

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Economics**



**Bachelor Thesis**

**Analysis of company EvoBus Ltd.**

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**CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE**

Department of Economics  
Faculty of Economics and Management

# **BACHELOR THESIS ASSIGNMENT**

Včeláková Zuzana

Economics and Management

Thesis title

**Analysis of company EVOBUS Ltd.**

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## **Objectives of thesis**

Evaluate financial and economic situation of Evobus s.r.o. company. Assess impact of economic crisis upon the company.

## **Methodology**

Literature review is conducted using methods of abstraction, induction, deduction, synthesis and extraction. Analytical section is done using methods of financial and economic analysis, i.e. calculation of indices of rentability, profitability, liquidity and supply demand analysis.

## **Schedule for processing**

9/2013 literature review

11/2013 thesis submission

**The proposed extent of the thesis**

35 pages

**Keywords**

EVOBUS, financial analysis, economic analysis, Altman's index, horizontal and vertical analysis

**Recommended information sources**

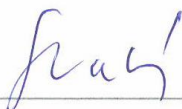
- [1] KOOP, Gary. Analysis of economic data. Chichester: John Wiley & Sons, 2009. ISBN 978-0-470-71389-1.
- [2] REES, Bill. Financial analysis. London ; New York ; Toronto: Prentice-Hall, 1995. ISBN 0-13-288283-3.
- [3] SEDLÁČEK, Jaroslav. Účetní data v rukou manažera : finanční analýza v řízení firmy. 2. doplněné vyd. Brno : Computer Press, 2001. ISBN 8072265628.
- [4] WHITE, Gerald. The analysis and use of financial statements. New York: John Wiley & Sons, 1994. ISBN 0-471-02419-8.

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March 2014



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Dean

Prague February 27. 2014

I declare that this bachelor thesis “Analysis of company EvoBus Ltd. “is entirely my own composition under the supervision of the supervisor of my thesis, Ing. Petr Procházka, MSc, Ph.D., and that literature and other information sources I am using, are cited in the work and listed in the bibliography at the end of the work.

In Prague 17<sup>th</sup> March 2014

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As well I would like to thank to the management of EvoBus Bohemia Ltd. for providing me information about EvoBus Bohemia Ltd.

## **Analysis of company EvoBus Ltd.**

### **Analýza obchodní společnosti EvoBus s.r.o.**

#### **Abstract**

The goal of the thesis “Analysis of company EvoBus Ltd.” is to evaluate economic and financial situation of EvoBus Bohemia Ltd. and assess an impact of financial crisis 2008 and 2010 upon the company. The thesis is divided into two sections, theoretical and practical. The theoretical part describes different methods of financial analysis. The practical part is focused first on the description of the company itself, its background and its position on the market. The analytical part is done by using selected methods of financial analysis that were described in literature review. All findings from the previous sections are summarized and analysed. In the conclusion is evaluated situation of the company, impact of the financial crisis and are suggested recommendations for improving the situation of the enterprise.

#### **Souhrn**

Cílem bakalářské práce “Analýza obchodní společnosti EvoBus s.r.o.“ je vyhodnotit ekonomickou a finanční situaci společnosti EvoBus Bohemia s.r.o. a posoudit vliv finanční krize v letech 2008 a 2010 na společnost. Práce je rozdělená na dvě části, teoretickou a praktickou. V teoretické části jsou popsány různé metody finanční analýzy. Praktická část se v první řadě zaměřuje na představení společnosti samotné, její historie a pozice na trhu. Analytická část je vypracována za použití vybraných metod finanční analýzy, které byly popsány v literární rešerši. Všechny poznatky z předešlých částí jsou shrnuty a vyhodnoceny. V závěru je posouzena pozice společnosti, vliv krize a navrhnutá doporučení pro zlepšení situace podniku.

**Keywords:** EvoBus Bohemia Ltd., market analysis, financial analysis, analysis of absolute indicators, financial ratios, Altman’s Z-Score

**Klíčová slova:** EvoBus Bohemia Ltd., analýza trhu, finanční analýza, analýza absolutních ukazatelů, finanční ukazatelé, Altmanův index

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## **1. Introduction**

In years 2008-2009 the whole world was affected by the biggest economic collapse since the Great Depression in 1929. Industrial production and the volume of an international business dropped significantly. Neither the companies in the Czech Republic could avoid this trend. Demand after goods declined and business environment got worse. In order to stay competitive, it has become more important than ever for financial managers to control company's economic and financial situation.

Economic analysis is one of the most widely used management tools for evaluation of a business position. Part of the economic analysis is a financial analysis. It enables managers and all the users to determinate current financial health of the enterprise and at the same time it allows to predict the future development of the company. However, for a better understanding it is recommended to analyse as well the company's external and internal environment. To verify the correctness of the management decisions it is important to perform the analysis of the economic and financial situation regularly.

This thesis describes the basic methods of economic and financial analysis and subsequently shows their utilization on an example of EvoBus Bohemia Ltd.

## **2. Objectives and Methodology**

The aim of this thesis is to evaluate economic and financial situation of EvoBus Bohemia Ltd. and assess an impact of financial crisis 2008 and 2010 upon the company. The purpose of this paper is to provide valuable information for management of the company.

The thesis is divided into two parts, theoretical and practical. The theoretical part introduces basic principles of an economic and financial analysis. This part also includes selected methods of financial analysis and explanation of financial statements used in this thesis. Literature review is conducted by using methods of abstraction, deduction and synthesis. Literature and other information sources that are used in this thesis are listed in the bibliography at the end of the work.

The practical part is focused first on the description of a company itself, its background and its position on the market. Analytical part is done by using selected methods of financial analysis described in literature review. In the conclusion are summarized and evaluated findings from the previous sections.

The thesis was prepared based on publicly available data. For purposes of this thesis, the author used financial statements from years 2005-2012 that were provided by the controlling department of the company. In the practical part, the author also describes her personal observation findings from working at this company.

## **3. Literature Overview**

### **3.1 Economic Analysis**

To find one clear definition of the term “Economic Analysis” and its subject matter seems to be quite a complicated task. Any short definition of the boundaries of economic analysis is unavoidably inadequate. To define it as a study of mankind in the ordinary business of life: is surely too broad. To define it as the study of material wealth is too narrow. To define it as the study of human valuation and choice is again probably too wide, and to define it as the study of that part of human activity subject to the measuring rod of money is again too narrow.<sup>1</sup>

For the purpose of this thesis the definition retrieved from the internet suits the best: *“Economic analysis is a systematic approach in which economists and other professionals will estimate the economic environment and its strengths and weaknesses. Economic analysis plays an important role in determining how a trader will want to position themselves in a market.”*<sup>2</sup>

The subject of the economic analysis is normally an enterprise. Economists may evaluate the situation of the company either at a one point of time or in a certain time period. According to the chosen methods of evaluation and the time frame, the economic analysis can be differently complex and laborious.

### **3.2 Financial Analysis**

One part of the economic analysis of the company is so called financial analysis. The goal of financial analysis is to use financial data to evaluate the current and past performance of a firm and to assess its sustainability. Financial analysis is useful in credit evaluation, financial distress prediction, security analysis, mergers and acquisitions

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1 BOULDING Kenneth E..Economic Analysis

2 Available at: <http://www.invetorguide.com/definition/economic-analysis.html> (27.2.2014)

analysis, and corporate financial policy analysis. In all these contexts, financial analysis is a key input for making sound predictions about a company's future prospects.<sup>3</sup>

In the literature we can find two approaches of financial analysis:

- **Fundamental analysis** is based on knowledge and experiences of an analyst.
- **Technical analysis** uses mathematical and statistical approach.<sup>4</sup>

Basic steps of financial analysis are shown in **Schema 1**.

### Schema 1: Steps of Financial Analysis



Source: Own processing

### 3.3 Users of the Financial Analysis

Upon beginning financial analysis, the first step for an analyst is to determine the user of the analysis.

Financial analysis is used by both internal users and external groups.<sup>5</sup>

- **Internal users:** managers, directors, line supervisors, employees
- **External users:** owners, creditors, investors, labour unions, governmental agencies, taxing authorities, suppliers, customers, trade associations

External groups use financial analysis in deciding whether to invest in a particular firm, whether to extend credit, etc. There are several rating agencies (such as Moody's, Standard & Poor's) that routinely perform financial analysis of firms in order to arrive at a composite rating<sup>6</sup>.

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<sup>3</sup> PALEPU, Krishna G, Victor L BERNARD a Paul M HEALY. Business analysis: using financial statements

<sup>4</sup> MACEK, Jan, Rudolf KOPEK a Jitka SINGEROVÁ. Ekonomická analýza podniku.

<sup>5</sup> STÁROVÁ, Marta. Fundamentals of accounting: theory, exercises and dictionary. Vyd. 1

<sup>6</sup> MARINIČ, Pavel. Essential financial analyse for beginners.

It is a key to assess the users upfront, so that their goals or objectives can be established. Investors are most commonly interested in the valuation and profitability of a firm, while creditors are concerned with ability to repay debt, and management is interested in assessing the overall efficiency of the firm and, ultimately, answer the concern of the audience.<sup>7</sup> For better understanding see **Table 1**.

**Table 1: Financial Analysis Objectives According to the Audience**

<i>Audience</i>	<i>Goals or Objectives</i>	<i>Sources of Information</i>	<i>Analytical Tools</i>	<i>Financial position</i>
Investors	Valuation	Financial statements (annual report or 10-K)	Common-size financial statements	Valuation
Creditors	Ability to pay debt	Footnotes	Ration Analysis	Liquidity
Management	Efficiency	Management discussion	Cash flow projection	Profitability
		Other industry data		Solvency

*Source: TEMTE, Andrew. Financial statement analysis*

### 3.4 Sources for Financial Analysis

To create complex and good quality financial analysis, large amount of data is needed. Basic sources for financial analysis are financial statements- balance sheet, income statements, statement of cash flow and statement of retained earnings.

Financial statements are customarily prepared on a quarterly, biannual or annual basis. The date of a financial statement is of considerable importance. Most are drawn up on a yearly (fiscal) basis. Statements provided that are outside of the fiscal closing are known as interim statements.<sup>8</sup>

<sup>7</sup> TEMTE, Andrew. Financial statement analysis

<sup>8</sup> MARINIĆ, Pavel. Essential financial analyse for beginners.

### 3.4.1 Balance Sheet

The balance sheet is a snapshot of the firm. It is a convenient means of organizing and summarizing what a firm owns, what firm owes, and the difference between the two at a given point in time.<sup>9</sup> The balance sheet is comprised of these three main types of accounts: assets, liabilities, and owner's equity. The relationship between them is expressed through the basic accounting identity:<sup>10</sup>

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

**Assets** are things that the company owns. They are the resources of the company that have been acquired through transactions, and have future economic value that can be measured and expressed in dollars.<sup>11</sup>

**Liability** is an accounting statement which tracks how much a person or business owes a creditor. The liability account tracks debts owed to banks, vendors, employees and any other creditor who had not yet been paid for products or services received.<sup>12</sup>

**Equity (Capital)** is defined as the residual interest in the assets of an entity that remains after deducting its liabilities. Equity is the value of an ownership interest in property, including shareholders' equity in a business. Equity can be also called net asset.<sup>13</sup>

### 3.4.2 Income Statement

The income statement measures performance over some period of time, usually a quarter or a year. The income statement equation is<sup>14</sup>:

$$\text{Revenues} - \text{Expenses} = \text{Income}$$

**Revenue** is the total amount of money received by the company for goods sold or services provided during a certain time period. It also includes all net sales, exchange of assets; interest and any other increase in owner's equity<sup>15</sup>

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<sup>9</sup> DITTMAR, Amy. F409 Corporate Financial Analysis.

<sup>10</sup> TEMTE, Andrew. Financial statement analysis

<sup>11</sup> Available at: <http://www.accountingcoach.com/balance-sheet/explanation> (28.2.2014)

<sup>12</sup> Available at: <http://www.businessdictionary.com/definition/liability-account.html> (28.2.2014)

<sup>13</sup> STÁROVÁ, Marta. Fundamentals of accounting: theory, exercises and dictionary. Vyd.

