rozlišení

## ROZVAHA ve zjednodušeném rozsahu

ke dni 31.12.2013 ( v celých tisících Kč )

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Obchodní říma nebo jiný rstatív účetní jednotky

Kynšperský pivovar

Side, bydaté nebo meda podnikani účetni jednosky Sokolovská 482/40 Kynšperk nad Ohři 357 51

označ	AKTIVA	řád	Béž	bi	Min.úč. období	
	b	c	Brutto 1	Korekoe 2	Netto 3	Netto 4
	AKTIVA GELKEM ( 7. 02 + 03 + 07 + 12 )	001	3 603	-229	3 374	766
Α.	Pohledávky za upsaný základní kapitál	002	0	0	0	0
В.	Dlouhodobý majetek ( ř. 04 až 06 )	003	481	-229	252	260
B. L.	Dlouhodobý nehmotný majetek	004	0	0	0	0
B. II.	Dlouhodobý hmotný majetek	005	481	-229	252	260
B. III.	Dlouhodobý finanční majetek	006	0	0	0	0
C.	Oběžná aktíva ( f. 08 až 11 )	007	2 107	0	2.107	433
C. L	Zásoby	008	1 385	0	1 385	228
C. II.	Dlouhodobé pohledávky	009	5	0	5	0
C. III.	Krátkodobě pohledávky	010	278	0	278	114
C. IV.	Krátkodobý finanční majetek	011	439	0	439	91
D. L.	Časové rozlišeni	012	1 015	0	1 015	73
označ	PASIVA	rád	Běžně	2000	Minulé	
8	b	c	období 5		období 6	
	PASIVA CELKEM ( f. 14 + 20 + 25 )	013	3 374		76	
A.:	Vlastní kapitál (ř. 15 až 19 )	014		-4 623	-2 48	
A. L.	Základní kapitál	015		200	20	
A. II.	Kapitálové fondy	016		0		
A. III.	Rezervní fondy, nedělitelný fond a ostatní fondy ze získu	017		0	-	
A. IV.	Výsledek hospodaření minulých let	018		-2.684	-615	
A. V.	Výsledek hospodaření běžného účetního období (+ / - ) ( ř. 01 - 15 - 16 - 17 - 18 - 20 - 25 )	019	-2 139		-2 069	
В.	Cizi zdroje ( f. 21 až 24 )	020		7 997		3 250
B. I.	Rezervy	021		0		
B. II.	Dlouhodobě závazky	022		0	116	- 0
B. III.	Krátkodobé závazky	023		7 997		3 250
B. IV.	Bankovní úvěry a výpomoci	024		0	1	0
		100000				100000000000000000000000000000000000000

Formulaf zpracovala ASPERT HM, darlova, lačební a auditorská kancelař, Bělohorská 39, Praha 6-Břavnov, livov supektivnicz

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Zpracováno v souladu s vyhláškou č. 500/2002 Sa. ve znění pozdějších předpisů

## VÝKAZ ZISKU A ZTRÁTY ve zjednodušeném rozsahu ke dni 31.12.2013 ( v celých tisících Kč )

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29 11 15 36

Obchodní firma nebo jiný název učetní jednotky

Kynšperský pivovar

Skite, bydištá rebo neste podrekání účetní. jednotky

Sokolovská 482/40

Kynšperk nad Ohři 357 51

Označení	TEXT	Člslo	Skutečnost v úče	tnim obdobi
а	b	řádku c	sledovaném 1	minulém 2
L	Tržby za prodej ztroži	01	2 413	. 0
A.	Náklady vynaložené na prodané zboží	02	643	. 0
+	Obchodní marže ( ř. 01 - 02 )	03	1 770	
R.	Výkony	04	4 793	0
В.	Výkonová spotřeba	05-	5 503	938
+:	Přídaná hodnota (ř. 03 + 04 - 05)	06	1 060	-938
C.	Osobni náklady	07	2 945	995
D.	Dané a poplatky	08	12	12
E.	Odpisy dlouhodoběho nehmotněho a hmotného majetku	09	98	88
101.	Tržby z prodeje dlouhodobého majetku a materialu	10	0	0
F.	Zústatková čena prodeného dlouhodobého majetku a materiálu	11	0	0
G.	Změna stavu rezerv a opravných položek v provozní oblasti a komplexních nákladů přištích období ( + / - )	12	0	0
TV.	Ostatni provozni výnosy	13	2	5
H.	Ostatní provozní náklady	14	32	25
V.	Převod provozních výnosů	15	0	0
L	Převod provozních nákladů	16	0	0
	Provozní výsledek hospodaření (ř. 06 - 07 - 08 - 09 + 10 - 11 - 12 + 13 - 14 + (-15) - (-16))	17	-2 025	-2 053
VI.	Tržby z prodeje cenných papírů a podlíů	18	0	0
J.	Produné cenné papiny a podíly	19	0	0
VII.	Výnosy z dlouhodobého finančního majetku	20	0	0
VIII.	Výnosy z krátkoodobého finančního majetku	21	0	0
K.	Nákledy z finančního majelku	22	0	0
IX.	Výnosy z přecenění cenných papírů a derivátů	23	0	0
4	Náklady z přecenění cenných papírů a denvátů	24	0	. 0
M.	Změna stavu rezerv a opravných položek ve finanční oblasti ( + /- )	25	0	0
X	Výnosové úroky	26	- 0	0