<sup>14</sup> DITTMAR, Amy. F409 Corporate Financial Analysis

**Expense** represents decrease in retained earnings (equity) that result from entity activity. It is outflow or other use of asset by an entity in order to sell goods or services. Expense is measured in terms of cost of goods and services sold to customer or consumed.<sup>16</sup>

### 3.4.3 Statement of Cash Flows

Cash flows are derived from the income statement and from changes in the balance sheet. It is a summary of the actual or anticipated incomings and outgoings of cash in a firm over an accounting period (month, quarter, and year).<sup>17</sup> A statement of cash flows categorizes all cash transactions into one of three types of activities

- **Operating activities:** The cash inflows and outflows related to transactions which are entered in determining net income.
- **Investing activities:** These transactions involve the acquisition and sale of long-term assets that are used by the organization, as well as non-operating investment assets.
- **Financing activities:** These transactions include cash inflows and outflows between the business and its creditors and owners, i.e. the sale of stock for cash.<sup>18</sup>

### 3.4.4 Statement of Retained Earnings

Retained earnings of a company refer to income that is not distributed to the stockholders. Retained earnings is increased by net income or decreased by net loss, and decreased by dividends. The statement of retained earnings explains the changes in retained earnings from net income (or loss) and from any dividends over a period of time. This means that the statement of retained earnings reports the change in retained earnings from the beginning to end of a time period, usually a year.<sup>19</sup>

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<sup>15</sup> Available at: <http://www.investorwords.com/4254/revenue.html#ixzz2vOq1DnCL> (28.2.2014)

<sup>16</sup> STÁROVÁ, Marta. Fundamentals of accounting: theory, exercises and dictionary. Vyd.

<sup>17</sup> Available at: <http://www.businessdictionary.com/definition/cash-flow-statement.html> (1.3.2014)

<sup>18</sup> Available at: [http://www.e-economic.co.uk/accountingsystem/statement-of-cash-flows\(28.2.2014\)](http://www.e-economic.co.uk/accountingsystem/statement-of-cash-flows(28.2.2014))

<sup>19</sup> Available at: <http://www.austincc.edu/accting/toolbox/documents/statement.pdf> (1.3.2014)



## 3.5 Analysis of Absolute Indicators

The analysis of absolute indicators is the first step in the financial statement analysis. The basic methods used are horizontal and vertical analysis.

### 3.5.1 Horizontal Analysis

Horizontal analysis is the comparison of historical financial information over a series of reporting periods, or of the ratios derived from this financial information.<sup>20</sup> This method of analysis is also known as trend analysis. Horizontal analysis allows the assessment of relative changes in different items over time. It also indicates the behaviour of revenues, expenses, and other line items of financial statements over the course of time.<sup>21</sup>

Horizontal analysis can be performed in one of the following two different methods: i.e. absolute comparison or percentage comparison.

**Absolute Comparison:** In first method, the absolute currency amounts of some items are compared over the period of time. This method is helpful in identifying the items which are changing the most. It can be described by following formula:

$$\textit{Absolute Change} = \text{Indicator's Value (t)} - \text{Indicator's Value (t - 1)}$$

**Percentage Comparison:** In the second method, percentage differences in certain items are compared over a period of time. This method is useful when comparing performance of two companies of different scale and size.<sup>22</sup> . It can be described by following formula:

$$\textit{Percentage Change} = \frac{\text{Indicator's Value (t)} - \text{Indicator's Value (t - 1)}}{\text{Indicator's Value (t - 1)}}$$

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<sup>20</sup> Available at: <http://www.accountingtools.com/horizontal-analysis> (1.3.2014)

<sup>21</sup> MACEK, Jan, Rudolf KOPEK a Jitka SINGEROVÁ. Ekonomická analýza podniku

<sup>22</sup> Available at: <http://www.readyratios.com/reference/analysis.html> (1.3.2014)

### 3.5.2 Vertical Analysis

A method of financial statement analysis in which each entry for each of the three major categories of accounts (assets, liabilities and equities) in a balance sheet is represented as a proportion of the total account. The main advantage of vertical analysis is that the balance sheets of businesses of all sizes can easily be compared. It also makes it easy to see relative annual changes within one business.<sup>23</sup>

## 3.6 Financial Ratio Analysis

A popular way to analyse the financial statements is by computing ratios. A ratio is a relationship between two numbers and a ratio by itself may have no meaning. Hence, a given ratio is compared to:

- (A) Ratios from previous years- internal trends, or
- (B) Ratios of other firms in the same industry- external trends

Ratios are more of diagnostic tool that helps us to identify problem areas and opportunities within a company.<sup>24</sup>

Ratios can be used to evaluate four different facets of a company's performance and condition: internal liquidity, financial risk, operating performance, and growth.<sup>25</sup>

### 3.6.1 Liquidity Ratios

Liquidity refers to the speed and ease with which an asset can be converted to cash. Liquidity is valuable. The more liquid a business is, the less likely it is to experience financial distress.<sup>26</sup>

Liquidity ratio is the relation between total liquid assets, i.e. cash and possessions which can be quickly turned into cash, and its total deposit liabilities, i.e. the amount it owes to its customers, esp. on current and deposit accounts.<sup>27</sup>

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<sup>23</sup> Available at: [http://www.investopedia.com/terms/v/vertical\\_analysis.asp](http://www.investopedia.com/terms/v/vertical_analysis.asp) (1.3.2014)

<sup>24</sup> MARINIČ, Pavel. Essential financial analyse for beginners

<sup>25</sup> TEMTE, Andrew. Financial statement analysis

<sup>26</sup> DITTMAR, Amy. F409 Corporate Financial Analysis.

**Current ratio** is a financial ratio that shows the proportion of current assets to current liabilities. The current ratio is used as an indicator of a company's liquidity. In other words, a large amount of current assets in relationship to a small amount of current liabilities provides some assurance that the obligations coming due will be paid.<sup>28</sup>

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

Though the ideal current ratio depends to some extent on the type of business, a general rule of thumb is that it should be at least 2:1. A lower current ratio means that the company may not be able to pay its bills on time, while a higher ratio means that the company has money in cash or safe investments that could be put to better use in the business.<sup>29</sup>

**Quick ratio**, also known as Acid Test Ratio, is more stringent than 'current ratio,' it excludes inventories (typically the least liquid of current assets) to concentrate on the more liquid assets of the firm. Usually an acid test ratio of 1.0 or higher is considered satisfactory by lenders and investors.<sup>30</sup>

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

**Cash ratio** is the ratio of cash and cash equivalents of a company to its current liabilities. It is an extreme liquidity ratio since only cash and cash equivalents are compared with the current liabilities. Cash ratio is calculated using the following formula:<sup>31</sup>

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

Although a high ratio may indicate some degree of safety from a creditor's viewpoint, excess amounts of cash may be viewed as inefficient.<sup>32</sup>

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<sup>27</sup> ADAM, J a David ARNOLD. Longman dictionary of business English. 2nd ed

<sup>28</sup> Available at: <http://www.accountingcoach.com/blog/current-ratio-2> (2.3.2014.)

<sup>29</sup> Available at: <http://www.inc.com/encyclopedia/financial-ratios.html> (2.3.2014)

<sup>30</sup> Available at: <http://www.businessdictionary.com/definition/acid-test-ratio.html> (2.3.2014).

<sup>31</sup> Available at: <http://accountingexplained.com/financial/ratios/cash-ratio> (2.3.2014).

<sup>32</sup> Available at: <http://www.inc.com/encyclopedia/financial-ratios.html> (2.3.2014).

The current, quick, and cash ratios differ only in the assumed liquidity of the current assets that the analyst projects will be used to pay off current liabilities.<sup>33</sup>

### 3.6.2 Activity Ratios

Activity ratios, sometimes referred to as operating ratios or management ratios, measure the efficiency with which a business uses its assets, such as inventories, accounts receivable, and fixed (or capital) assets. The more commonly used operating ratios are the inventory turnover and the total assets turnover.<sup>34</sup>

**Inventory turnover:** this ratio should be compared against industry averages. A low inventory turnover ratio is a signal of inefficiency, since inventory usually has a rate of return of zero. It also implies either poor sales or excess inventory. High inventory turnover ratio implies either strong sales or ineffective buying<sup>35</sup>

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

**Total asset turnover:** a financial ratio that indicates the effectiveness with which a firm's management uses its assets to generate sales. A relatively high ratio tends to reflect intensive use of assets. Total asset turnover is calculated by dividing the firm's annual sales by its total assets. Sales are listed on the firm's income statement and assets are listed on its balance sheet.<sup>36</sup>

$$\text{Total asset turnover} = \frac{\text{Sales}}{\text{Total assets}}$$

### 3.6.3 Long-Term Solvency Ratios

Long-term solvency ratios are intended to address the firm's long-run ability to meet its obligations, or, more generally, its financial leverage. These are sometimes called financial leverage ratios or just leverage ratios. We consider three commonly used measures and some variations.<sup>37</sup>

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<sup>33</sup> TEMTE, Andrew. Financial statement analysis

<sup>34</sup> Available at: <http://ratio-analysis.org/activity-ratios.php> (2.3.2014).

<sup>35</sup> Available at: <http://www.ccdconsultants.com/documentation/financial-ratios> (2.3.2014)

<sup>36</sup> Available at: <http://financial-dictionary.thefreedictionary.com/Total+Asset+Turnover> (2.3.2014).

<sup>37</sup> DITTMAR, Amy. F409 Corporate Financial Analysis

**Debt ratio** is a financial leverage ratio used along with other financial leverage ratios to measure a company's ability to handle its obligations. If a company is overleveraged, i.e. has too much debt, they may find it difficult to maintain their solvency and/or acquire new debt. The debt ratio formula can be used by a company internally and also can be used by investors and debtors.<sup>38</sup>

$$\text{Debt ratio} = \frac{\text{Liabilities}}{\text{Total assets}}$$

**Debt-equity ratio** is a measure of the relationship between the capital contributed by creditors and the capital contributed by shareholders. It also shows the extent to which shareholders' equity can fulfil a company's obligations to creditors in the event of liquidation. In general, a high debt-to-equity ratio indicates that a company may not be able to generate enough cash to satisfy its debt obligations. However, low debt-to-equity ratios may also indicate that a company is not taking advantage of the increased profits that financial leverage may bring.<sup>39</sup>

$$\text{Debt equity ratio} = \frac{\text{Liabilities}}{\text{Total equity}}$$

**Times interest earned** is the final leverage ratio and is slightly different to the previous two. It is purely a risk measure and the calculation tells us how many times over a company's earnings, specifically its earnings before interest and tax (EBIT), can be used to meet its interest payments.<sup>40</sup>

$$\text{Times interest earned} = \frac{\text{EBIT}}{\text{Interest}}$$

### 3.6.4 Profitability Ratios

*“The power of a business to earn profits, or the degree to which a business is profitable, esp. as compared with another business.”<sup>41</sup>*

**Gross profit margin** is one of the most important ratios to measure the profitability of a company. This ratio gives the relationship between total sales and cost of sales. Gross

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<sup>38</sup> Available at: <http://www.financeformulas.net/Debt-Ratio.html> (4.3.2014).

<sup>39</sup> Available at: [http://www.investinganswers.com/financial-dictionary/ratio-analysis/\(4.3.2014\)](http://www.investinganswers.com/financial-dictionary/ratio-analysis/(4.3.2014)).

<sup>40</sup> Available at: [http://www.ratioanalysis.net/en/leverage-ratios/times-interest-earned-ratio\(4.3.2014\)](http://www.ratioanalysis.net/en/leverage-ratios/times-interest-earned-ratio(4.3.2014)).

<sup>41</sup> ADAM, J a David ARNOLD. Longman dictionary of business English. 2nd ed,

margin is calculated by subtracting cost of sales from net sales. The resultant gross profit is then divided by sales to arrive at gross margin ratio. This ratio indicates margin available to absorb selling and administrative costs and other expense and losses to arrive at net profit. The magnitude of gross margin is largely industry specific. Interpretation of gross margin needs reference to industry norm<sup>42</sup>

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Sales}}$$

**Return on Assets (ROA)** provides an idea of how efficient management is at using its assets to generate earnings. It is calculated, by dividing a company's annual earnings by its total assets, with ROA displayed as a percentage. Sometimes this is referred to as return on investment.<sup>43</sup>

$$\text{Return on assets (ROA)} = \frac{\text{Net profit}}{\text{Total assets}}$$

**Return on Equity (ROE)** is critical to shareholders since it shows how much yield they earn on their investments. It also allows shareholders to judge whether the return made on their investment is worth the risk.<sup>44</sup> Owners would like to see this ratio going up.

$$\text{Return on equity (ROE)} = \frac{\text{Net profit}}{\text{Total equity}}$$

### 3.7 Altman's Z-Score

*“Widespread analysis providing framework for measurement bankruptcy, or financial distress is Z-Score model by Professor E.I. Altman.”<sup>45</sup>*

The Z-Score formula is a multivariate formula for a measurement of the financial health of a company. The Z-Score combines five common business ratios, using a weighting system calculated by Altman. Thus it determines the likelihood that a company will go bankrupt. It was derived based on data from manufacturing firms, but has since

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<sup>42</sup> Available at: [http://www.gulfbase.com/investmenttutorial/\(3.3.2014\)](http://www.gulfbase.com/investmenttutorial/(3.3.2014)).

<sup>43</sup> Available at: <http://financial-dictionary.thefreedictionary.com/Return+on+Assets> (3.3.2014).

<sup>44</sup> Available at: <http://ratio-analysis.org/profitability-ratios.php> ( 3.3.2014).

<sup>45</sup> MARINIĆ, Pavel. Essential financial analyse for beginners

proven to be also effective (with some modifications) in determining the risk that a firm will go bankrupt.<sup>46</sup>

Z-Score Formula varies for publicly and privately owned companies. For purposes of this thesis is used revised formula for private manufacturing companies:

$$Z = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$$

### Where

$X_1$  = working capital/total assets

$X_2$  = retained earnings/total assets

$X_3$  = earnings before interest and taxes/total assets

$X_4$  = market value of equity/ book value of total liabilities

$X_5$  = sales/total assets

Z = overall index<sup>47</sup>

### Classification of Result

$Z < 1.23$                       Bankrupt area

$Z > 2.90$                       Prosperous area

$Z = (1.23, 2.90)$               Grey area

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<sup>46</sup>Available at: [http://www.12manage.com/methods\\_altman\\_z-score.html](http://www.12manage.com/methods_altman_z-score.html) (3.3.2014).

<sup>47</sup>Available at: <http://pages.stern.nyu.edu/~ealtman/PredFnclDistr.pdf> (3.3.2014).

## **4. Practical Part**

The practical part of this thesis is divided into three sections. At the first part, there is a short introduction of EvoBus Bohemia Ltd., its history and its organisational integration in Daimler Group.

Second section of practical part is focused on evaluation of EvoBus position on the European market. There is a description of traditional and new market places. Author of this thesis also included a list of competitors of EvoBus Group, with description of their weaknesses and strengths. According to this assess the author opportunities for growth of the company.

In the last part are used the principles of financial analysis, which were described in theoretical part. First of all are calculated the absolute indicators, followed by financial ratio analysis. According to obtained information, evaluate the author financial situation of EvoBus Bohemia Ltd. and the impact of financial crisis in 2008 and 2010. Eventually are proposed suggestions for management of the company for the improvement.



#### 4.1 Basic Information about EvoBus Bohemia Ltd.<sup>48</sup>

<b>Business Name:</b>	EvoBus Bohemia, s. r. o.
<b>Address:</b>	Na Hůrce 211/10 Praha 6- Ruzyně 161 00 Czech Republic
<b>Legal Form:</b>	Limited Liability Company
<b>Identification Number (IC):</b>	256 57 704
<b>Registered Capital:</b>	339,000,000 CZK
<b>Date of Establishment:</b>	7 <sup>th</sup> April 1998
<b>Number of Employees:</b>	413 (in 2012)

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<sup>48</sup> Účetní závěrka a zpráva auditora k 31. 12. 2012

#### **4.1.1 Scope of Business**

Main scope of business according to CZ-NACE:

- 293200 Manufacture of other parts and accessories for motor vehicles

Secondary scope of business according to CZ-NACE:

- 257200 Manufacture of locks and hinges
- 469000 Not-specialised wholesale
- 772000 Renting and leasing of goods for personal use and mainly for household
- 771100 Renting and leasing of cars and light motor vehicles, except motorcycles

#### **4.1.2 Business Locations**

The residency of the company is in Prague 6- Ruzyně, Na Hůrce 211/10. Here is also located shop and service centre for Mercedes Benz and Setra buses. However, production plant of EvoBus Bohemia Ltd. is situated more than 120 km west from Prague, in Holýšov. Here are manufactured chassis and basic structures for almost all types of Mercedes-Benz and Setra buses. EvoBus Bohemia employs more than 400 employees.

#### **4.1.3 Organisational Integration**

EvoBus Bohemia Ltd is a member of German multinational automotive corporation Daimler AG. EvoBus GmbH is virtually 100% owner of EvoBus Bohemia. EvoBus Austria is only a symbolic co-owner of the company. EvoBus GmbH is wholly owned subsidiary of Daimler AG. Its organisational integration in Daimler Group is shown in **Appendix 1**.

##### **4.1.3.1 Daimler AG**

Together with a production of Mercedes-Benz cars, Daimler manufactures busses, trucks, vans and provides financial services through its Daimler Financial Services arm.

Daimler sells cars, vans, trucks and busses under the following marques worldwide: Mercedes-Benz, Maybach, AMG, Smart, Setra, Freightliner, Mitsubishi Fuso, Detroit Diesel, Western Star, Sterling Trucks, and Thomas Built Buses.<sup>49</sup>

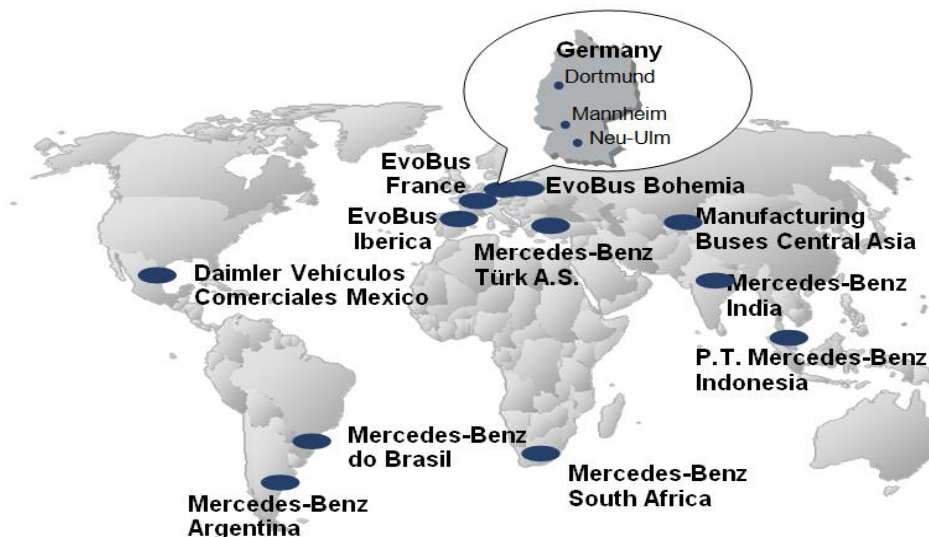
### ***Basic Information about Daimler AG***

- Date of Establishment: 17.11.1998 (from DaimlerChrysler AG)
- Residency: Stuttgart, Deutschland
- Legal form: Joint stock company
- Scope of business: automotive production, financial services
- Number of employees 275,087<sup>50</sup>

#### **4.1.3.2 Daimler Buses**

Division Daimler Busses, the market leader in its core markets, has production plants and more than 16,600 employees all over the world. In its production plants are manufactured buses of those brands: Mercedes-Benz and SETRA. The product range supplied by Daimler Buses comprises city and intercity buses, coaches and bus chassis. In the picture below are displayed production plants of Daimler Buses division.

**Image 1: Production Plants of Daimler Buses Division**



*Source: Studie proveditelnosti, Inovace ve společnosti EvoBus, 2010.*

<sup>49</sup> Available at: <http://www.daimler.com/> (4.3.2014)

<sup>50</sup> Daimler Annual Report 2012

#### **4.1.4 History of the Company**

Mercedes-Benz has been making buses since 1895. Production started in Mannheim, Germany. Since then it has been developed a huge number of different types of buses. In the spring of 1956 there was a large model renewal. Also this year started production of Mercedes-Benz O 302. This model is referred to be the last versatile bus made, because it was manufactured as a long-distance, intercity and city bus. Since 1974 buses were equipped with modern systems ABS and EPS. Production has gradually expanded to Brazil, Argentina and Turkey.

With the discovery of the first self-supporting coach frame in 1951, the Setra brand was born. Until 1995 Setra buses were made in the family firm Kässbohrer, which outside of buses also produced trailers. In 1995 Kässbohrer got into financial trouble and bus manufacturing was taken over by Daimler group.<sup>51</sup> From the beginning the goal was to exploit synergies in the development, production and service while maintaining the autonomy of both brands- Setra and Mercedes-Benz. As a neutral name for the company producing buses was chosen name EvoBus.

EvoBus Bohemia Ltd. was founded 7<sup>th</sup> April 1998 in Prague and production plant in Holýšov was opened in 1999.

#### **4.1.5 EvoBus Bohemia Ltd. Nowadays**

As mentioned before, EvoBus Bohemia Ltd. sells replacement parts and provides service to both Mercedes-Benz and Setra buses in Prague. It is as well place where the customer can order a new bus or buy used one.

EvoBus Bohemia started to manufacture parts for buses in 1999. First production plant was opened in 2001 in Holýšov. Since then it was rebuilt several times and in 2012 new production hall was opened. Into the construction of an area of 5600 m<sup>2</sup> and new equipment was invested more than 330 mil. CZK. At the factory works more than 470 people. They cut and weld together parts of chassis and bodies of Mercedes-Benz and Setra buses. Every day they process more than 7,000 tons of steel. Immediately after phosphating are the individual parts exported to Germany, where they are assembled

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<sup>51</sup>Available at: <http://www.setra.de/en/all-about-setra/heritage-history.html> (4.3.2014)

together. Factory in Holýšov is involved in the production of the latest vehicles with gas, hybrid and fuel cell drive technology. Selected types of buses and share of EvoBus Holýšov on supplies is listed in **Appendix 2**.

#### 4.1.6 Basic Economic Indicators

**Table 2: Basic Economic Indicators of EvoBus Bohemia Ltd.**

	2008	2009	2010	2011	2012
Net turnover in mil. CZK	2,625	1,607	1,584	1,541	1,449
Export	43%	67%	60%	65%	63%
Average number of employees	428	453	440	421	413

*Source: Výroční zprávy společnosti EvoBus Bohemia s.r.o. from years 2008-2012*

## 4.2 Market Analysis

Market with buses is from production point of view dividend into those segments:

- City Buses
- Intercity Buses
- Coaches
- Chassis

EvoBus Bohemia Ltd. focuses its production on three main market segments:

- City Buses
- Intercity Buses
- Coaches

### 4.2.1 Traditional Markets

Daimler Busses will exploit existing growth potential in its traditional markets- Europe and South America. The company wants to boost the demand with new model series with lower gas consumption and better emission values. Individual market shares in the Western Europe are shown in the following table:

**Table 3: Analysis of the Western Europe Competition in 2009**

<b>Market Share</b>	<b>Germany</b>	<b>France</b>	<b>Italy</b>	<b>Spain</b>	<b>Average</b>
<b>IrisBus</b>	1%	55%	43%	28%	32%
<b>EvoBus</b>	58%	16%	27%	20%	30%
<b>MAN</b>	30%	0%	7%	19%	14%
<b>Scania</b>	0%	0%	8%	20%	7%
<b>Volvo</b>	2%	0%	0%	13%	4%
<b>VanHool</b>	0%	7%	0%	0%	2%
<b>Other</b>	9%	22%	15%	0%	11%
<b>Sum</b>	100%	100%	100%	100%	100%

*Source: Studie proveditelnosti, Inovace ve společnosti EvoBus, 2010*

According to the latest Daimler Annual Report 2012, EvoBus market share in Europe was around 28%.<sup>52</sup>

#### **4.2.2 New Markets**

EvoBus wants to as well benefit from the growing market potential in Russia, India and China. In September 2008 developed the group joint venture with an Indian bus producer Sutlej. In Russia, the division together with Daimler Truck has focused on strategic partnership with KamAZ, the largest Russian truck manufacturer. In China the company concentrates on licensing deals.

#### **4.2.3 Competition**

Among EvoBus Group competitors belong below listed manufacturers:

- Ashok Leyland- India
- Irisbus IVECO- Italia
- MAN- Germany
- Solaris- Poland
- Scania- Sweden
- Volvo- Sweden
- SoR Libchavy- Czech Republic
- Varied producers in China

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<sup>52</sup> Daimler Annual Report 2012

Below are described basic characteristics of selected competing manufactures.

**Irisbus IVECO** the biggest direct competitor in Europe, which was created by the merger of Renault, Iveco and Karosa. It does not have own network for bus services and complete product line. It has a low safety standards and undeveloped range of ecological engines.

**MAN** producer from Germany. To its customers offers solid quality. However, safety standard of MANs' buses are low and even the network of offices is less-developed.

**Solaris** has buses all over the Czech Republic. This producer from Poland focuses just on city buses. It lacks own network for bus services and has a limited degree of representation in the world.

**Scania** is first of all a chassis manufacturer. It offers a good quality products and even good safety standard. It does not have own dedicated service centre for buses.

**SoR Libchavy** is a local producer. It lacks representation offices around the world and it does not have own dedicated service centre network for buses.

Products of EvoBus group stands out especially with complete product range, dedicated service network, very high safety standards and high quality manufacturing. EvoBus also has its own extensive development base, flexible production system, broad portfolio of clean motors and one of the most valuable brands in the world. It is obvious that the products EvoBus Group form an extensive product range. EvoBus is an absolute leader in its technical design, but also service. This allows to EvoBus maintain their products at a higher price level than the competition.<sup>53</sup>

#### **4.2.4 Demand Analysis**

Following analysis concentrates only on a market segment in Europe. For production process in Holýšov, markets outside of Europe are not significant.

According to data provided by EvoBus Bohemia, around 12,000 city and intercity buses are produced every single year. The amount of couches produced annually, is approximately same. The total production on the European market is around 24,000 buses

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<sup>53</sup> Studie Proveditelnosti, Inovace společnosti EvoBus CZ, 2010

a year. EvoBus holds about 30% of the European market, which means around 7,200 buses annually. Non-European demand for buses from EvoBus represents about 2,800 buses per. The total demand thus represents approximately 10,000 buses a year.

The projections of the International Association of Public Transport (UITP) expect that over the next 25 years the volume of passengers transported by public transportation will double. Number of factors will lead to that:

- More and more people are going to live in large urban agglomerations
- The costs of travelling with public transportation are generally lower than the costs of using individual motor vehicles
- Large urban areas are becoming impassable, especially in the main rush hours; most city authorities prefer to use public transportation over individual.<sup>54</sup>

In terms of the investment into infrastructure, is the segment of city and intercity buses less costly option compared to tram, trolley or subway. Due to all those facts, forecasts the UITP future growth. UITP assumes a growth of 100% in sales of buses over the next 25 years.

Sell will be buses that will be:

- Safe- the user will expect a high level of passive and active safety in transportation,
- Comfortable- the user will expect the same quality and comfort, which is close to the quality and comfort that provide cars,
- Ecological- the user will expect minimization of negative effects caused by bus traffic on the environment.

#### **4.2.5 Market Opportunities**

The opportunity in the market is the possibility of individualization of supplied buses. It is not just meant cosmetic individualization but complex individualization. Cosmetic individualization means possibility of changes in colour, types of door, seats, and

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<sup>54</sup> Source: Press Release, Zdvojnásobení veřejné hromadné dopravy, 2010



equipment. The term complex individualization can stand for changes in the total length of the bus, location and number of doors, engine type, engine power, or power unit location. EvoBus vision is simple:” Everything is possible.”

However, the concept of the company does not end with the production of the buses. During the lifetime of the bus have to be in all EvoBus service centres in the world available necessary supply of spare parts for a particular bus.

The above text describes market opportunities that EvoBus may want to exploit in the coming years.

### 4.3 Financial Analysis of EvoBus Bohemia Ltd.

#### 4.3.1 Analysis of Balance Sheets

First financial statement to be vertically and horizontally analysed is balance sheet. This part will focus firstly on analysis of assets and after that on analysis of total liabilities. Inputs for the financial analysis are accounting data for years 2008-2012.

##### 4.3.1.1 Total Assets

Following table shows how individual items of asset participated on the total assets.

**Table 4: Vertical Analysis of Total Assets**

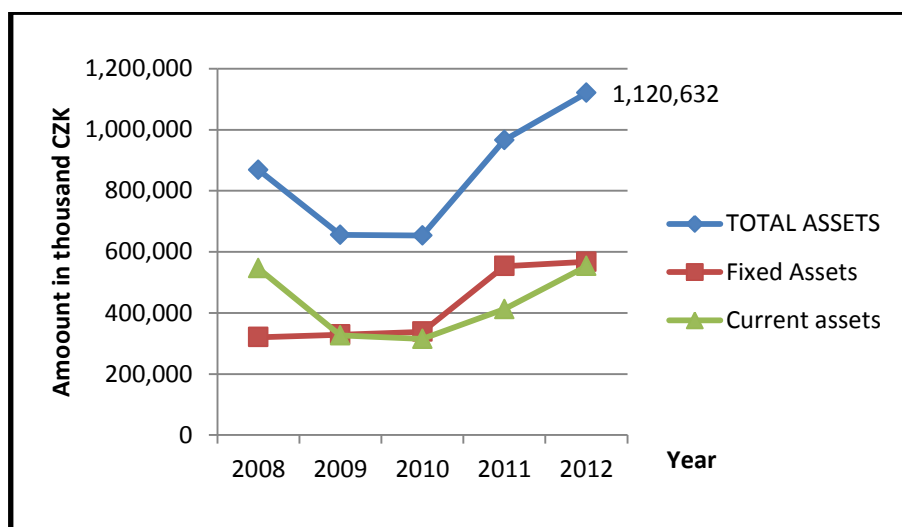
<b>Total Assets</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
		100.00%	100.00%	100.00%	100.00%
<b>Fixed Assets</b>	36.93%	50.16%	51.76%	57.26%	50.62%
Intangible fixed assets	0.54%	0.57%	0.46%	0.27%	0.35%
Tangible fixed assets	36.38%	49.58%	51.30%	56.20%	49.59%
Long-term financial assets	0.00%	0.00%	0.00%	0.79%	0.68%
<b>Current assets</b>	62.86%	49.78%	48.20%	42.68%	49.36%
Inventory	20.81%	20.15%	18.67%	12.14%	12.37%
Long-term receivables	1.11%	0.02%	0.00%	0.00%	19.48%
Short-term receivables	29.19%	26.99%	18.52%	25.37%	14.09%
Short-term financial assets	11.74%	2.60%	10.97%	5.18%	3.43%
<b>Accruals</b>	0.22%	0.07%	0.05%	0.06%	0.02%

*Source: Own calculations*

It is visible that the share of current assets (62.86%) on total assets in year 2008 was higher than the share of fixed assets (36.93%) on total assets. It was caused by significantly higher values of short-term financial assets and short term receivables. This could be explained by conclusion of a framework agreement with ICOM transport a.s. In 2007 EvoBus Bohemia Ltd. won tender for supply of 600 buses and that lead to the increase in current assets. The biggest item in fixed assets during the observation period is tangible fixed assets. In 2011 it is 56.20%. It consists predominantly of structures and movable fixed assets. This corresponds with EvoBus Bohemia Ltd. scope of business. The company has production plant with many machines.

For the detection of an assets' development over the observed period, were used principles of horizontal analysis. In **Appendix 6.** are calculated absolute and relative changes in selected time period.

**Graph 1: Trend Analysis of Assets**



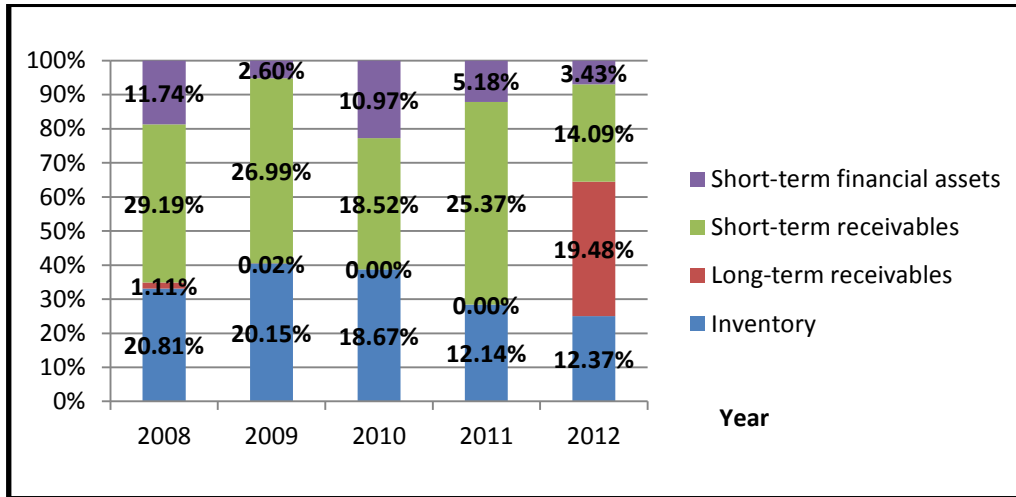
*Source: Own processing*

Development of total assets and its individual parts is shown in **Graph 1.** In all observed years fixed asset was growing. However, the fastest growth occurred between years 2010 and 2011 (63.59%). The main cause of a sudden growth was an investment into the construction of a new production hall in Holýšov.

## Current Assets

The biggest changes during the observation period were registered in current assets. In **Graph 2** we can see the structure of current assets.

**Graph 2: Vertical Analysis of Current Assets**



Source: Own calculations

It is evident that the main items of current assets are inventory and short-term receivables. There has been a rapid growth (19.48%) in long-term receivable in year 2012. It was caused by the purchase of DIL Czech Leasing Šumperk Koncernová s.r.o., EvoBus Bohemia Ltd. renamed the company to Šumperská správa majetku k.s. and gave it credit line of 9 mil. EUR. The biggest share on inventory has work-in progress and material.

### 4.3.1.2 Total Liabilities

Equity of EvoBus Bohemia Ltd. recorded growing trend during the whole reporting period. It was caused by the continual growth of the account: profit/loss of previous years, which was till 2012 negative. Registered capital of the company was stable (339,000 thousand CZK) between years 2008-2012.

All parts of total liabilities are again expressed as a share to the balance sheet value. In the **Table 5** below is shown vertical analysis during observed time periods, followed by explanation. Subsequently is described the structure of liabilities.