Označeni	TEXT	Čislo	Skutečnost v úče	tnim obdobi
	365	řádku	sledovaném	minuléen
2	ь	0	1	2
XI.	Ostatní finanční výriosy	28	6	0
0.	Ostatni finančni náklady	29	120	16
XII.	Převod finančních výnosů	30	0	0
P.	Převod finančních nákladů	31	0	0
*	Finanční výsledek hospodaření ( ř. 18-19+20+21-22+23-24-25+28-27+28-29+(-30)-(-31) )	32	-114	-16
0.	Daň z příjmů za běžnou činnost	33	0	0
**	Výsledek hospodaření za běžnou činnost (ř. 17 + 32 - 33 )	34	-2 139	-2.069
XIII.	Mimořádně výnosy	35	0	0
R.	Mimořádně něklady	36	0	0
S.	Dań z příjmů z mimořádně činnosti	37	0	0
	Mimořádný výsledek hospodaření (ř. 35 - 36 - 37)	38	0	0
T:	Převed pocilu na výsledku hospodáření společníkům (+7-)	39	0	0
***	Výsledek hospodaření za účetní období (+/-) (ř.34+38-39)	40	-2 139	-2 069
	Výsledek hospodaření před zdaněním (+/-) ( ř. 40 + 33 + 37 + 39 )	41	-2 139	-2 089

Právní forma ú	četní jednotky :	společnost s ručením amezeným
Předmět podní	kānī nebo jinė činnosti :	pivovarníctví a sladovnictví
27220		
Okamžik Podpi iestaveni	sový záznam osoby odpovědně za seutovení účejání závěnky	Podpisový záznam statutárního orgánu nebo fyzicke osoby, která je sobiní jednotkou

Rozvaha podle Přílohy č. 1 vyhlášky č. 500/2002 Sb.

Účetní jednotka doručí účetní závěrku současně s doručením daňového přiznání za daň z příjmů

1 x příslušnému finančnímu úřadu

### ROZVAHA ve zjednodušeném rozsahu

ke dni 31.12.2014 ( v celých tisících Kč )

Rok	Měsíc	IČ
2014		29111536

Obchodní firma nebo jiný název účetní jednotky

Kynšperský pivovar s.r.o.

Sídlo nebo bydliště účetní jednotky a místo podnikání liší-li se od bydliště

Označení	AKTIVA	čís. řád.	Bě	žné účetní období	9	Minulé úč. obdob	
а	b	c rad.	Brutto 1	Korekce 2	Netto 3	Netto 4	
	AKTIVA CELKEM	1	3 037	-384	2 653	3 266	
A.	Pohledávky za upsaný základní kapitál	2					
B.	Dlouhodobý majetek	3	920	-384	536	252	
B. I.	Dlouhodobý nehmotný majetek	4					
B. II.	Dlouhodobý hmotný majetek	5	920	-384	536	252	
B. III.	Dlouhodobý finanční majetek	6					
C.	Oběžná aktiva	7	2 117	- 0	2 117	1 999	
C. I.	Zásoby	8	1 884		1 884	1 385	
C. II.	Dlouhodobé pohledávky	9				74	
C. III.	Krátkodobé pohledávky	10	195	-	195	101	
C. IV.	Krátkodobý finanční majetek	11	38	-	38	439	
D. I.	Časové rozlišení	12				1 015	

Označení	PASIVA	čís. řád.	Stav v běžném účetním období	Stav v minulém účetním období
а	b	c	5	6
- 0	PASIVA CELKEM	13	2 653	3 266
Α.	Vlastní kapitál	14	-7 476	-4 624
A. I.	Základní kapitál	15	200	200
A. II.	Kapitálové fondy	16		
A. III.	Fondy ze zisku	17		
A. IV.	Výsledek hospodaření minulých let	18	-4 823	-4 824
A. V. 1.	Výsledek hospodaření běžného účetního období /+ -/	19	-2 853	
A. V. 2.	Rozhodnuto o zálohách na výplatu podílu na zisku /-/	26		
B.	Cizí zdroje	20	10 129	7 890
B. I.	Rezervy	21		
B. II.	Dlouhodobé závazky	22	6 568	6 466
B. III.	Krátkodobé závazky	23	3 561	1 424
B. IV.	Bankovní úvěry a výpomoci	24		
C. I.	Časové rozlišení	25		

Výkaz zisku a ztráty ve druhovém členění podle Přílohy č. 2 vyhlášky č. 500/2002 Sb.

Účetní jednotka doručí účetní závěrku současně s doručením daňového přiznání za daň z příjmů

1 x příslušnému finančnímu úřadu

#### VÝKAZ ZISKU A ZTRÁTY ve zjednodušeném rozsahu

ke dni 31.12.2014 ( v celých tisících Kč )

Rok	Měsíc	IČ
2014		29111536

Obchodní firma nebo jiný název účetní jednotky

Kynšperský pivovar s.r.o.

Sídlo nebo bydliště účetní jednotky a místo podnikání liší-li se od bydliště

Označení	TEXT	číslo	Skutečnost v účetním období	
	TEXT	řádku	běžném	minulém
8	ь	С	1	2
I.	Tržby za prodej zboži	1	12 944	
A	Náklady vynaložené na prodané zboží	2	3 857	
+	Obchodní marže	3	9 087	
II.	Výkony	4	3 581	
В.	Výkonová spotřeba	5	10 905	
+	Přidaná hodnota	8	1 763	
C.	Osobní náklady	7	4 156	
D.	Dané a poplatky	18	51	
E.	Odpisy dlouhodobého nehmotného a hmotného majetku	9	155	
III.	Tržby z prodeje dlouhodobého majetku a materiálu	10	1	
F.	Zůstatková cena prodaného dlouhodobého majetku a materiálu	11	Ì	
G.	Změna stavu rezerv a opravných položek v provozní oblasti a komplexních nákladů příštích období Ostatní provozní výnosy	12		
IV.	Ostatní provozní výnosy	13	28	
H.	Ostatní provozní náklady	14	396	
V.	Převod provozních výnosů	15	540.00	
T.	Převod provozních nákladů	16		
	Provozní výsledek hospodaření	17	-2 966	

Označení	TEXT	číslo	Skutečnost v účetním období		
9	ь	řádku	běžném 1	minulém 2	
VI.	Tržby z prodeje cenných papírů a podílů	18			
J.	Prodané cenné papíry a podíly	19	*		
VII.	Výnosy z dlouhodobého finančního majetku	20	-		
VIII.	Výnosy z krátkodobého finančního majetku	21	-		
K	Náklady z finančního majetku	22			
IX.	Výnosy z přecenění cenných papírů a derivátů	23	-		
L	Náklady z přecenění cenných papírů a derivátů	24			
M.	Změna stavu rezerv a opravných položek ve finanční oblasti	25			
X	Výnosové úroky	28			
N.	Nákladové úroky	27			
XI.	Ostatní finanční výnosy	28	150		
0.	Ostatní finanční náklady	29	37		
XII.	Převod finančních výnosů	30			
P.	Převod finančních nákladů	31			
•	Finanční výsledek hospodaření	32	113		
Q.	Daň z příjmů za běžnou činnost	33			
**	Výsledek hospodaření za běžnou činnost	34	-2 853		
XIII.	Mimořádné výnosy	35			
R.	Mimořádné náklady	36	-23		
S.	Daň z příjmů z mimořádné činnosti	37			
*	Mimořádný výsledek hospodaření	38			
T.	Převod podílu na výsledku hospodaření společníkům (+/-)	39			
***	Výsledek hospodaření za účetní období (+/-)	40	-2 853		
****	Výsledek hospodaření před zdaněním	41	-2 853		

Rozvaha podle Přílohy č. 1 vyhlášky č. 500/2002 Sb.

Účetní jednotka doručí účetní závěrku současně s doručením daňového přiznání za daň z příjmů

1 x příslušnému finančnímu úřadu

### ROZVAHA ve zjednodušeném rozsahu

ke dni 31.12.2015 ( v celých tisících Kč )

Rok	Měsíc	IČ
2015		29111536

Obchodní firma nebo jiný název účetní jednotky

Kynšperský pivovar s.r.o.

Sídlo nebo bydliště účetní jednotky a místo podnikání liší-li se od bydliště

Označení	AKTIVA	čís. řád.	Bě	žné účetní období		Minulé úč. obdob
а	b	c c	Brutto 1	Korekce 2	Netto 3	Netto 4
	AKTIVA CELKEM	1	4 479	-623	3 856	2 653
A.	Pohledávky za upsaný základní kapitál	2				
В.	Dlouhodobý majetek	3	1 300	-623	677	536
B. I.	Dlouhodobý nehmotný majetek	4				1
B. II.	Dlouhodobý hmotný majetek	5	1 300	-623	677	536
B. III.	Dlouhodobý finanční majetek	6				
C.	Oběžná aktiva	7	3 179		3 179	2 117
C. I.	Zásoby	8	1 833		1 833	1 884
C. II.	Dlouhodobé pohledávky	9	7	-		8
C. III.	Krátkodobé pohledávky	10	1 232		1 232	195
C. IV.	Krátkodobý finanční majetek	11	114		114	38
D. I.	Casové rozlišení	12	-	-		