**Table 5: Vertical Analysis of Total Liabilities**

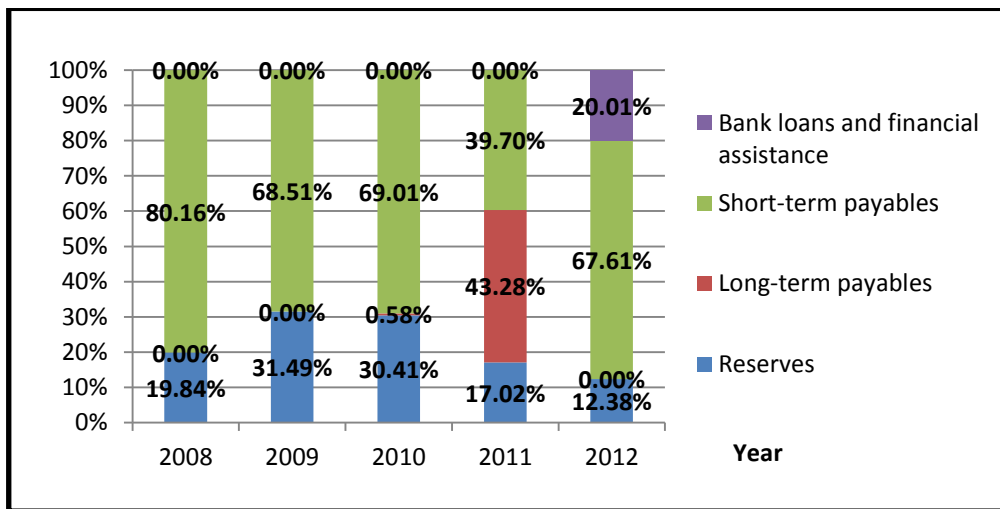
<b>TOTAL LIABILITIES</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
	100.00%	100.00%	100.00%	100.00%	100.00%
<b>Equity</b>	29.11%	42.37%	48.53%	37.31%	32.67%
Registered capital	39.05%	51.70%	51.90%	35.10%	30.25%
Capital funds	0.00%	0.00%	0.00%	0.00%	0.00%
Reserve funds, etc.	0.00%	0.00%	0.00%	1.34%	1.35%
Profit / loss of previous years	-10.18%	-13.17%	-9.37%	-3.62%	0.55%
Profit / loss of current period (+/-)	0.24%	3.83%	6.00%	4.49%	0.61%
<b>Liabilities</b>	70.89%	57.63%	51.47%	62.69%	67.33%
Reserves	14.07%	18.15%	15.65%	10.67%	8.34%
Long-term payables	0.00%	0.00%	0.30%	27.13%	0.00%
Short-term payables	56.83%	39.48%	35.52%	24.89%	45.52%
Bank loans and financial assistance	0.00%	0.00%	0.00%	0.00%	13.47%
<b>Accruals</b>	0.00%	0.00%	0.00%	0.00%	0.00%

*Source: Own calculations*

The table shows, that in all years were total liabilities made up mostly from liabilities-other sources. In 2008 it was 70.89%. In years 2009 and 2010 the share of liabilities decreased. However, again in year 2011 the previous trend changed, and in 2012 the share of other sources on liabilities increased up to 67.33%. The reasons that lead to this were already mention in analysis of assets. In 2011EvoBus Bohemia Ltd. invested in construction of new production hall and so they borrowed money from bank. In 2012 company purchased Šumperská správa majetku k.s. and got a loan for 6 mil. EUR (150,000 thousand CZK) from UniCredit Bank Czech Republic, a.s..

For better understanding, describes the following **Graph 3** the structure of liabilities- other sources. The main parts of liabilities are short-term payables. Due to the investments into new production hall, in year 2011 rapidly increased the share of long-term payables on liabilities. According to the horizontal analysis it was relative growth of 1,3401.18% (260,117 thousand CZK.) However, in 2012 the loan was classified as a short-term payable and that lead to the relative increase of short-term payables by 112.16%. The 20.01% share of bank loans in year 2012 is caused by already mentioned loan for 150,000 thousand CZK from UniCredit Bank Czech Republic, a.s.

**Graph 3: Vertical Analysis of Liabilities**



Source: Own calculations

### 4.3.2 Analysis of Income Statements

Next financial statements to be analysed are income statements. Again the vertical analysis will be done for five accounting periods, followed by the horizontal analysis. Both vertical and horizontal analyses are included in Appendix.

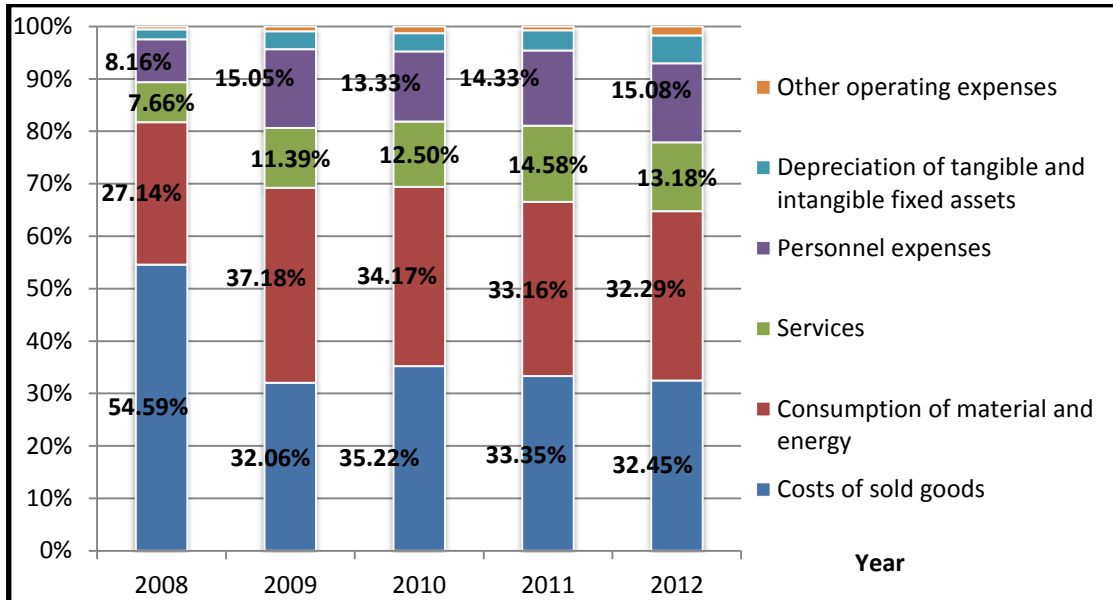
#### 4.3.2.1 Vertical Analysis of Income Statements

Income statement, in contrast to balance sheet, enables to distinguish between production in Holýšov and sales in Prague. The item revenues from merchandise represent service and sales that were made in Prague and line with revenues from own products and services stand for production in Holýšov. Between years 2009- 2012 the total revenues were made up mainly by revenues from own products and services. Only in 2008 the share of revenues from merchandise exceeded (56.23%) revenues from own products and services. Reason for this was the conclusion of contract with ICOM transport a.s. in 2007 for 600 buses.

The largest share on expenses of EvoBus Bohemia Ltd. in 2008 had the cost of goods sold (54.59%). However, its share was decreasing gradually during the observation period and in 2012 its share on expenses was just 32.45%. It was caused by lower sales of goods. The main part of expenses is represented by production consumption (except the year 2008.) In 2011 it was almost the half of the revenues (47.74 %.) Production

consumption consists of consumption of material and energy and services. The item consumption of material and energy shows a decreasing trend during the whole observation period. In **Graph 4** is described the structure of operating expenses.

**Graph 4: Operating Expenses Structure**



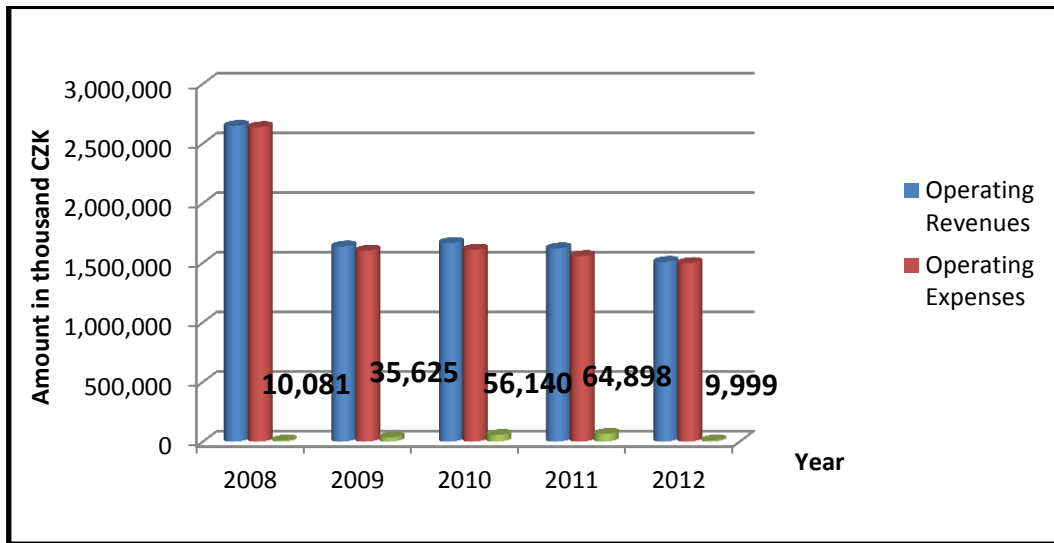
Source: Own calculations

#### 4.3.2.2 Horizontal Analysis of Income Statements

The entire horizontal analysis of income statements is included in **Appendix 7 and Appendix 8**. For purpose of this thesis were selected only the analysis of operating profit/loss and profit/ loss of current period accounts.

It is necessary to know the development of total operating revenues and total operating expenses, to be able to assess the development of the operating profit/loss account. From the following **Graph 5** is obvious that year 2008 was unique both in revenues and expenses. It was primary caused by the framework agreement with ICOM transport, a.s. from 2007. In all periods were the operating revenues higher than the operating expenses. That means that EvoBus Bohemia Ltd. reported in all selected time periods operating profit. The highest operating profit was acquired in year 2011 (64,898 thousands CZK.) However, in 2012 dropped the operating profit by 84.59%. The biggest decrease (-162.31%) occurred on the account “change in inventory of the company’s own production.

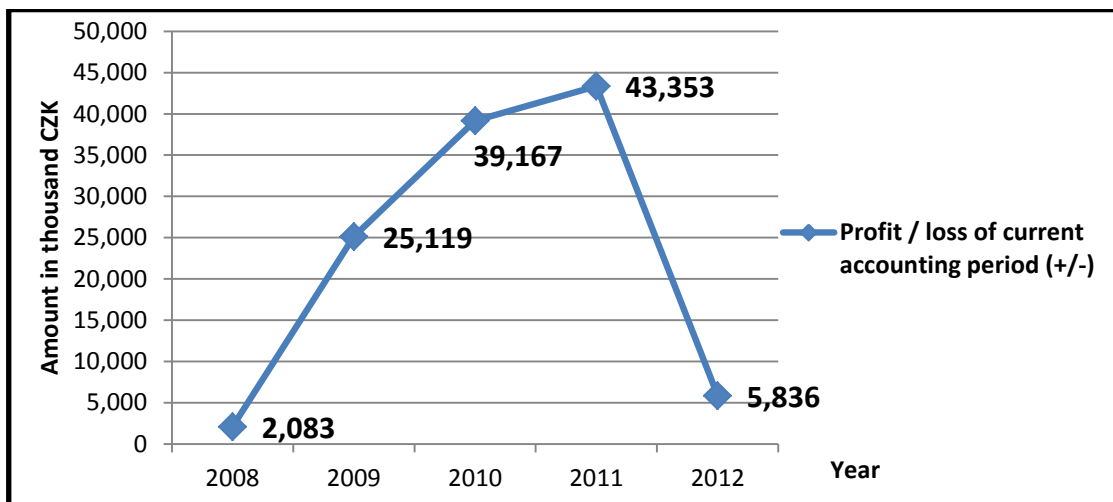
**Graph 5: Development of Operating Profit/Loss**



Source: Own calculations

The account profit/loss of current period and its development is shown in **Graph 6**. The greatest profit was gained in 2011. It is linked with the greatest operating profit in reporting period. The fastest growth (1105.90%) of profit was measured between years 2008 and 2009. It is connected with the growth of 253.39% in operating profit.

**Graph 6: Development of Profit/Loss of Current Period Account**



Source: Income statements from 2008-2012

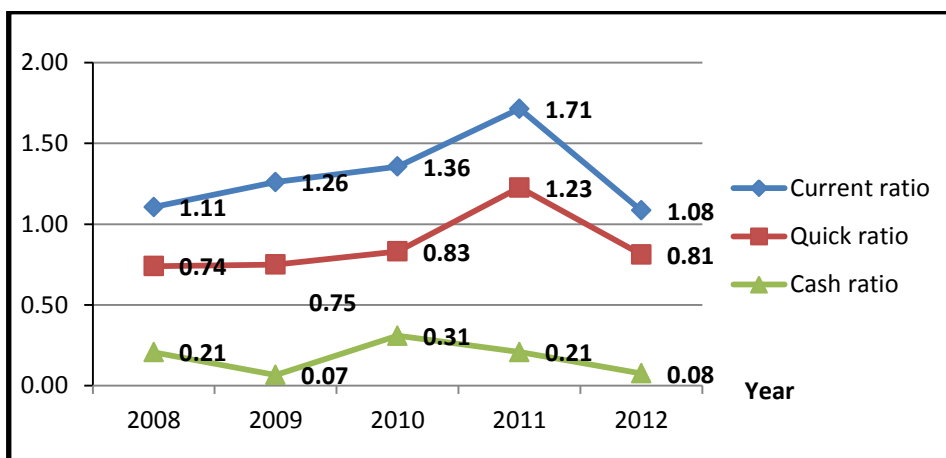
### 4.3.3 Financial Ratio Analysis

The ratios of liquidity, long-term solvency and profitability were calculated and analysed for EvoBus Bohemia Ltd. Profitability ratios were also compared to the industry's average performance.

### 4.3.4 Liquidity Ratios

Development of current, quick and cash ratios is captured in **Graph 7**.

**Graph 7: Development of Liquidity Ratios**



*Source: Own calculations*

Although according to the theory, optimal value of current ratio should be between 1.5- 2.5, EvoBus Bohemia Ltd. achieved that only in 2011 (1.71.) However, it is visible that between years 2008-2012 reported current ratio growing trend. In 2011 was recorded increase by 26.38%. After closer examination of balance sheets can be found out that short-term receivables during this time period increased by 102.56%. In 2012 there was a decrease current ratio by -36.75%. It was due to the classification of loan from 2010 as a short-term payable (262,058 thousands CZK, increase of short-term payables by 112.16 %.) Quick ratio shows the same trend as current ratio. The growth in 2011 was even faster (47.60 %.) It was caused by a continued decline of inventory.

Cash ratio of EvoBus Bohemia Ltd. reaches throughout the entire observed periods lower values compared to industry. The company may get to difficulties if asked to repay its payables quickly.



**Table 6** is presented for comparison of company's liquidity with average liquidity of manufacturing industry in the Czech Republic.

**Table 6: Liquidity Ratios in Manufacturing Industry**

	2008	2009	2010	2011	2012	Optimal values
Current ratio	1.28	1.63	1.70	1.58	1.65	1,5 – 2,5
Quick ratio	1.13	1.27	1.49	1.13	1.16	1 – 1,5
Cash ratio	0.40	0.45	0.41	0.30	0.33	0,2 – 0,5

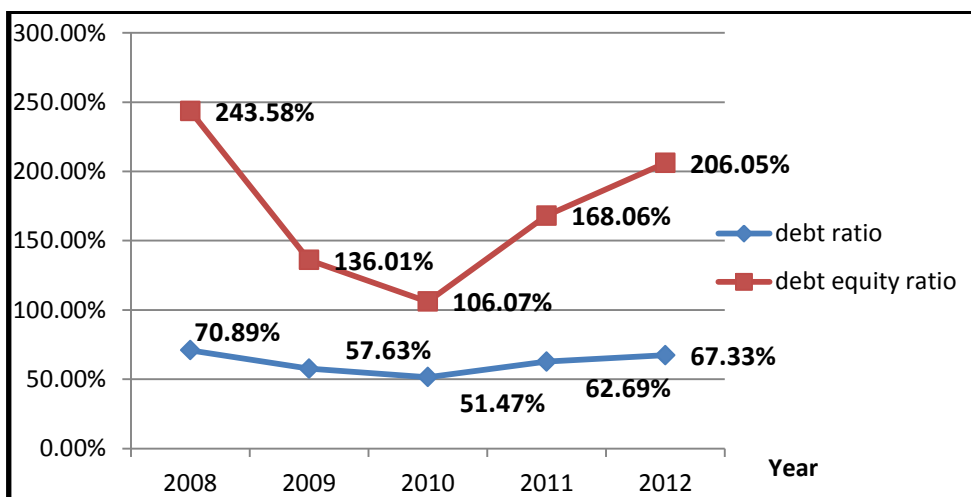
Source: Based on data of the Ministry of Industry and Trade of the Czech Rep. [online]

#### 4.3.5 Long-Term Solvency Ratios

Following **Table 7** shows the development of financial leverage ratios. Debt ratio represents the share of liabilities- other sources on total assets. According to the theory, the higher percentage the larger the risk to maintain own solvency.

From 2008 to 2010 both the debt ratio and debt-equity increased. The lowest values were detected in year 2010. It was due to the lowest values of assets and liabilities during observation period. After 2010 there was change in trend and both ratios started to increase. It was caused by taking a loan in year 2010.

**Graph 8: Development of Long-Term Solvency Ratios**



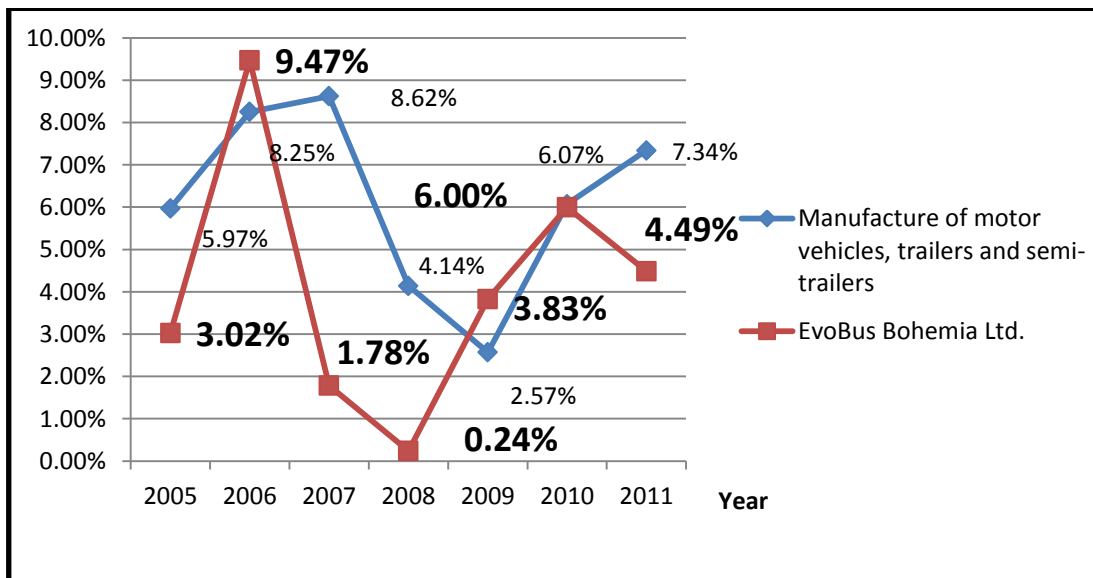
Source: Own calculations

#### 4.3.6 Profitability Ratios

Ratios of profitability were calculated for year 2005- 2011 and compared with the average values of companies within the same sector. Anyways it is important to mention that EvoBus Bohemia Ltd is not just manufacturing company and therefore data from the Czech Statistical office have only illustrative purpose.

**Graph 9** shows the development of ROA of EvoBus Bohemia Ltd. and industry from 2005 till 2011. The highest value was reached in year 2006, due to the higher net profit compared to the previous year. Moreover this net profit is the highest for the entire observed periods.

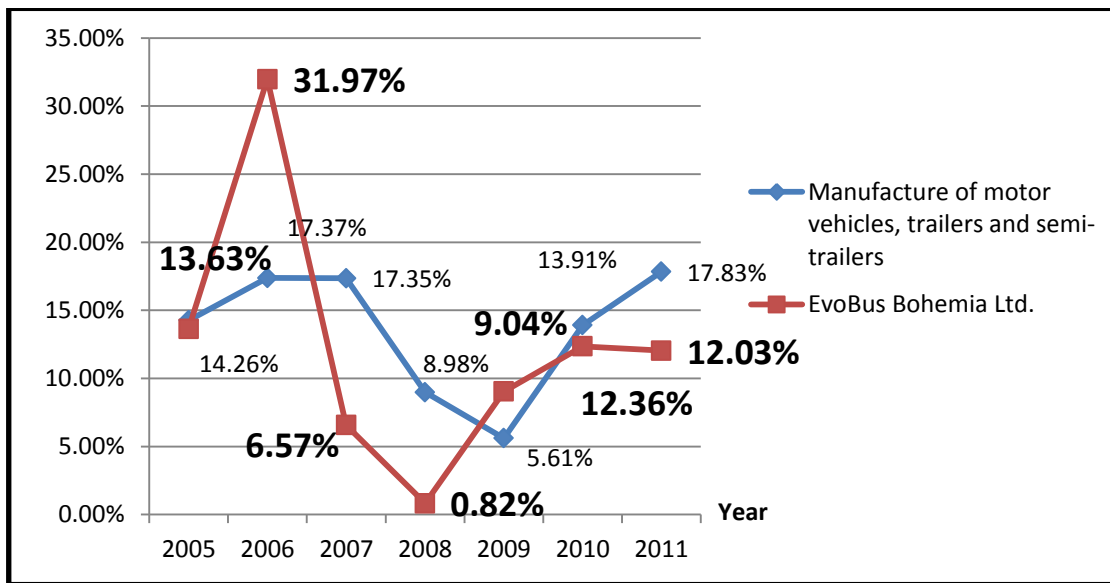
**Graph 9: ROA of EvoBus Bohemia Ltd. and Industry**



*Source: Own processing, ROA of industry retrieved from Czech Statistical Office [online]*

Even the return on equity (ROE) has the highest value in 2006. The reason for this is again high net profit. Equity was increasing over the entire period so the biggest influence on development of ROE had the net profit. That is also the reason why ROE reached its minimum (0.24 %) in 2008, when the net profit was the lowest. However, in the following two years trend changed, and ROE increased to 12.36%. In 2011 decreased ROE mainly due to the increase of equity. After closer examination it was determined that it was caused by creating reserves. The development of the company's ROE and as well as the development of the industry ROE is shown in **Graph 10**.

**Graph 10: ROE of EvoBus Bohemia Ltd. and Industry**



Source: Own processing, ROE of industry retrieved from Czech Statistical Office [online]

#### 4.3.7 Altman's Z-Score

According to this model can be EvoBus Bohemia Ltd. marked as financially stable from 2008 till 2010, when the Z-Score reached value greater than 2.9. In years 2011 and 2012 belonged EvoBus Bohemia Ltd. to the grey area. It was mainly caused by decrease of  $X_5$ . This ratio expresses the share of sales on total assets- total asset turnover. In 2012 the total assets were the highest and sales were the lowest for the observed periods.

**Table 7: Altman's Z-Score**

		2008	2009	2010	2011	2012
$X_1$	0.717	0.63	0.50	0.48	0.43	0.49
$X_2$	0.847	-0.10	-0.09	-0.03	0.02	0.03
$X_3$	3.107	0.01	0.05	0.09	0.07	0.01
$X_4$	0.42	0.41	0.74	0.94	0.60	0.49
$X_5$	0.998	3.04	2.45	2.43	1.60	1.29
<b>Z-SCORE</b>		3.60	3.20	3.40	2.38	1.90
<b>Classification</b>		Prosperous Area			Grey Area	

Source: Own calculations

## 5. Results

Analysis of EvoBus Ltd. was done by analyzing the European market with buses and by using selected methods of financial analysis. For the analytical part of the thesis were used financial statements from 2008-2012.

Due to the warranties resulting from the integration of the company in Daimler Group, the financial situation of EvoBus is highly stable. EvoBus is one of the leading manufacturers of buses in Europe. According to the latest Daimler Annual Report 2012, EvoBus market share was around 28%. Compared with the competition, EvoBus offers higher quality products and services. Opportunity for growth is the complex individualization of the buses and new technologies.

From the analysis of absolute indicators, it is evident that the main source of assets coverage is during the entire observation period other sources- liabilities. Important milestone in this case was year 2011 when EvoBus Bohemia Ltd. invested in the construction of a new production hall. Another important factor was the purchase of of DIL Czech Leasing Šumperk Koncernová s.r.o. in 2012. For this purpose EvoBus Bohemia Ltd. borrowed 6 mil EUR from UniCredit Bank Czech Republic, a.s.. These events caused that the debt ratio increased and with that as well the risk of stakeholders. Nevertheless the company was always able to meet its interest payments.

In contrast to the balance sheet, the income statement enables to distinguish between production in Holýšov and sales made in Prague. It is evident that during almost the entire monitored period; nearly two thirds of the total turnover came from the production in Holýšov. Only year 2008 was exceptional in volume of sales of merchandise. Behind sudden growth, it was the framework agreement with ICOM Transport a.s. for 600 buses.

Despite the fact that year 2008 was successful both in sales and production, profitability ratios dropped to their minimal values. After closer examination of the financial statements, was determined that it was caused by sudden increase of reserves, which resulted in low net profit.

Based on the ratios of liquidity it can be stated, that the investigated company may have certain problems with paying its obligations. Recommended values were reached only in 2011. Especially cash ratio reported low values.

Altman's Z-Score measures financial distress of the company. The results confirmed that EvoBus Bohemia Ltd. was from 2008-2010 financially stable. Decline in 2011 and 2012 was due to the lower assets turnover.

Considering all results of this thesis, author concluded that EvoBus Bohemia Ltd. was not significantly affected by the financial crisis in 2008 and 2010. Main reasons why company remained financially stable during those years was stable demand for buses.

## Conclusion

The aim of this bachelor thesis was to evaluate economic situation of EvoBus Bohemia Ltd. and assess an impact of financial crisis 2008 and 2010 upon the company.

Between years 2008-2011 the company recorded favourable development. Net profit was increasing together with other indicators, e.g. liquidity ratios. In addition to that, in 2011 the company made an investment into the construction of a new production hall in Holýšov. This and other indicators prove that EvoBus Bohemia Ltd. was not significantly affected by the financial crisis in 2008 and 2010. However, in 2012 sales of own production as well as merchandise decreased.

Based on findings of this thesis following recommendations were compiled:

- EvoBus Bohemia Ltd. should focus on its ability to repay its obligations. Unless liquidity improves, it can lead to the financial distress and worsening the company's reputation. Tightening of conditions for collection of receivables could be a solution.
- Another problem could be the fact that share of liabilities has been growing during the last years. If the company gets more and more in debt, it might not appear trustworthy for banks. A solution could be to increase registered capital.
- Finally, the company should focus on increasing its sales volume. A solution could be to increase technological skills that would allow complex individualization of the buses.

Financial situation of EvoBus Bohemia Ltd is due to the organizational integration into Daimler Group stable. It will be interesting to watch its development in the future.

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## **Attachments**

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Appendix 2: Selected Types of Buses and Share of EvoBus Holýšov on Supplies

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Appendix 5: Vertical Analysis of Balance Sheets

Appendix 6: Horizontal Analysis of Balance Sheets

Appendix 7: Vertical Analysis of Income Statements

Appendix 8: Horizontal Analysis of Income Statements

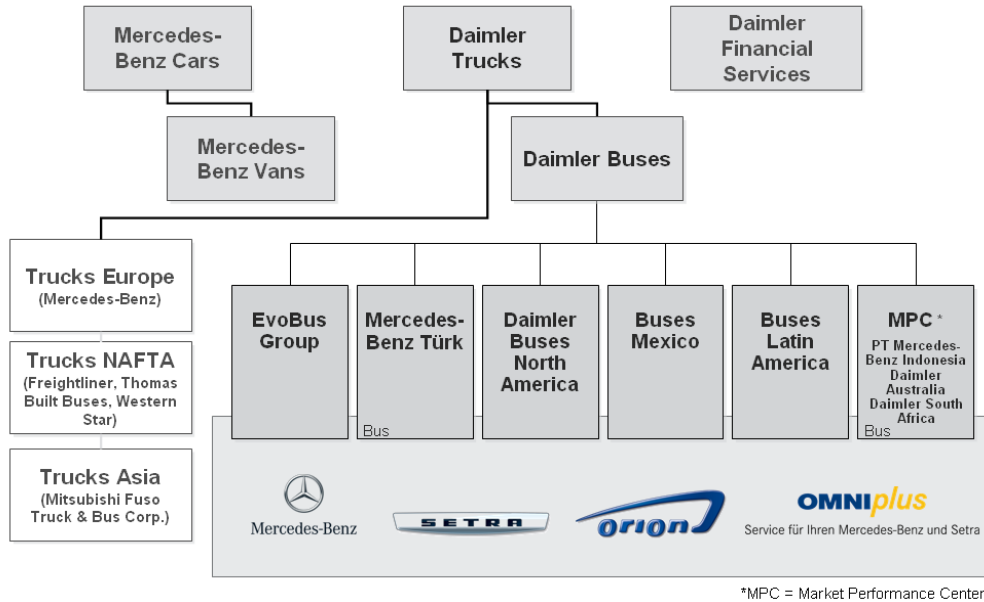
Appendix 9: Changes in Liquidity and Long-Term Solvency Ratios

## Appendix 1: Organizational Integration of EvoBus Group in Daimler Group

DAIMLER

Daimler Buses

### Organisational integration



Source: Studie proveditelnosti, Inovace ve společnosti EvoBus, 2010

## Appendix 2: Selected types of buses and share of EvoBus Holýšov on supplies

Brand	Segment	Type	Share of EvoBus on supplies
Mercedes-Benz	City	Citaro	100%
		CapaCity	100%
		Conecto	0%
	Intercity	Citatro	100%
		Integro	100%
		Intouro	0%
	Couches	Travego	60%
Tourismo		0%	
Setra	Intercity	MultiClass	100%
		TopClass	100%
	Couches	ComfortClass	100%

Source: Studie proveditelnosti, Inovace ve společnosti EvoBus, 2010

**Appendix 3: Balance Sheets of EvoBus Bohemia Ltd. from years 2008-2012**

<b>EvoBus Bohemia Ltd.</b>					
	in thousand CZK				
<b>BALANCE SHEET</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>TOTAL ASSETS</b>	868,185	655,662	653,205	965,879	1,120,632
<b>Fixed Assets</b>	320,603	328,861	338,074	553,040	567,228
Intangible fixed asset	4,729	3,763	2,974	2,582	3,899
Tangible fixed assets	315,874	325,098	335,100	542,817	555,688
Long-term financial assets	0	0	0	7,641	7,641
<b>Current assets</b>	545,708	326,368	314,822	412,253	553,186
Inventory	180,650	132,148	121,936	117,252	138,588
Long-term receivables	9,594	107	0	0	218,263
Short-term receivables	253,426	176,949	120,958	245,007	157,870
Short-term financial assets	101,938	17,022	71,673	49,994	38,465
<b>Accruals</b>	1,874	433	309	586	218
<b>TOTAL LIABILITIES</b>	868,185	655,662	653,205	965,879	1,120,632
<b>Equity</b>	252,689	277,808	316,975	360,328	366,164
Registered capital	339,000	339,000	339,000	339,000	339,000
Capital funds	0	0	0	0	0
Reserve funds, etc.	8	8	8	12,946	15,114
Profit / loss of previous years	-88,402	-86,319	-61,200	-34,971	6,214
Profit / loss of current period (+/-)	2,083	25,119	39,167	43,353	6,836
<b>Other sources</b>	615,496	377,854	336,230	605,551	754,468
Reserves	122,121	118,986	102,259	103,072	93,427
Long-term payables	0	0	1,941	262,058	0
Short-term payables	493,375	258,868	232,030	240,421	510,069
Bank loans and financial assistance	0	0	0	0	150,972
<b>Accruals</b>	0	0	0	0	0

*Source: Výroční zprávy společnosti EvoBus Bohemia, s. r. o., years 2008-2012*

#### Appendix 4: Income Statements of EvoBus Bohemia Ltd., years 2008-2012

<b>EvoBus Bohemia Ltd.</b>				<b>in thousand CZK</b>	
<b>INCOME STATEMENTS</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Revenues from merchandise	1,487,595	501,235	606,187	548,068	508,813
Costs of sold goods	1,399,557	512,505	566,479	506,657	470,022
Sales margin	88,038	-11,270	39,708	41,411	38,791
Production	1,146,824	1,078,557	986,661	1,006,007	933,067
Revenues from own products and services	1,148,029	1,106,669	978,035	993,861	940,635
Change in inventory of the company's own production	-1,205	-28,112	8,626	12,146	-7,568
Capitalisation	0	0	0	0	0
Production consumption	892,216	776,613	750,733	725,198	658,614
Consumption of material and energy	695,710	594,492	549,728	503,680	467,660
Services	196,506	182,121	201,005	221,518	190,954
Added value	342,646	290,674	275,636	322,220	313,244
Personnel expenses	209,243	240,594	214,432	217,717	218,411
Taxes and fees	814	659	749	545	646
Depreciation of tangible and intangible fixed assets	48,073	54,402	55,883	58,635	76,598
Revenues from disposals of fixed assets and materials	10,136	53,834	66,840	65,464	57,641
Net book value of disposed fixed assets and materials	6,353	18,095	20,093	45,750	41,080
Change in operating reserves and adjustments and complex deferred costs	67,437	-15,976	-18,989	-8,903	7,850
Other operating revenues	3,110	2,871	6,173	1,354	7,899
Other operating expenses	13,891	13,980	20,341	10,396	24,200
Operating profit / loss	10,081	35,625	56,140	64,898	9,999
Interest revenues	1,937	151	174	320	1,554
Interest expenses	4,217	845	666	2,032	6,710
Other financial revenues	75,289	50,151	14,232	22,137	36,903
Other financial expenses	76,847	49,654	17,818	33,626	33,632
Profit / loss from financial operations (transactions)	-3,838	-197	-4,078	-13,201	-1885
Income tax on ordinary income	4,160	10,309	12,895	8,344	2,278
Profit / loss of current accounting period (+/-)	2,083	25,119	39,167	43,353	5,836
Income (Profit / loss) before tax	6,243	35,428	52,062	51,697	8,114

Source: Výroční zprávy společnosti EvoBus Bohemia, s. r. o. from years 2008-2012

## Appendix 5: Vertical Analysis of Balance Sheets

Vertical Analysis of Balance Sheets										
	2008	share in %	2009	share in %	2010	share in %	2011	share in %	2012	share in %
<b>TOTAL ASSETS</b>	868,185	100.00%	655,662	100.00%	653,205	100.00%	965,879	100.00%	1,120,632	100%
<b>Fixed Assets</b>	320,603	36.93%	328,861	50.16%	338,074	51.76%	553,040	57.26%	567,228	50.62%
Intangible fixed assets	4,729	0.54%	3,763	0.57%	2,974	0.46%	2,582	0.27%	3,899	0.35%
Tangible fixed assets	315,874	36.38%	325,098	49.58%	335,100	51.30%	542,817	56.20%	555,688	49.59%
Long-term financial assets	0	0.00%	0	0.00%	0	0.00%	7,641	0.79%	7,641	0.68%
<b>Current assets</b>	545,708	62.86%	326,368	49.78%	314,822	48.20%	412,253	42.68%	553,186	49.36%
Inventory	180,650	20.81%	132,148	20.15%	121,936	18.67%	117,252	12.14%	138,588	12.37%
Long-term receivables	9,594	1.11%	107	0.02%	0	0.00%	0	0.00%	218,263	19.48%
Short-term receivables	253,426	29.19%	176,949	26.99%	120,958	18.52%	245,007	25.37%	157,870	14.09%
Receivables Total	263,020	30.30%	177,056	27.00%	120,958	18.52%	245,007	25.37%	376,133	33.56%
Short-term financial assets	101,938	11.74%	17,022	2.60%	71,673	10.97%	49,994	5.18%	38,465	3.43%
<b>Accruals</b>	1,874	0.22%	433	0.07%	309	0.05%	586	0.06%	218	0.02%
<b>TOTAL LIABILITIES</b>	868,185	100.00%	655,662	100.00%	653,205	100.00%	965,879	100.00%	1,120,632	100.00%
<b>Equity</b>	252,689	29.11%	277,808	42.37%	316,975	48.53%	360,328	37.31%	366,164	32.67%
Registered capital	339,000	39.05%	339,000	51.70%	339,000	51.90%	339,000	35.10%	339,000	30.25%
Capital funds	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Reserve funds, etc.	8	0.00%	8	0.00%	8	0.00%	12,946	1.34%	15,114	1.35%
Profit / loss of previous years	-88,402	-10.18%	-86,319	-13.17%	-61,200	-9.37%	-34,971	-3.62%	6,214	0.55%
Profit / loss of current period (+/-)	2,083	0.24%	25,119	3.83%	39,167	6.00%	43,353	4.49%	6,836	0.61%
<b>Liabilities</b>	615,496	70.89%	377,854	57.63%	336,230	51.47%	605,551	62.69%	754,468	67.33%
Reserves	122,121	14.07%	118,986	18.15%	102,259	15.65%	103,072	10.67%	93,427	8.34%
Long-term payables	0	0.00%	0	0.00%	1,941	0.30%	262,058	27.13%	0	0.00%
Short-term payables	493,375	56.83%	258,868	39.48%	232,030	35.52%	240,421	24.89%	510,069	45.52%
Bank loans and financial assistance	0	0.00%	0	0.00%	0	0.00%	0	0.00%	150,972	13.47%
<b>Accruals</b>	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Source: Own calculations

## Appendix 6: Horizontal Analysis of Balance Sheets

Horizontal Analysis of Balance Sheets								
	Δ08-09		Δ 09-10		Δ 10-11		Δ 11-12	
	Absolute CZK	Relative (%)	Absolute CZK	Relative (%)	Absolute CZK	Relative (%)	Absolute CZK	Relative (%)
<b>TOTAL ASSETS</b>	-212,523	-24	-2,457	-0.37	312,674	47.87	154,753	16.02
<b>Fixed Assets</b>	8,258	3	9,213	2.80	214,966	63.59	14,188	2.57
Incorporation expensess	-966	-20	-789	-20.97	-392	-13.18	1,317	51.01
Tangible fixed assets	9,224	3	10,002	3.08	207,717	61.99	12,871	2.37
Long-term financial assets	0	x	0	x	7,641	x	0	0.00
<b>Current assets</b>	-219,340	-40	-11,546	-3.54	97,431	30.95	140,933	34.19
Inventory	-48,502	-27	-10,212	-7.73	-4,684	-3.84	21,336	18.20
Long-term receivables	-9,487	-99	-107	-100.00	0	x	218,263	x
Short-term receivables	-76,477	-30	-55,991	-31.64	124,049	102.56	-87,137	-35.57
Receivables Total	-85,964	-33	-56,098	-31.68	124,049	102.56	131,126	53.52
Short-term financial assets	-84,916	-83	54,651	321.06	-21,679	-30.25	-11,529	-23.06
<b>Accruals</b>	-1,441	-77	-124	-28.64	277	89.64	-368	-62.80
<b>TOTAL LIABILITIES</b>	-212,523	-24	-2,457	-0.37	312,674	47.87	154,753	16.02
<b>Equity</b>	25,119	10	39,167	14.10	43,353	13.68	5,836	1.62
Registered capital	0	0	0	0.00	0	0.00	0	0.00
Capital funds	0	x	0	x	0	x	0	x
Reserve funds, etc.	0	0	0	0.00	12,938	x	2,168	16.75
Profit / loss of previous years	2,083	2	25,119	29.10	26,229	42.86	41,185	117.77
Profit / loss of current period (+/-)	23,036	1,106	14,048	55.93	4,186	10.69	-36,517	-84.23
<b>Liabilities</b>	-237,642	-39	-41,624	-11.02	269,321	80.10	148,917	24.59
Reserves	-3,135	-3	-16,727	-14.06	813	0.80	-9,645	-9.36
Long-term payables	0	x	1,941	x	260,117	13401.18	-262,058	-100.00
Short-term payables	-234,507	-48	-26,838	-10.37	8,391	3.62	269,648	112.16
Bank loans and financial assistance	0	x	0	x	0	x	150,972	x
<b>Accruals</b>	0	x	0	x	0	x	0	x

Source: Own calculations



## Appendix 7: Vertical Analysis of Income Statements

Vertical Analysis of Income Statements	2008	2009	2010	2011	2012
	share	share	share	share	share
Revenues from merchandise	56.44%	31.17%	38.26%	35.54%	35.10%
Costs of sold goods	53.10%	31.87%	35.76%	32.86%	32.43%
Sales margin	3.34%	-0.70%	2.51%	2.69%	2.68%
Production	43.51%	67.08%	62.28%	65.24%	64.37%
Revenues from own products and services	43.56%	68.83%	61.74%	64.46%	64.90%
Change in inventory of the company's own production	-0.05%	-1.75%	0.54%	0.79%	-0.52%
Capitalisation	0.00%	0.00%	0.00%	0.00%	0.00%
Production consumption	33.85%	48.30%	47.39%	47.03%	45.44%
Consumption of material and energy	26.40%	36.97%	34.70%	32.67%	32.26%
Services	7.46%	11.33%	12.69%	14.37%	13.17%
Added value	13.00%	18.08%	17.40%	20.90%	21.61%
Personnel expenses	7.94%	14.96%	13.54%	14.12%	15.07%
Taxes and fees	0.03%	0.04%	0.05%	0.04%	0.04%
Depreciation of tangible and intangible fixed assets	1.82%	3.38%	3.53%	3.80%	5.28%
Revenues from disposals of fixed assets and materials	0.38%	3.35%	4.22%	4.25%	3.98%
Net book value of disposed fixed assets and materials	0.24%	1.13%	1.27%	2.97%	2.83%
Change in operating reserves and adjustments and complex deferred costs	2.56%	-0.99%	-1.20%	-0.58%	0.54%
Other operating revenues	0.12%	0.18%	0.39%	0.09%	0.54%
Other operating expenses	0.53%	0.87%	1.28%	0.67%	0.72%
Operating profit / loss	0.38%	2.22%	3.54%	4.21%	0.69%
Interest revenues	0.07%	0.01%	0.01%	0.02%	0.11%
Interest expenses	0.16%	0.05%	0.04%	0.13%	0.46%
Other financial revenues	2.86%	3.12%	0.90%	1.44%	2.55%
Other financial expenses	2.92%	3.09%	1.12%	2.18%	2.32%
Profit / loss from financial operations (transactions)	-0.15%	-0.01%	-0.26%	-0.86%	-0.13%
Income tax on ordinary income	0.16%	0.64%	0.81%	0.54%	0.16%
Profit / loss of current accounting period (+/-)	0.08%	1.56%	2.47%	2.81%	0.40%
Income (Profit / loss) before tax	0.24%	2.20%	3.29%	3.35%	0.56%

Source: Own calculations

## Appendix 8: Horizontal Analysis of Income Statements

Horizontal Analysis of Income Statements								
	Δ08-09		Δ 09-10		Δ 10-11		Δ 11-12	
	Absolute (CZK)	Relative (%)	Absolute (CZK)	Relative (%)	Absolute (CZK)	Relative (%)	Absolute (CZK)	Relative (%)
Revenues from merchandise	-986,360	-66.31	104,952	20.94	-58,119	-9.59	-39,255	-7.16
Costs of sold goods	-887,052	-63.38	53,974	10.53	-59,822	-10.56	-36,635	-7.23
Sales margin	-99,308	-112.80	50,978	452.33	1,703	4.29	-2,620	-6.33
Production	-68,267	-5.95	-91,896	-8.52	19,346	1.96	-72,940	-7.25
Revenues from own products and services	-41360	-3.60	-128,634	-11.62	15,826	1.62	-53,226	-5.36
Change in inventory of the company's own production	-26,907	-2232.95	36,738	130.68	3,520	40.81	-19,714	-162.31
Capitalisation	0	x	0	x	0	x	0	x
Production consumption	-115,603	-12.96	-25,880	-3.33	-25,535	-3.40	-66,584	-9.18
Consumption of material and energy	-101,218	-14.55	-44,764	-7.53	-46,048	-8.38	-36,020	-7.15
Services	-14,385	-7.32	18,884	10.37	20,513	10.21	-30,564	-13.80
Added value	-51,972	-15.17	-15,038	-5.17	46,584	16.90	-8,976	-2.79
Personnel expenses	31,351	14.98	-26,162	-10.87	3,285	1.53	694	0.32
Taxes and fees	-155	-19.04	90	13.66	-204	-27.24	101	18.53
Depreciation of tangible and intangible fixed assets	6,329	13.17	1,481	2.72	2,752	4.92	17,963	30.64
Revenues from disposals of fixed assets and materials	43,698	431.12	13,006	24.16	-1,376	-2.06	-7,823	-11.95
Net book value of disposed fixed assets and materials	11,742	184.83	1,998	11.04	25,657	127.69	-4,670	-10.21
Change in operating reserves and adjustments and complex deferred costs	-83,413	-123.69	-3,013	-18.86	10,086	53.11	16,753	188.17
Other operating revenues	-239	-7.68	3,302	115.01	-4,819	-78.07	6,545	483.38
Other operating expenses	89	0.64	6,361	45.50	-9,945	-48.89	0	0.00
Operating profit / loss	25,544	253.39	20,515	57.59	8,758	15.60	-54,899	-84.59
Interest revenues	-1,786	-92.20	23	15.23	146	83.91	1,234	385.63
Interest expenses	-3,372	-79.96	-179	-21.18	1,366	205.11	4,678	230.22
Other financial revenues	-25,138	-33.39	-35,919	-71.62	7,905	55.54	14,766	66.70
Other financial expenses	-27,193	-35.39	-31,836	-64.12	15,808	88.72	6	0.02
Profit / loss from financial operations (transactions)	3,641	94.87	-3,881	-1970.05	-9,123	-223.71	11,316	85.72
Income tax on ordinary income	6,149	147.81	2,586	25.08	-4,551	-35.29	-6,066	-72.70
Profit / loss of current accounting period (+/-)	23,036	1105.90	14,048	55.93	4,186	10.69	-37,517	-86.54
Income (Profit / loss) before tax	29,185	467.48	16,634	46.95	-365	-0.70	-43,583	-84.30

Source: Own calculations

## Appendix 9: Changes in Liquidity and Long-Term Solvency Ratios

	2008-2009		2009-2010		2010-2011		2011-2012	
	Index	Δ	Index	Δ	Index	Δ	Index	Δ
<b>Liquidity Ratios</b>								
current ratio	1.140	13.98%	1.076	7.62%	1.264	26.38%	0.632	-36.75%
quick ratio	1.014	1.40%	1.108	10.80%	1.476	47.60%	0.662	-33.76%
cash ratio	0.318	-68.17%	4.698	369.76%	0.673	-32.68%	0.363	-63.73%
<b>Long-term solvency ratios</b>								
debt ratio	0.813	-18.71%	0.893	-10.68%	1.218	21.80%	1.074	7.39%
debt equity ratio	0.558	-44.16%	0.780	-22.01%	1.584	58.43%	1.226	22.61%
times interest rate	58.094	5709.36%	1.999	99.94%	0.379	-62.11%	0.047	-95.33%

Source: Own calculations