Označení	PASIVA	čís. řád.	Stav v běžném účetním období	Stav v minulém účetním období
а	b	С	5	6
8	PASIVA CELKEM	13	3 856	2 653
A.	Vlastní kapitál	14	-7 550	-7 476
A. I.	Základní kapitál	15	200	200
A. II.	Kapitálové fondy	16		
A. III.	Fondy ze zisku	17		
A. IV.	Výsledek hospodaření minulých let	18	-7 677	-4 823
A. V. 1.	Výsledek hospodaření běžného účetního období /+ -/	19	-73	-2 853
A. V. 2.	Rozhodnuto o zálohách na výplatu podílu na zisku /-/	26		E
В.	Cizí zdroje	20	11 406	10 129
B. I.	Rezervy	21		
B. II.	Dlouhodobé závazky	22	7 387	6 568
B. III.	Krátkodobé závazky	23	2 130	3 561
B. IV.	Bankovní úvěry a výpomoci	24	1 889	
C. I.	Časové rozlišení	25		8

Výkaz zisku a ztráty ve druhovém členění podle Přílohy č. 2 vyhlášky č. 500/2002 Sb.

Účetní jednotka doručí účetní závěrku současně s doručením daňového přiznání za daň z příjmů

1 x příslušnému finančnímu úřadu

### VÝKAZ ZISKU A ZTRÁTY ve zjednodušeném rozsahu

ke dni 31.12.2015 ( v celých tisících Kč )

Rok	Měsíc	IČ	
2015		29111536	

Obchodní firma nebo jiný název účetní jednotky

Kynšperský pivovar s.r.o.

Sídlo nebo bydliště účetní jednotky a místo podnikání liší-li se od bydliště

Označení	TEXT	číslo	Skutečnost v účetním období	
8	ь	řádku	běžném 1	minulém 2
1.	Tržby za prodej zboží	1	8 781	12 944
A.	Náklady vynaložené na prodané zboží	2	2 999	3 857
+	Obchodní marže	3	5 782	9 087
H.	Výkony	4	6 018	3 581
В.	Výkonová spotřeba	5	8 057	10 905
+	Přidaná hodnota	8	3 743	1 763
C.	Osobní náklady	7	2 768	4 158
D.	Dané a poplatky	8	58	51
E.	Odpisy dlouhodobého nehmotného a hmotného majetku	9	239	155
UL.	Tržby z prodeje dlouhodobého majetku a materiálu	10	1	.1
F.	Zůstatková cena prodaného dlouhodobého majetku a materiálu	11		
G.	Zména stavu rezerv a opravných položek v provozní oblasti a komplexních nákladů příštích období	12		
IV.	Ostatni provozni vynosy	13	340	28
H.	Ostatní provozní náklady	14	689	398
V.	Převod provozních výnosů	15		
I.	Převod provozních nákladů	16		
•	Provozní výsledek hospodaření	17	330	-2 968

Označení	TEXT	číslo	Skutečnost v účetním období	
8	b	řádku	běžném 1	minulém 2
VI.	Tržby z prodeje cenných papírů a podílů	18	- 10	4380
J.	Prodané cenné papíry a podíly	19	-	
VII.	Výnosy z dlouhodobého finančního majetku	20		
VIII.	Výnosy z krátkodobého finančního majetku	21		
K	Náklady z finančního majetku	22		
IX.	Výnosy z přecenění cenných papírů a derivátů	23	1	
L.	Náklady z přecenění cenných papírů a derivátů	24	-	
M.	Změna stavu rezerv a opravných položek ve finanční oblasti	25		
X.	Výnosové úroky	28	-	
N.	Nákladové úroky	27	53	
XI.	Ostatní finanční výnosy	28	52	150
0.	Ostatní finanční náklady	29	341	37
XII.	Převod finančních výnosů	30	-	
P.	Převod finančních nákladů	31		
*	Finanční výsledek hospodaření	32	-342	113
Q.	Daň z příjmů za běžnou činnost	33		
**	Výsledek hospodaření za běžnou činnost	34	-12	-2 853
XIII.	Mimořádné výnosy	35		
R.	Mimořádné náklady	38	61	
S.	Dań z příjmů z mimořádné činnosti	37		
	Mimořádný výsledek hospodaření	38	-61	
T,	Převod podílu na výsledku hospodaření společníkům (+/-)	39		
***	Výsledek hospodaření za účetní období (+/-)	40	-73	-2 853
***	Výsledek hospodaření před zdaněním	41	-73	-2 853

## Appendix 4:











