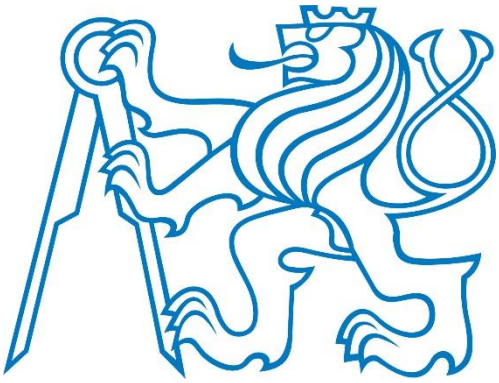
CZECH TECHNICAL UNIVERSITY IN PRAGUE

FACULTY OF CIVIL ENGINEERING

DEPARTMENT OF ECONOMICS AND MANAGEMENT IN CIVIL ENGINEERING



DIPLOMA THESIS

2018 Helena Knapová

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ZADÁNÍ DIPLOMOVÉ PRÁCE

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II. ÚDAJE K DIPLOMOVÉ PRÁCI

Název diplomové práce: Finanční analýza stavebního podniku v období krize

Název diplomové práce anglicky: Financial analysis of the construction company in times of crisis

Pokyny pro vypracování:
Diplomová práce se bude obecně zabývat finanční analýzou stavebního podniku, v praktické části pak konkrétně společností Eurovia CS, a.s. Poznatky plynoucí z analýzy budou hodnoceny pro období před, během a po poslední světové finanční krizi. Cílem práce je zjištění schopností podniku čelit další případné krizi stavebního trhu a návrh sady doporučení/opatření pro jejich zvýšení.

Seznam doporučené literatury:
Ekonomika podniku - Freiberg, Zralý; Finanční řízení v praxi - kolektiv autorů; Finanční analýza - Růčková; Finanční management - Růčková; Úvod do podnikové ekonomiky - Martinovičová

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Podpis vedoucího práce Podpis vedoucího katedry

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12.10.2017
Datum převzetí zadání Podpis studenta(ky)

I hereby declare that I elaborated this thesis by myself only with guidance of my thesis supervisor Ing. Radan Tomek MSc. from CTU in Prague. I also declare that all the documents I used and from which I derived are listed in the bibliography.

Date …….

7.1.2018 Helena Knapová

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I would like to thank my supervisor, Ing. Radan Tomek MSc. from CTU in Prague for his valuable advices and continuous support throughout the thesis work.

Financial analysis of the construction company in times of crisis

Finanční analýza stavebního podniku v období krize

Abstract

The main goal of this thesis is to perform a financial analysis of the company Eurovia CS a.s. between years 2006 and 2016. The thesis also follows the impact of the financial crisis from the year 2008. Information, such as financial statement data, come from the company's annual reports. In order to achieve the thesis' goal, the company was analyzed in ten categories, such as the ratio analysis, bankruptcy and solvency models or economic value added (EVA). In the ratio analysis, the company was compared to the industry average, which was calculated using values from two other same market major construction companies. Some of the outputs for the analysis were obtained from the software tool FinAnalysis.

Key words

Financial analysis, ratio analysis, EVA, WACC, model, crisis, DuPont, company, financial statements

Abstrakt

Hlavním cílem této práce je provést finanční analýzu stavebního podniku Eurovia CS, a.s. mezi roky 2006 až 2016. Práce se také zabývá pozorováním vlivu finanční krize z roku 2008. Data pro analýzu, například data z finančních výkazů, pocházejí z výročních zpráv podniku. Aby bylo dosaženo cíle práce, byla společnost analyzována v deseti kategoriích, například poměrovou analýzou, bankrotními a bonitními modely nebo ekonomickou přidanou hodnotou (EVA). V poměrové analýze byla společnost porovnána s oborovým průměrem, který byl spočítán z hodnot dalších dvou stavebně zaměřených společností. Některé výstupy pro analýzu byly získány ze softwaru FinAnalysis.

Klíčová slova

Finanční analýza, poměrová analýza, EVA, WACC, modely, krize, DuPont, společnost, finanční výkazy

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List of abbreviations

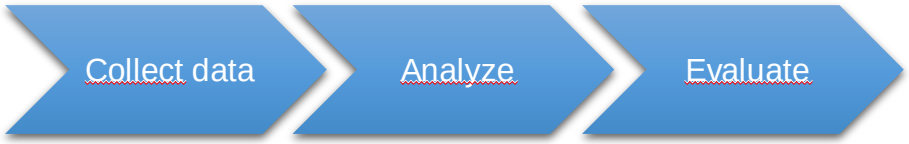
ROS	return on sales
CR	current ratio
QR	quick ratio
CPR	cash position ratio
NWC	net working capital
G&A	general and administrative
EPS	earnings per share
CF	cash flow
P/E	price to earnings
EVA	economic value added
NOPAT	net operating profit after taxes
WACC	weighted average cost of capital
C	capital
D	debt
E	equity
NPV	net present value
IRR	internal rate of return
EBT	earnings before taxes

1 Introduction

The diploma thesis focuses on the financial analysis of the company EUROVIA, a.s. and the impact of the global financial crisis from 2008. The thesis consists of two main parts – theoretical and practical one.

The theoretical part has three chapters. First chapter focuses on the financial analysis itself. The chapter has information about the horizontal and vertical analysis of the financial statements, ratio analysis, economic value added, pyramid indicator systems and systems of purpose-selected indicators. The ratio analysis focuses on five groups of ratios – profitability ratios, liquidity ratios, activity ratios, debt ratios and market ratios. Several ratios were selected and described for each of these five groups. Following part of the thesis contains information about the economic value added (EVA), weighted average cost of capital (WACC) and how are they both calculated. The DuPont system, which is a good addition to profitability ratios, is described within the subchapter about the pyramid indicator systems. The next part is about the systems of purpose-selected indicators, which are split in two categories, one being about the bankruptcy models and the other about solvency models. Several models were selected and described in each of the categories. The second theoretical chapter discusses the sources of information – the financial statements. The chapter contains information about each individual financial statement – the balance sheet, the income statement and the cash flow statement, and their mutual interconnection. Final chapter of the theoretical part focuses on the economic crisis from 2008, what caused it, how it influenced the business performance and how it generally affected the Czech Republic.

The second main part, the practical one, is the financial analysis of the company Eurovia CS, a.s. between the years 2006 and 2016. First there is an introduction of the company, which consists of basic information about the company and its core business. After that follows the financial analysis itself. The input data for the analysis come from Eurovia's annual reports. Part of the output data comes from the program FinAnalysis, which was provided by the company ABRA Software a.s.



Picture 1 Financial analysis

Source: own source

The steps for the analysis are collect data, analyze and give evaluation. It is possible to use any kind of internal or external data, for example the balance sheet, the income statement or the cash flow statement. After collection of the data comes the analysis, which provides results for the evaluation. The evaluation should serve as a base for company's future steps and decisions.

The goal of the thesis is to analyze the company and to observe the impact of the financial crisis. Eurovia is analyzed in ten categories – general company information, cash flow charts, ratio analysis, DuPont Analysis, bankruptcy models, solvency models, profit on 1 employee, the horizontal analysis of the balance sheet, the vertical analysis of the balance sheet and EVA, which together form a good overview about the company's financial health.

General information about the company, such as the number of employees, profit, costs and sales, gives a basic overview of the company in specific numbers throughout the years. This category is followed with the cash flow charts, where are displayed different type of cash flows etc. Ratio analysis is done in four categories – profitability ratios, liquidity ratios, activity ratios and debt ratios. For better evaluation of results, was the ratio analysis done for two more construction companies. The DuPont Analysis shows the decomposition of ROE/ROA. This serves as an additional information for profitability ratios because it is easier to spot the weak places. Bankruptcy models used to analyze Eurovia are the Altman Z-Score, Taffler Model and the Credibility index IN05. Those models operate on different probability of success, so they provide different angles on companies' situation. As a solvency model was chosen the Kralicek Quick Test. After the bankruptcy and solvency models, the company is analyzed through profit on 1 employee. Eurovia is compared to two other construction companies, which gives a good perspective, when evaluating the results. The horizontal and vertical analysis of the balance sheet show the changes in the balance sheet throughout the years and also within each category of the balance sheet. In the end was calculated the WACC and EVA. For better overview is the EVA compared to the industry average. The information from these ten categories form together a thorough overview of the company for the financial analysis.

2 Financial analysis

The goal of the financial analysis of a company is to determine a complex financial state of the company. It should identify its strong features as well as the weak ones, which is important for predicting future opportunities or threats for the company.

It uses data from previous years to identify the trends, that the company has been following, which is important for its future decision making.

Financial state of the company is influenced by three main factors:

- Short-term financial state of the company
  (solvency within one year)
- Long-term financial state of the company
  (ability to pay long-term liabilities)
- Profitability

The information from the analysis is used not only by the managers of the company but also for other external subjects:

- Banks and creditors
- Investors
- State
- Customers and suppliers

Main sources for the financial analysis are the Balance sheet, the Income statement and the Cash Flow statement. Useful data could also come from the management accounting.

There are several ways of approaching the analysis, for example:

- Horizontal analysis
- Vertical analysis
- Ratio analysis
- DuPont system
- Model analysis

These approaches will be further introduced in this thesis.

2.1 Horizontal analysis of the financial statements

The horizontal analysis follows the progress of the items from financial statements (the balance sheet and the income statement) in time. It evaluates their stability and the power of development. This analysis tries to find the answer on the question “How is the item changing in time?” and it could be done every year (compare two following financial periods) or for multiple following periods. [1]

There are two basic ways of approaching the analysis: [1]

a) Ratio method – relative increase of a financial statement item (evaluating the item in the followed period with the period before). This method is more appropriate for larger companies. [1]
b) Differential method – absolute increase of a financial statement item (following the difference between the followed period and the period before). This method is better for smaller companies since they do not have a steady property structure. [1]

2.1.1 The Balance Sheet

When doing the horizontal analysis of the balance sheet, it is important to focus first on the items which changed the most using the ratio method. If too many items changed (which would make the interpretation less clear), it is better to analyse also the items which changed (increased/decreased) a lot using the differential method. The interpretation of results could have a lot of options since each person has a different opinion. [1]

Thorough analysis needs enough information. It is important to provide an actual picture of the financial state of the company but still clear enough, so overflow of information does not happen. Sometimes less is more. Also keep in mind who is the targeted group of the analysis. [1]

2.1.2 The Income Statement

The focus of the horizontal analysis of the income statement should be on all the profit categories and comparison between revenues from sales of company’s own products and services with its costs. The revenues should be steadily growing and the costs decreasing. To get a complete picture, it is recommended to analyse these items in a longer period. [1]

2.1.3 The Cash Flow Statement

It is necessary to be cautious when analysing the cash flow statement. It is used in the analysis if it is available more than once every six months and when it is possible to get some internal company information. The focus should lie on the operational cash flow to find out if the revenues are higher than expenses. [1]

2.2 Vertical analysis of the financial statements

The vertical analysis tracks the proportionality of the financial statement items to a comparative base and it looks for the answer to questions like “Does the mutual proportions of the financial statement items change during the company’s development?” or “Is the property, capital and profit structure steady or is there some development?”. [1]

The goal of vertical analysis is to define:

- the share of each asset item to total assets
- the share of each financing source to total liabilities
- the share of each item of the income statement to total sales [1]

2.2.1 The Balance Sheet

Each item of the balance sheet in followed period is related to the total balance sheet sum. The financial sources (liabilities and equity) are evaluated first and the assets after that, which is only logical since the assets were purchased with the financial sources. The financial structure shows from which sources are the assets purchased. The main goal of the financial structure of the company is to evaluate the sources which could the company use. The total amount of these sources depends mainly on the company’s size (if the company is larger, it needs more finances to function, but it also has wider options of financing), the technology it uses (if the technology capacity is full, the company wants more investments), how fast is the working capital turned over and how are the sales organized. [1]

Over-capitalized company uses the capital ineffectively and, so it occurs that even the current assets are financed with long-term capital. That is only useful when the economy is in crisis and the company cannot be weighted down with another (even short-term) loan. Under-capitalized company could have problems with financing its regular activities, which should only happen in times of expansion, when the company can handle the situation thanks to the turnover. The ideal financial structure is the one which acquires the financing sources for the lowest costs but also maximizes the sales and profit. [1]

When it comes to financing, it is more profitable for the company to use short-term liabilities since long-term liabilities are more expensive. But short-term liabilities are riskier, and the company could find itself in the situation when there are no sources left. It is necessary to find balanced structure according to the branch of business. Optimal setting is related to the growth of rentability ratios, but also the targeted group. The creditors want fewer liabilities since the risk of loaning finances to the company is lower. But the investors (owners) is more suitable financial structure which leads towards an increase in rentability of equity. [1]

When it comes to assets, it is more profitable for the company to invest in long-term assets, which generate higher rentability. But being liquid enough is also crucial for the company, so it is necessary to have current assets as well. Considering the risk is important, because the less risk the asset represent the lower the profitability. The point of view is also different for each side – the creditors prefer more current assets (which are more liquid) but the owners want assets which have long-term use for the company. The main goal of the financial manager is to establish the optimal distribution of assets, so the company is liquid enough (meaning the liquid ratios are in recommended limits) but effective as well (when a company focuses too much on the liquidity, it usually becomes less effective). [1]

Usually the vertical analysis is done just for the balance sheet. For the income and cash flow statement is the vertical analysis valuable as a refinement when doing the internal financial analysis. [1]

2.3 Ratio analysis

To analyse mutual links and contexts between indicators, their absolute values are put into different ratios. For use of financial analysis these ratios are sorted into equally important groups, which measure some specific aspect of a company's financial health. There are five groups of ratios: [2]

a) Profitability ratios
b) Liquidity ratios
c) Debt ratios
d) Activity ratios
e) Market ratios [2]

2.3.1 Profitability ratios

Those ratios measure company's earnings to a chosen comparative base. Higher profitability means that the company is using its assets effectively to make a profit. In all the profitability ratios an income statement item is divided by a balance sheet item. [1]

- Return on assets – this ratio shows the total efficiency of a company, meaning how skilled is the company with turning its money into assets, which generate their net income and profit. It is better to use for comparing companies in the same industry as different industries use assets differently. [2]

$$ROA = \frac{EBIT}{total\ assets}$$

$$EBIT = earnings\ before\ interest\ and\ taxex$$

Equation 1 ROA

- Return on equity – this ration is very important for shareholders and potential investors because it compares how much profit each dollar of common stockholders' equity generates (a return of 1 means that every crown of common stockholders' equity generates 1 crown of net income). Besides that, it also represents how effectively is management of the company using the equity for financing operations. ROE is a ratio from the investor's side. [2]

$$ROE = \frac{EAT}{equity}$$

$$EAT = earnings\ after\ taxes$$

Equation 2 ROE

- Return on capital employed –return on capital employed allows investors to see how many crowns in profits each crown of capital employed makes. It is a long-term profitability ratio – ROCE takes into consideration long-term financing. For example, a return of 3 states that for every crown invested in capital employed, the company made 30 pennies of profits. [3]$ROCE = \frac{EBIT}{capital\ employed}$

$$ROCE = \frac{EBIT}{capital\ employed}$$

Equation 3 ROCE

- Return on sales - this ratio shows how many crowns of profit is made from one crown of sales. If this ratio does not provide a good result, the other ratios are probably not in a good place either. [1]

$$ROS = \frac{EAT}{(sales\ from\ own\ products\ and\ services + sales\ from\ goods)}$$

Equation 4 ROS

2.3.2 Liquidity ratios

Liquidity shows the ability to turn company's assets to cash (or cash equivalent) and pay its liabilities. Liquidity is important for a long-term existence of the company – it influences its strategy. The company's management must compromise between high liquidity which binds funds with low (or none) profit and without the possibility to invest them, which decreases the profitability and low liquidity which could mean that the company does not have enough cash. [1]

- Current ratio – represents the ability of a company to pay its short-term liabilities with its current assets. It shows how many times can the company pay off its creditors. Recommended value lies between 1,8 and 2,5. [1]

$$CR = \frac{current\ assets}{current\ liabilities}$$

Equation 5 Current ratio

- Quick ratio – is stricter current ratio. The least liquid part of current assets – supplies – is deducted (because the inventory is the most difficult to convert to cash). [1]

$$QR = \frac{(current\ assets - supplies)}{(current\ liabilities)}$$

Equation 6 Quick ratio

- Cash position ratio – shows a company's capability to fund its current liabilities with only cash (or cash equivalents). This ratio is more limiting than the current or quick ratio because just cash is used for paying off the debt. If the ratio is higher than one it means that the current debt can be paid by cash (and cash equivalents) and if not, it is clear that the company would need more than just cash to pay its debts. [4]

$$CPR = \frac{cash}{current\ liabilites}$$

Equation 7 Cash position ratio

- Net working capital – when the current liabilities are deducted from current assets it is clear how much capital is left to use freely without getting into financial problems. It shows the short-term liquidity of a company and ability of the company's management to use the assets efficiently, which is important for the management, creditors and suppliers. [5]

$$NWC = current\ assets - current\ liabilities$$

Equation 8 Net working capital

2.3.3 Activity ratios

These ratios are used for capturing how well is a company using its individual asset items. It shows if the assets are used enough or if the company lacks productive assets and there for will miss possible opportunities in the future. Activity ratios inform about the number of turnovers or how long it takes to do the turnover. It is desired to have a higher number of turnovers, which take shorter periods of time instead of the opposite. [2]

- Accounts receivable turnover – it represents how efficiently and timely a company collects funds from its customers (showing also the quality of company's customers and sales conditions and care of the accounts receivables). A low turnover most likely means that it takes a lot of time for the company to collect its funds form the customers.

On the other hand, a high turnover ratio indicates a combination of quality customers and thorough policy for collecting company's funds from them. [2]

$$Accounts\ receivable\ turnover = \frac{net\ sales}{average\ accounts\ receivable}$$

Equation 9 Accounts receivable turnover

- Inventory turnover – this ratio measures how many times is the inventory sold during monitored time. An increase of the inventory turnover time could mean that company's product either does not sell as good or that the company is increasing the inventory because it expects an increase in demand. This type of ratio tracks if the company does not overspend by buying too much inventory and wastes resources by storing non-salable inventory. Inventory is often put as a collateral for loans, which makes this ratio also interesting for investors. [2]
- Asset turnover – it evaluates how efficiently is a company using its total assets – if the assets generate sales. Lower turnover indicates that the company is not using its assets efficiently and higher turnover means that it does. The turnover represents how many sales are generated from each crown of company assets. [2]

$$Asset\ turnover = \frac{net\ sales}{total\ assets}$$

Equation 10 Asset turnover

- Working capital turnover – represents how effectively is a company using its working capital. A low turnover indicates that a company puts too much money in accounts receivables and inventory instead of using the short-term assets and liabilities to support sales. [6]

$$Working\ capital\ turnover = \frac{revenues}{working\ capital}$$

Equation 11 Working capital turnover

2.3.4 Debt ratios

Debt ratios mainly measure debt to equity but also provide information about the ability to pay debt costs. It is important to consider assets which are just leased because they do not show in the balance sheet just in the income statement (as a cost of a service).

- Debt to equity – it is a ratio between company's total debt and its total net wort – how many percent of the financing comes from external subjects. These ratios are mainly influenced by taxes, risks, types of assets and a level of financial freedom [1]

$$Debt\ to\ equity = \frac{total\ debt}{total\ net\ worth}$$

Equation 12 Debt to equity

- Total debt – shows a company's ability to pay off its liabilities with its assets - how many assets the company must sell to pay off all of its liabilities. [7]

$$Total\ debt = \frac{total\ liabilities}{total\ assets}$$

Equation 13 Total debt

- Debt to capital – ratio measuring how would a company handle possible downturn in sales because it puts significance on the relationship between debt and equity financing. It is a proportion between company's total debt and its capital. If the ratio is high, it indicates that the company is using debt to finance its operations a lot which could mean a potential risk for the investors. [8]

$$Debt\ to\ capital = \frac{total\ debt}{total\ debt + equity}$$

Equation 14 Debt to capital

- Equity to G&A expenses – it represents the relative amount of general and administrative expenses – using the ratio between the total net worth and G&A expenses. The adequate ratio should be 1:1. The ration is influenced by the constructor system. It is different for just a construction management or regular organization of a company with its own capacities.

$$Equity\ to\ G\&A = \frac{total\ net\ worth}{G\&A\ expenses}$$

$$G\&A\ expenses = general\ \ and\ administrative\ expenses$$

Equation 15 Equity to G&A expenses

- Financial leverage - it is a ratio between total liabilities and total equity of a company (or vice versa), measuring how much is the company financed by debt. It uses the same values as previous ratios, but with a different mathematic approach, showing a risk of the company. Because the higher the leverage (meaning financing with debt), the higher the interest payments. But if the company earns more than what are the interest payments, using the debt financing, its rentability rises rapidly. [2]

$$financial\ leverage = \frac{total\ liabilities}{total\ equity}\ (\text{or vice versa})$$

Equation 16 Financial leverage

2.3.5 Market ratios

These ratios indicate how the market values previous activity of a company and how the market predicts its future. Market ratios are important for possible investors, who want to know if their investment will have desired return. [1]

- Earnings per share – it is basically a modified version of ROE. This ratio is interesting for potential investors because it calculates the possible amount of money which would each stock receive if all the profits were distributed in the end of the year. This also allows comparing larger companies with smaller ones. [2]

$$EPS = \frac{EAT}{shares\ of\ campany's\ stock}$$

Equation 17 EPS

- Cash Flow per share – instead of using earning, it is also possible to use cash flow and calculate cash flow per share. [2]

$$CF\ per\ share = \frac{CF\ from\ operations - preffered\ dividends}{weighted\ average\ number\ of\ shares}$$

Equation 18 CF per share

- Price to earnings – this ratio calculates the market value of a stock relative to its earnings. If the value is low, it indicates a high possible profit but also a high risk. Higher value means low profit and low risk. P/E ratio is good for analyzing how much should the investor pay for stock base on its current earnings. [2]

$$P/E = \frac{market\ value\ per\ share}{earnings\ per\ share}$$

Equation 19 P/E

2.4 Economic Value Added

The thought behind EVA is that an investment is only valuable to investors if its expected profitability exceeds its capital costs. EVA is an important part of the financial analysis because unlike the ratios (which use only information from the financial statements), it pushes the cost of capital towards valuating economic returns. [9]Just because the company is making a profit in a given period it does not necessarily mean that it makes a positive economic profit. A successful company should have a positive profit as well as EVA value (the higher the EVA value the better). [1]The company is creating a value if the net operating profit after taxes (NOPAT) is higher than cost of used capital (a sum of payed interest and payed dividends). [9]

$$EVA = EBIT * (1 - tax\ rate) - WACC * C$$

$$EVA = Economic\ Value\ Added$$

$$EBIT = Earning\ Before\ Interest\ and\ Taxes$$

$$WACC = Weighted\ Average\ Cost\ of\ Capital$$

$$C = Capital\ (used\ by\ the\ company)$$

Equation 20 EVA

First part of the equation focuses on NOPAT. The goal behind that is bringing the accounting concept of investor's company earnings. The second part deals with the total invested capital, which is multiplied by WACC. [9]

2.4.1 Weighted Average Cost of Capital

WACC consists of cost of debt and cost of equity. The theory of economic value added is based on the fact, that one of the main goals of any company is to maximize economic profit, which is not the same as an accounting profit. The accounting profit is the difference between revenues and costs and it is shown in the balance sheet. In the economic profit the costs also contain the alternative costs (costs of missed opportunities), which shows that the regular interpretation of profit ignores the cost of equity because the cost of debt (payed interests) reflects in the income statement. [9]

$$WACC = r_d * (1 - d) * \frac{D}{C} + r_e * \frac{E}{C}$$

$$r_d = cost\ of\ debt\ (payed\ interests)$$

$$d = tax\ rate$$

$$D = debt$$

$$C = total\ long - term\ invested\ capital$$

$$r_e = cost\ of\ equity$$

$$E = equity$$

Equation 21 WACC

Estimating the cost of equity is quite problematic. The companies do not promise the rate of return of invested money. When estimating the cost of equity, the rate of return risk-free security is usually increased with risk resulting from the investment. The risk surcharge is calculated from the development of profitability of the company's stock during previous years, which is compared to profitability of risk-free state debentures. The sum of interest rate of state

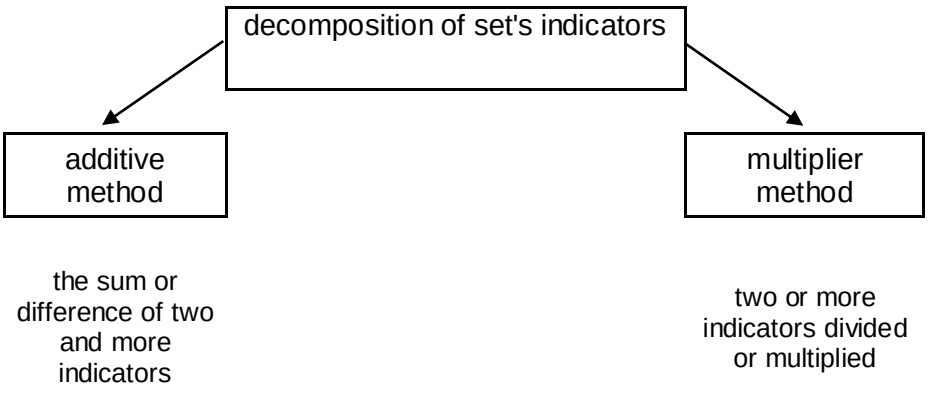
debentures and difference of profitability from previous years is the resulting cost of equity. This is one of the method of estimating the cost of equity. [9]

The economical profit starts existing only when the accounting profit is more than a sum of regular costs and costs of missed opportunities. It may look like that if the company uses debt financing, economic value added would be higher because debt financing is cheaper than equity financing. But the debt financing increases the risk of the investment, which makes the investors demand higher profitability of the investment, which only shows that debt financing also increases the cost of equity. [9]

According to different theories the attractivity of EVA is caused by containing the basic management functions: capital budgeting, estimating the company's performance and rewarding. EVA could replace a lot of other ratios, such as ROA, EPS, NPV, IRR, etc. The value of EVA and its changes enable measuring the company's performance but the difficulty in estimating the cost of equity is one of its disadvantages. Other disadvantage is that EVA is given as an absolute value which makes it unable to compare between companies or industry average. [9]

2.5 Pyramid indicator systems

Pyramid indicator systems use the additive or multiplier method to decompose the top indicator: [9]



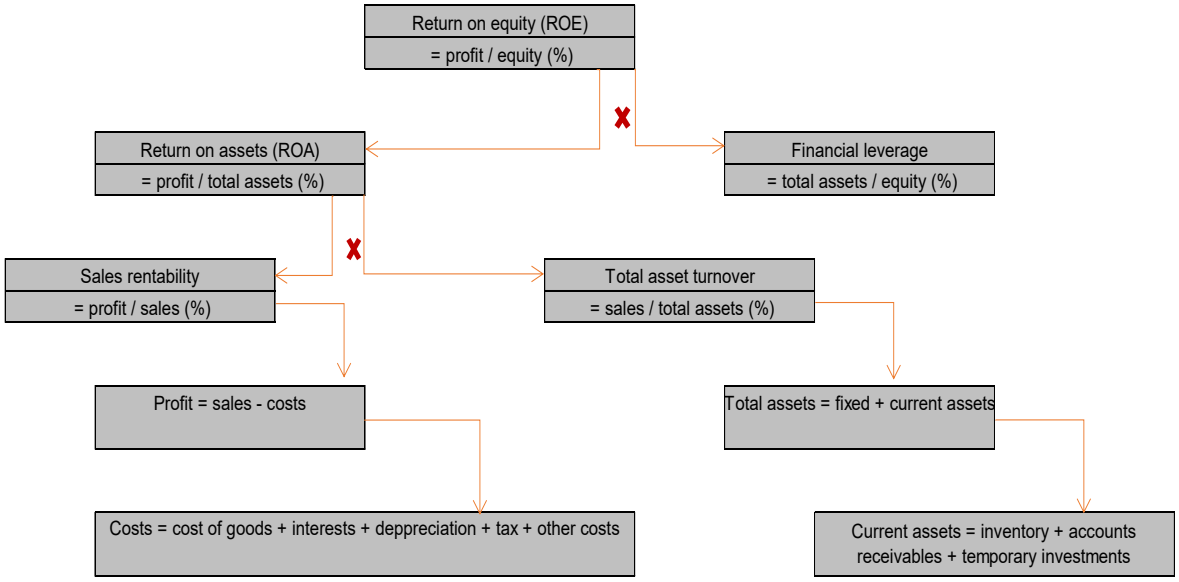
Picture 2 Pyramid indicator systems

Source: own source

The goal of the pyramid systems is to describe mutual dependence of separate indicators and to analyze complicated inside ties between them in the pyramid. Any interference in one indicator will influence all the other connected indicators. [9]

2.5.1 DuPont System

The pyramid distribution was first used in the chemical company DuPont de Nomeurs and till today it is the most typical pyramid indicator system. Du Pont distribution is focused on analyzing ROE or ROA indicator. [9]



Picture 3 DuPont System

Source: FinAnalysis

The right side of DuPont distribution is the leverage effect indicator or inverted value of equity ratio. The presence of this indicator shows that if a company uses more debt financing, it is possible with certain circumstances to achieve higher ROE value. The positive influence of debt financing will show up only when company's profit is able to compensate higher cost of interest. The DuPont system tracks the individual components of ROE in order to determine how these components influence it. [9]

Indicator:	**Formula:**
Net profit margin	EAT/sales
Total asset turnover	Sales/Total assets
ROA	Net profit margin/Total asset turnover
Financial leverage	Total assets/Equity
ROE	ROA * Financial leverage

Table 1 DuPont distribution

Source: own source

"DuPont analysis involves examining changes in these figures over time and matching them to corresponding changes in ROE. By doing so, analysts can determine whether operating efficiency, asset use efficiency or leverage is most responsible for ROE variations." [10]

2.6 Systems of purpose-selected indicators

To this category belong bankruptcy and solvency models. Both types of these models have the same goal – assign one single characteristic number, which enables to evaluate financial health of a company. [2]

2.6.1 Bankruptcy models

Bankruptcy models inform about the threat of a bankruptcy. It is based on the fact, that a company, which is threatened by bankruptcy, shows symptoms which are typical for bankrupting some time before. The most common are problems with current liquidity, the amount of clean working capital or rentability of total invested capital. [9]

2.6.1.1 Altman Z-Score

Altman model was published in 1968 and is one of the most known bankruptcy models. Altman picked based on discriminate analysis five indicators, which should have, based on this analysis, the biggest use for separating the good companies from the bad ones. The Altman Z-Score is a sum of five ratios, which have assigned different weights (the biggest weight has a return on assets). [2]

The intention behind the Altman model was to find out, how to separate easily bankrupting companies from the others. The discriminate method, which Altman used, is a direct statistical method, which classifies observed subjects into two or more defined groups based on defined characteristics. Based on the analysis, Altman specified weighted of the ratios, which are used as variables in his model. The model also developed throughout the years, same as the economic situation of companies and states. [9]

The equations for the publicly traded companies (on the stock market) and private companies differ a bit in the weights of variables, which are the same for both equations: [2]

Variable	Formula
X_1	Working capital/Total Assets
X_2	Retained earnings/Total Assets
X_3	EBIT/Total Assets
X_4	Equity/Total Liabilities
X_5	Asset Turnover

Table 2 Altman variables

Source: own source

i. Publicly traded company

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

Equation 22 Altman Score - publicly traded company

ii. Private company

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

Equation 23 Altman Score - private company

Same as the weights of variables, the limit values are also different for the publicly traded company and the private ones. [9]

Value of Z		Interpretation
> 2,99	Publicly traded company	Safe zone - financially stable company
> 2,9	Private company	
1,81 - 2,98	Publicly traded company	Grey zone - not successful but without problems
1,2 - 2,9	Private company	
< 1,81	Publicly traded company	Bankruptcy zone - significant financial problems
< 1,2	Private company	

Table 3 Altman model - interpretation of results

Source: own source

The index for developing markets is a modified version of basic Altman index. The main advantage of this modification is that it does not need the market value of the company, because it would increase the price of the analysis for smaller companies, but it uses typical information from the financial statements. [9]

$$Z = 6{,}56 * X_1 + 3{,}26 * X_2 + 6{,}72 * X_3 + 1{,}05 * X_4$$

Equation 24 Altman Score - developing markets

Value of Z	Interpretation
> 2,6	Safe zone - financially stable company
1,1 - 2,6	Grey zone - not successful but without problems
< 1,1	Bankruptcy zone - significant financial problems

Table 4 Altman model - interpretation of results (developing markets)

Source: own source

2.6.1.2 Credibility Indexes

These indexes were developed by the Neumaiers and are more suited for Czech companies and environment. It is a result of an analysis of twenty-four mathematical and statistical models of company evaluation and practical knowledge from analysing more than one thousand of Czech companies. [9]

Just as the Altman model, the credibility indexes use equations with weighted debt, profitability, liquidity and activity ratios. The assigned weight is a weighted average of ratio values of the industry. [9]

First was developed IN95, which respected the demands of the creditors when it came to liquidity and respected the industry in which the company was operating. A few years after that came out IN99 from the investors point of view, which respected the fact that the industry is not as important for the investors, that more important is the ability to make a profit from committed funds. Considering that IN95 and IN99 each looked into the company from a different point of view, the Nuemaiers constructed IN01 which combines previous indexes plus also considers EVA. In 2005 IN01 was slightly modified to its latest version IN05. [9]

$$IN05 = 0.13 * X_1 + 0.04 * X_2 + 3.97 * X_3 + 0.21 * X_4 + 0.09 * X_5$$

Equation 25 IN05

Variable	Formula
X_1	Total Assets/Total Liabilities
X_2	EBIT/Interests
X_3	EBIT/Total Assets
X_4	Revenue/Total Assets
X_5	Current Assets/Short-term Liabilities

Table 5 IN05 Variables

Source: own source

The interpretation of results is as follows:

Value of IN05	Interpretation
> 1,6	Healthy company
0,9 - 1,6	Grey zone
< 0,9	Unhealthy company

Table 6 IN05 - interpretation of results

Source: own source

2.6.1.3 Taffler Model

Taffler model was published in 1977 and has basic and modified version. Both versions use four ratios and the final score is called Z-Score (same as Altman). The modified version assumes that there is no detailed information available, so the X_4 is calculated differently. [9]

$$Z = 0.53 * X_1 + 0.13 * X_2 + 0{,}18 * X_3 + 0.16 * X_4$$

Equation 26 Taffler model

Variable	Formula
X_1	EBT/Short-term Liabilities
X_2	Current Assets/Total Liabilities
X_3	Short-term Liabilities/Total Assets
X_4	(Financial assets - Short-term Liabilities)/Operating Costs
	Asset Turnover

Table 7 Taffler model variables

Source: own source

The modified version interprets the Z-Score differently.

Value of Z		Interpretation
< 0	Basic version	High probability of bankruptcy
< 0,2	Modified version	
> 0	Basic version	Low probability of bankruptcy
> 0,3	Modified version	

Table 8 Taffler model - interpretation of results

Source: own source

2.6.2 Solvency models

Solvency models try to evaluate company's solvency with points. They are dependent on the quality of ratios database for the industry, in which is the company being compared. [9]

2.6.2.1 Rudolf Doucha Balance Analysis

Rudolf Doucha Balance Analysis is a system of indicators which could be used in any company without considering its size. It gives a possibility to test easily and quickly functioning of a company. This system was developed for specifically for Czech conditions. [9]

The basic variants of analysis use just an analysis of the balance sheet and the income statement, more complicated versions use also basic data from the cash flow statement. The balance analysis has three levels – balance analysis I, balance analysis II and balance analysis III. [9]

- Balance analysis I – gives a tentative look of company's situation and it is not suitable for any decision making or for comparing companies. It is a system of four basic and one total indicator. [9]
- Balance analysis II – this system evaluates company in four basic directions. Each direction has three to five indicators, which are constructed in the way where an increase in the indicator means that a company is doing better. [9]

$$S = \frac{(2 * S_1 + S_2 + S_3 + S_4 + 2 * S_5)}{7}$$

Equation 27 Balance Analysis II - Total stability

Indicator	Formula
S_1	Equity/Fixed Assets
S_2	2*(Equity/Fixed Assets)
S_3	Equity/Total Liabilities
S_4	Total Assets/(Short-term Liabilities*5)
S_5	Total Assets/(Supplies*15)

Table 9 Balance Analysis II - stability indicators

Source: own source

$$L = \frac{(5 * L_1 + 8 * L_2 + 2 * L_3 + L_4)}{16}$$

Equation 28 Balance Analysis II - Total liquidity

Indicator	Formula
L_1	(2*Financial Assets)/Short-term Liabilities
L_2	((Financial Assets + Accounts Receivables)/Short-term Liabilities)/2,7
L_3	(Current Assets/Short-term Liabilities)/2,5
L_4	Working Capital/(Total Liabilities + Equity)*3,33

Table 10 Balance Analysis II - liquidity indicators

Source: own source

$$A = \frac{(A_1 + A_2 + A_3)}{3}$$

Equation 29 Balance Analysis II - Total activity

Indicator	Formula
A_1	(Total Sales/2)/(Total Liabilities + Equity)
A_2	(Total Sales/4)/Equity
A_3	(EVA*4)/Total Sales

Table 11 Balance Analysis II - activity indicators

Source: own source

$$R = \frac{(3 * R_1 + 7 * R_2 + 4 * R_3 + 2 * R_4 + R_5)}{17}$$

Equation 30 Balance Analysis II - Total profitability

Indicator	Formula
R_1	(10*EAT)/EVA
R_2	(8*EAT)/Equity
R_3	(20*EAT)/(Total Liabilities + Equity)
R_4	(40*EAT)/(Total Sales)
R_5	(1,33*Operating Profit)/(Total Profit)

Table 12 Balance Analysis II - profitability indicators

Source: own source

The financial health of the company is evaluated based on a value which is calculated with the total indicator.

$$C = \frac{(2 * S + 4 * L + 1 * A + 5 * R)}{12}$$

Equation 31 Balance Analysis II - Total indicator

Value of C	Interpretation
> 1,0	Healthy company
1,0 - 0,5	Grey zone
< 0,5	Problems with company's financial situation

Table 13 Balance Analysis II - Total indicator value

Source: own source

Most alarming is when the total indicator C reaches a negative value. The way that the indicators are calculated, and because the biggest weight is on profitability, signals that a company is not able to evaluate its financial means, which makes it difficult to obtain more financial sources. [9]

- Balance Analysis III – unlike balance analysis I and II, balance analysis III also uses information from the cash flow statement. Also, some indicators are slightly altered. It is recommended to follow the company for some time – quarterly for two years. [9]

More quick and simple system of analysis is less precise and more optimistic, which could be dangerous when evaluating a company. [9]

2.6.2.2 Kralicek Quick Test

Same as the Balance Analysis, Quick Test consists of a system of equations. First part focus' on financial stability of a company and the other part on profitability situation. [9]

$$\text{Financial stability} = \frac{R_1 + R_2}{2}$$

Equation 32 Kralicek Quick Test - Financial stability

$$\text{Profitability} = \frac{R_3 + R_4}{2}$$

Equation 33 Kralicek Quick Test - Profitability

$$\text{Total position} = \frac{\text{Financial stability} + \text{Profitability}}{2}$$

Equation 34 Kralicek Quick Test - Total situation

Indicator	Formula
R_1	Equity/Total Assets
R_2	(Total Liabilities - Cash)/Operating Cash Flow
R_3	EBIT/Total Assets
R_4	Operating Cash Flow/Sales

Table 14 Kralicek Quick Test – indicators

Source: own source

If the total score is above 2 points, it suggests that the company is doing well. Fewer points indicate problems with financial management. [9]

Score	Interpretation
4	Very good
3	Good
2	Average
1	Weak
0	Very weak

Table 15 Kralicek Quick Test – interpretation of results

Source: own source

2.6.2.3 Tamari model

Tamari model is based on bank's practice of evaluating companies. This model is not really suited for Czech companies and environment. This system of equations evaluates company's financial individuality, equity and profit, current liquidity ratio and core business. [9]

Indicator	Formula
T_1	Equity/Total Liabilities
T_2	EAT/Total Assets
T_3	Current Assets/Short-term Liabilities
T_4	Production Costs/Average WIP
T_5	Sales/Average Accounts Receivable
T_6	Production Costs/Working Capital

Table 16 Tamari model – indicators

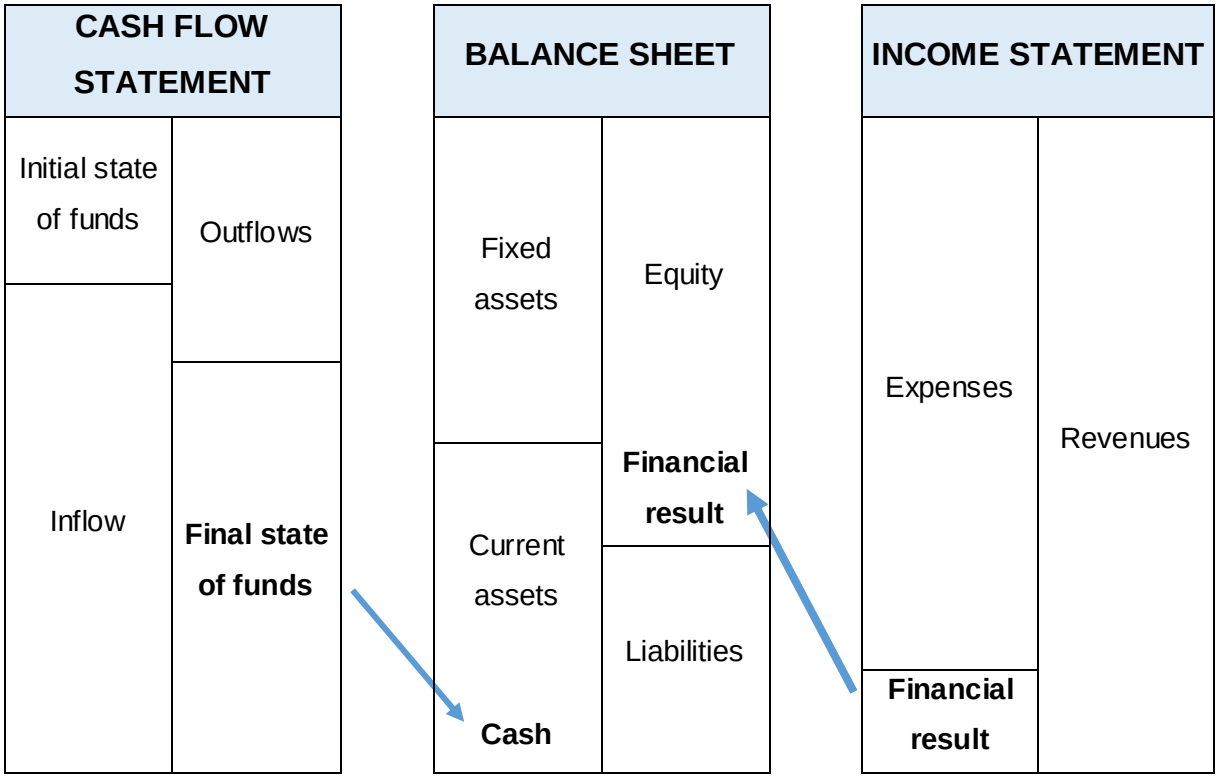
Source: own source

Each result has assigned a point value (maximum is one hundred). Solvency of the company is evaluated based on the amount of points. The higher the number, the better the solvency. Tamari model was constructed in 1960's, but is still valuable till today, because it uses statistical methods to distribute values. [9]

3 Sources of information

In order to perform a valuable financial analysis of the company, it is necessary to have proper sources of information. These sources are mainly the Balance Sheet, Income Statement and Cash Flow Statement. Together they form a connected system. “The income statement describes how the assets and liabilities were used in the stated accounting period. The cash flow statement explains cash inflows and outflows, and it will ultimately reveal the amount of cash the company has on hand, which is also reported in the balance sheet.” [11]

Together the statements provide a solid picture of the financial condition of the company.



Picture 4 Connected system

Source: own source

3.1 The Balance Sheet

The essential financial statement of the company is called the Balance Sheet because it balances two sides:

a) The Assets – could be defined as economic resources which are used to produce a profit for the company.
b) The Liabilities and Equity - are simply the commitments of the company to outside parties (banks, suppliers, employees), its debts, which is the company obligated to pay

to its creditors. Equity is the capital that belongs to the owners. It is the main carrier of business risk. Its ratio to total assets is an indicator of the financial security of the company. [12]

Since the liabilities and equity are used for purchasing the assets, the balance sheet must follow this equation: [12]

$$Total\ assets = Total\ Liabilities + Equity$$

Equation 35 The Balance Sheet

The Balance sheet shows the assets and the liabilities and equity at a certain moment in time e.g. the end of a year or a quarter.

BALANCE SHEET			
Assets		**Liabilities**	
Current Assets	Amount	**Current Liabilities**	Amount
Cash	-	Accounts Payable	-
Accounts receivable	-	Accrued Wages, Rent, Tax and Utilities Payable	-
Inventory	-	Short-Term Notes Payable	-
Temporary investments	-	Short-Term Bank Loan Payable	-
Prepaid expenses	-	Unearned Revenues	-
Fixed assets	Amount	**Long-term Liabilities**	Amount
Long-term investments	-	Long-Term Notes Payable	-
Machinery and equipment	-	Long-Term Debt	-
Building or Plants	-	**Equity**	
Land	-	Capital stock	-
		Retained Earnings	-
Σ		**Σ**	

Table 17 Balance sheet

Source: own source

3.1.1 The Assets

The assets could be divided into four main categories – fixed assets, intangible assets, current assets and other assets. However, that is a very general distribution. Each balance sheet differs according to size and type of company. [13]

ASSETS		
FIXED	Long-term investments	Financial investments in common stock, long-term notes, special funds etc. made for more than one year.
	Machinery and equipment	These assets are used repeatedly for a longer period of time. Using the assets decreases its value which is expressed as depreciation.
	Building or Plants	
	Land	
INTANGIBLE	Goodwill, software, patents, rights …	Assets providing economic advantages to a company but don't have a physical substance.
CURRENT	Cash	This is cash that the company has in the bank.
	Accounts receivable	Money from provided services owed to the company by the customers.
	Inventory	Assets that are ready to be sold or are in the process to be ready, e.g. material, work-in-progress, goods…
	Temporary investments	Short-term investments for less than a year.
	Prepaid expenses	These expenses usually include rent, taxes, insurance…
OTHER	Assets that don't fit in the one-year category. Deferred charges (long-term prepaid expenses), non-current receivables and advances to subsidiaries etc.	

Table 18 Assets

Source: own source using [14], [13]

3.1.2 The Liabilities and Equity

Same as the assets, also the liabilities and equity could vary a bit according to a company but three main categories they could be divided into are – long term liabilities, current liabilities and equity. [13]

LIABILITIES AND EQUITY		
CURRENT	Accounts Payable	Amount that a company owes to suppliers, employees, landlords, government, banks and others but is paid within one operating cycle/year.
	Accrued Wages, Rent, Tax and Utilities Payable	
	Short-Term Notes Payable	
	Short-Term Bank Loan Payable	
	Unearned Revenues	Received payments from customers for services which have not been provided yet.
LONG-TERM	Long-Term Notes Payable	Liabilities which are not paid within one operating cycle/year.
	Long-Term Debt	
EQUITY	Owner's Equity	Initial deposit made by the shareholders. Source of the company assets.
	Net Profit	Profit of a company.
OTHER	Liabilities that don't fit in the one-year category. They occur when a company has an expense which will be paid next year. For example, expense for next year's rent.	

Table 19 Liabilities and Equity

Source: own source using [14], [13]

3.2 The Income Statement

The Income Statement of a company summarizes revenues and expenses of the company in a specific period, such as one year. The statement informs about how successful a company was in the given period and how it achieved the economic result. [15]

The form of the income statement could be:

a) Horizontal – revenues and expenses are shown separately and against each other.
b) Vertical – allows detecting loss or profit from individual activities.

The Czech law prefers the form of the income statement which allows gradually calculate following items [16]:

- Trade margin
- Value added
- Operating profit
- Financial profit
- EAT – operating and financial profit after taxes
- Profit from extraordinary items
- Net profit

INCOME STATEMENT	
Income	Amount
Contract revenue	-
Interest income	-
Cost of construction	Amount
Labor	-
Material	-
Miscellaneous	-
General and administrative	Amount
Operating profit	Amount
Net income before taxes	Amount
Net income	Amount

Table 20 Income statement

Source: own source

3.2.1 Revenues

Revenue is simply the result of company's operations and activities, that being the gross increase in company's equity. Revenues of the company could be divided into 2 groups – operating revenue and non-operating revenue and gains. [17]

a) Operating revenue – it is the revenue earned by company's core business (for example selling products or services to customers).

b) Non-operating revenue and gains – revenues which are not predictable and most likely are onetime events.
    - Interest Income
    - Dividends
    - Commissions
    - Rental Income
    - Gain On Sale Of Assets
    - Gains -Other Unusual [17]

3.2.2 Expenses

Expenses include all the costs of goods, fixed assets, services and supplies, which were consumed during the business's operations in order to make revenue. Same as the revenues, expenses are divided into operating expenses and non-operating expenses. [16]

a) Operating expenses – expenses which occur due to company's common operations, such as rent, cost of equipment or wages. In the income statement, these expenses are usually divided into six groups:
    - Cost of goods sold
    - General and administrative costs
    - Depreciation and amortization
    - Other operating expenses
    - Interest expenses
    - Income taxes

    Interest expenses and income taxes are typically not included when determining the company's operating income. [18]
b) Non-operating expenses – they are not related to company's core business, for example interest, depreciation and amortization. [19]

3.3 Cash Flow Statement

Cash Flow is the actual difference between the all the cash receipts and the cash outflows over a given period of time, the cash flow statement shows actual flow of company's cash. It acknowledges the time gap between economic operations and their financial recognition. [20]

The Cash Flow statement provides the data about the inflows and outflows of company's cash. Managing CF correctly or being able to read the data from the CF statement correctly, is very important for the company's managers in order to make the correct decisions. The main difference between the CF and Income statement is in time. For example, winning a major contract is projected in company's Income statement as revenue almost immediately, however the actual cash from the contract will probably be received much later. Meaning that

even though the company is earning a profit and paying taxes for it, they may have less cash on the company's bank accounts than expected. [16]

There are two methods of determining the Cash Flow of a company:

a) Direct method – "the direct method presents cash flows from activities through a summary of cash outflows and inflows." [21]
b) Indirect method – "the indirect method shows a reconciliation from reported net income to cash provided by operations." [22]

Computing CF using the direct method requires a lot of information and time and possibly the outcome could be a bit confusing, which is one of the reasons why companies lean towards the indirect method more (especially companies abroad).

CASH FLOW STATEMENT	
Operating Activities	Amount
Net income from operations	-
Depreciation expenses	-
Investing activities	Amount
Purchase of equipment	-
Sale of used equipment	-
Financing activities	Amount
Increase in long-term debt	-
Issuance of stock	-
Dividends paid	-
Net change in Cash Flow	-

Table 21 Cash Flow statement

Source: own source

3.3.1 Cash Flow from Operations

All the inflows and outflows caused by the company's core business. However, it also includes activities that cannot be clearly assigned to the investment or financial activities.

3.3.2 Cash Flow from Investing

Cash Flow caused by the acquisition and sale of tangible and intangible assets, providing long-term loans and the receiving their repayments.

3.3.3 Cash Flow from Financing

Cash flow that affect the equity (for example loans to increase equity) or finance leases.

4 Economic crisis

During the second half of 2008 all the stock exchange rates started falling down. That situation did not happen to just some markets or industries that drop hit all the economically developed countries and was connected to the beginning of the global economic crisis. This crisis came from the USA and spread throughout the world. Its cause was unproportionable high debt of too many economic subjects – mainly American households, which had mortgages and they were not able to pay them up. That happened because of low interest rates and the fact that many banks were loaning them money without checking properly if they can make the payments. Those mortgages were called subprime mortgages and were later the biggest cause of the crisis. To obtain the necessary amount of money, American banks and state-guaranteed mortgage agencies issued many mortgage bonds, that were secured by mortgage-backed real estate. Those mortgages were later sold to other companies worldwide. They were securing them (for a good rating) against possible problems with payments, using the credit default swap contracts. [23]

The American central bank (FED) ended the policy of low interest rates in 2004 and started to increase the interest rates back up because of inflationary pressure and unbearably decreasing rate of American dollar. The basic interest rate was gradually increased from 1% p.a. (extremely low rate in 2004) to 5,25% p.a. in 2006. With some delay, this projected into growth of the interest rates of other banks and the interest rates of mortgages. Also, the payments of existing mortgages changed, especially for those who had mortgages with short-term fixation. All of that resulted in the real estate bubble bursting in 2006, which had following consequences:

- Significant decrease in the demand of mortgages, which resulted in lower interest in purchasing family houses.
- Lower demand of family houses caused their excessive amount on the market, which made their prices go down.
- Economically weaker families were not able to make their mortgage payments (which was also connected with the extremely high prices of energies and fuel) and they lost their houses.
- Due to the high number of unpaid (or partially paid) mortgages, the banks started having problems with liquidity and the risk of the mortgage bonds issued by them was increasing.
- All of this caused mutual incredulity between the banks. The banks stopped providing each other loans, which resulted in the international market collapse.
- And because of the CDS contracts, the crisis spread throughout the world. [23]

These errors first started happening in the USA, but because of mutual connection between financial systems worldwide and investments of many foreign companies in American securities, they started spreading into the world. The American central bank (FED) and also American government, other central banks and governments of infected countries tried to fight the crisis using strong expansive monetary and fiscal policy, but did not manage to stop the crisis. During the second half of 2008, most of the important financial markets started falling down and significant international investment and commercial banks started collapsing. Those banks were nationalized (if the government decided to save them) and practically all the significant central banks had to provide liquidity for the commercial banks, because of the malfunction of the international market. [23]

4.1 Business performance

Which part of the company's business performance is affected the most? It varies company to company, but some characteristics are similar. Crisis could show up in these areas of company's performance:

- Decrease in the number of contracts – lower demand for products and services leads towards a lower number of realized contracts and puts pressure on decreasing the price.
- Effect of operating lever – changing the production capacity influences the overhead costs. It could happen that the planned calculation says that the product has profit but in reality, the company shows loss. Decreasing the production volume could increase the overhead costs of one product. It creates a difference between calculated and actual costs. Companies with higher fixed costs tend to have bigger problems than companies with lower operating lever. High fixed costs are profitable for high production volume. Decrease in production volume is negative because the fixed costs are not covered.
- Lower input price – lower input price could be a positive factor. During crisis most of the commodities experienced a drop in their prices. That caused lower price of material.
- Decrease of profit and rentability – crisis rapidly influences the costs and revenues. Lower production volume decreases revenue as well as costs, which do not reduce as fast as revenue. These changes negatively influence the profit and companies could find themselves in loss.
- Cash flow – changes in the market also influence the cash flow. Banks stop giving out loans and start to lower the credit engagement.
- Financing and debt –
- Cost of capital – deterioration of capital structure and an increase in prices of external capital and risk lead towards higher cost of capital. [24]

4.2 Crisis in the Czech Republic

Czech Republic did not manage to avoid the crisis either. It was first indicated by the drop of Czech crown. That was a big problem for companies, which were doing business in the import/export industry. Currency, which changes its value in the short period of time, causes problems with exchange rate difference. Czech companies, which focus on exporting goods, lose thanks to the low position of Czech crown part of their profit, which gets them into financial problems. Czech Republic, as well as other countries of central Europe, was affected with the secondary consequences of the crisis. The automotive industry was affected the most. A lot of automotive companies (Škoda Auto, Hyundai, Tatra) had to dismiss employees or limit the production because of the low demand. That also had an impact on their suppliers, which had to dismiss employees, limit or stop the production as well. Big problem was also in the glass industry, which is considered very traditional for the Czech Republic, because of low demand, cheap foreign competition or consequences of some privatization and management decisions. [25]

Lower number of contracts caused collapse for a lot of Czech companies, which were not ready for the crisis. Some companies started to shorten the working hours, stop continuous performance or night shifts. [25]

5 Financial analysis of EUROVIA CS, a.s.

The financial analysis of EUROVIA CS a.s. will follow the economic results of the company trough out the years 2006 to 2016. The interpretation of those results will focus on the influence of economic crisis.

5.1 Introduction of the company

The construction company EUROVIA CS, a.s. operates in the Czech Republic for more than 60 years. Before the company was bought by EUROVIA, it was known as Stavby silnic a železnic, a.s.. As of 2006 the sole owner of EUROVIA CS, a.s. is EUROVIA, which is part VINCI company group. EUROVIA is a French company which operates in 18 countries. In the Czech and Slovak Republic is the group organized into six areas. [26]

EUROVIA CS, a.s. focuses on road engineering and has its own raw material base. Apart from construction, the company also mines/products and afterwards sells raw and other materials through EUROVIA Kamenolomy a.s., which produces quarried and crushed aggregates of stone. [26]

In 2014 the company implemented the Integrated Management System, meaning that they are certified in the quality management system (ČSN EN ISO 9001), environmental management system (ČSN EN ISO 14001) and Occupational Health and Safety (OHS) management system (ČSN OHSAS 18001). [26]

Legal arrangement of the company is a joint-stock venture. Joint-stock company is a type of company in which each shareholder owns a different amount of the company, based on the amount of stock he holds. The shareholders are liable for the company's debt only in the value of money they invested. The conditions for establishment are:

- Minimal number of founders: 1 physical or 1 legal personality
- Minimal deposit amount: 2 000 000 Kč or 80 000 € [26]

The highest authority in joint-stock companies is the General Assembly (Shareholders), company is managed by the Board of Directors and supervised by the Board of Supervisors.

Company:	EUROVIA, a.s.
Date of creation:	4th May 1992
Residence:	Národní 138/10, Nové Město, 110 00 Praha 1
Shareholders:	EUROVIA 92500 Rueil Malmaison, Place De L'Europe 18, France
Equity:	1 386 200 000 Kč Paid: 100%

Table 22 Eurovia information

Source: own source

As of 2014 the Chairman of the Directors Board is Martin Borovka with Vice chairman Luboš Trojánek and Member of the Directors Board Zdeněk Synáček. The Chairman of The Board of Supervisors is Xavier Neuschwander with members Pierre Anjolras, Patrick Jutier, Grégoire François Jean Pinasseau and Ludovic Demierre. [26]

Based on the data acquired from EUROVIA CS, a.s., it is clear, that the biggest clients over the last nine years have been the state and regional and municipal government. Only a small part of their projects has been financed by private or other investors. Apart from that, for the past three years, the percentage of clients coming from the state and regional and municipal government is becoming more even. [26]

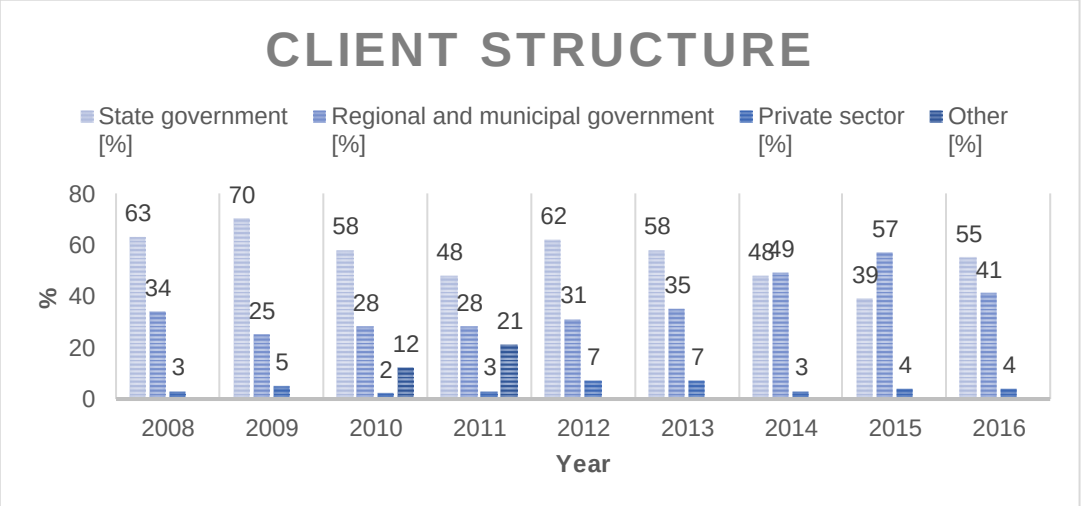


Chart 1 Client structure

Source: own source

The fact that the company's core business is road engineering and construction completely co-responds with the client structure. The biggest part of their scope of work belongs to "Roads, highways, urban roads" category. Accept the year 2011, the ratio of those contracts is quite steady. The ratios of other types of contracts (Bridges, Railway and tram tracks and Other) varies throughout the observed years. It is very likely that this trend will continue in the following years. [26]

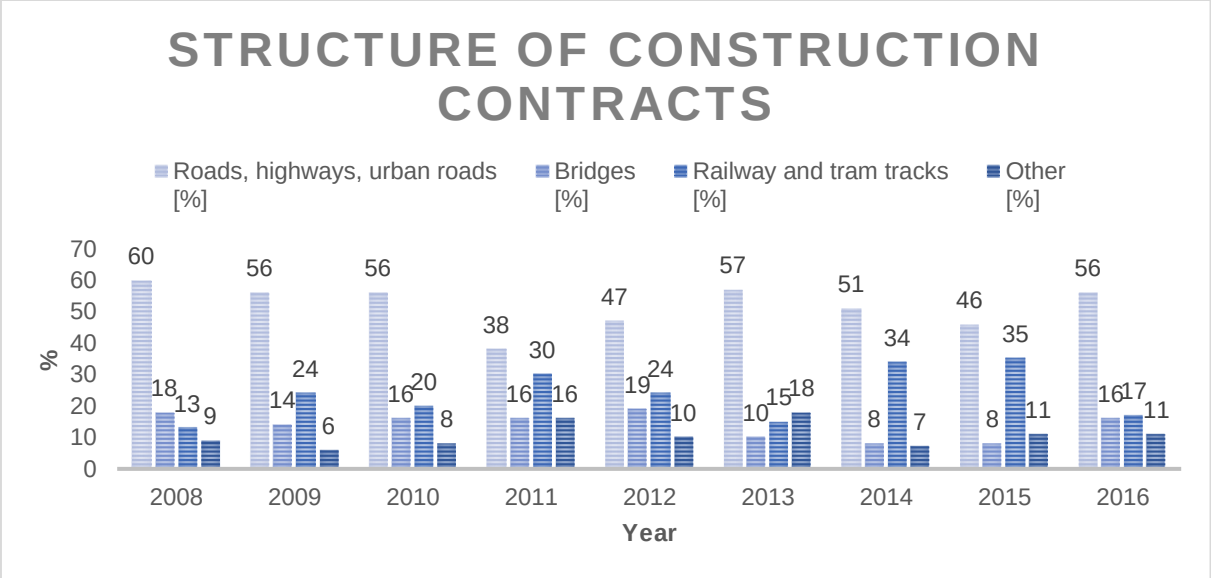


Chart 2 Structure of contracts

Source: own source

This chart reveals consolidated results of the company and its economic result before taxes. Considering the influence of the economic crises, it is not surprising that the results were lower after the year 2011. However, 2016's economic results were much lower than would be anticipated. Based only on consolidated results and financial results before taxes, it is impossible to say why the results dropped or how it affected the company. [26]

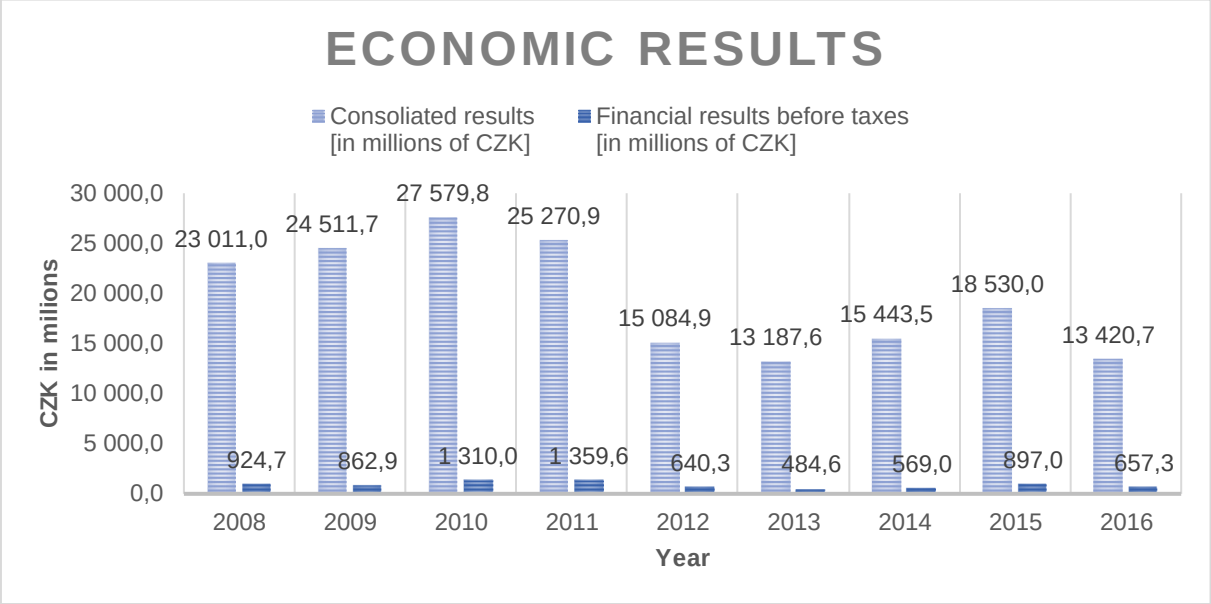


Chart 3 Economic results

Source: own source

The ration between Financial result before taxes and Consolidated results – pre-tax profit margin ranges between 3,5 and 5,4 %. It was the lowest in 2009 but then it peaked in 2011, only to drop again in 2013. After that it is steadily rising again even though the economic results are much lower than they used to be. [26]

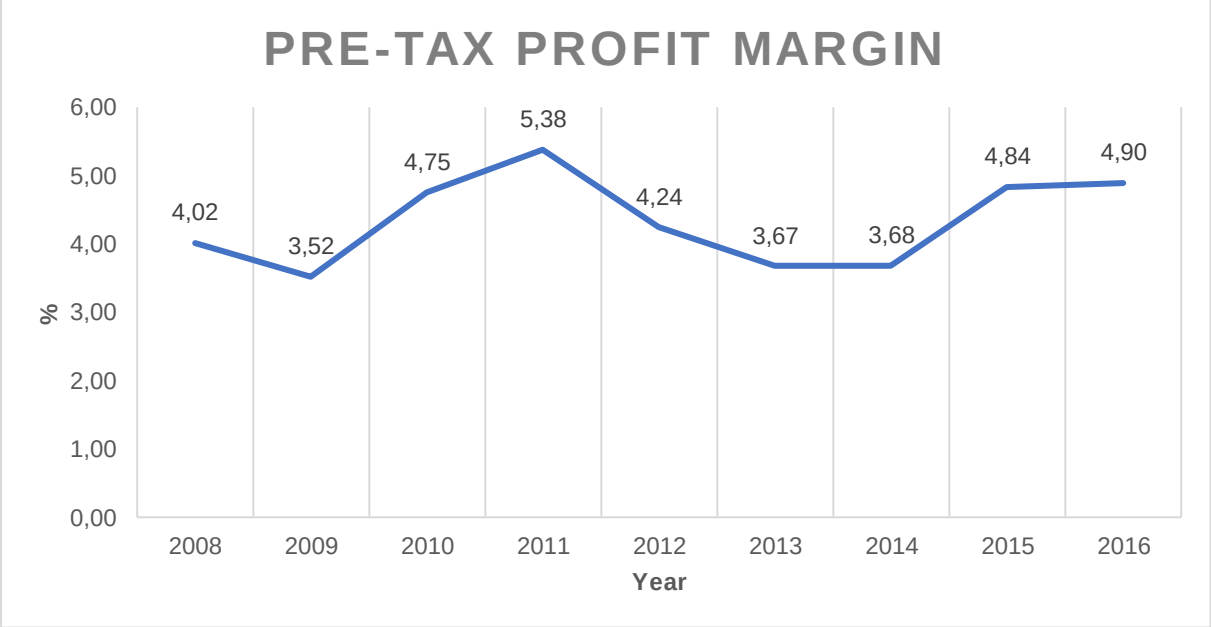


Chart 4 Pre-tax profit margin

Source: own source

5.2 Financial analysis

The financial analysis is done using the data from Eurovia's financial statements from their annual reports. The output data (charts, tables etc.) were provided by a program FinAnalysis. However, the interpretation of those results is solely based on my knowledge and judgement.

5.2.1 General company information

The analysis starts with some general information about the company. In the Table 23 it shows that the company had the lowest number of employees in 2009 and highest number of employees in 2010. After 2010 the was steadily dropping to 1 645 employees in 2016. Profit before taxes was the lowest in years 2014 and 2015. The reason for that is the global financial crisis from 2009, which hit the construction industry heavily in the following years.

Variable	State by 31.12.					
	2006	2007	2008	2009	2010	2011
Number of employees	2 278	2 079	2 088	2 073	2 655	2 326
Profit before taxes	1 089 095	1 121 842	912 576	774 234	861 586	1 097 369
Value Added	2 520 214	2 563 414	2 413 770	2 603 118	3 133 316	2 531 696
Value Added on 1 employee	1 106	1 233	1 156	1 256	1 180	1 088
Total sales	15 796 071	15 561 381	15 552 105	18 069 086	18 749 475	16 079 550
Total costs	15 678 863	15 308 677	15 500 957	18 131 322	18 889 675	15 986 423
Total revenue	16 544 165	16 155 365	16 261 296	18 745 472	19 582 744	16 955 702
Inventory	336 232	321 604	330 069	265 164	394 124	323 612
Variable	State by 31.12.					
	2012	2013	2014	2015	2016	
Number of employees	1 847	1 667	1 607	1 610	1 645	
Profit before taxes	747 619	720 012	223 252	265 508	924 588	
Value Added	1 445 501	1 212 266	881 956	1 669 028	1 321 263	
Value Added on 1 employee	783	727	549	1 037	803	
Total sales	10 442 997	9 764 052	11 666 031	13 273 671	9 155 731	
Total costs	10 528 059	10 295 726	12 080 010	13 374 481	9 157 481	
Total revenue	11 230 518	11 010 011	12 301 481	13 584 087	10 037 429	
Inventory	343 179	564 833	635 761	213 531	208 943	

Table 23 Basic information

Source: FinAnalysis

The total sales, costs and revenue fluctuate around 15 mil. CZK, hitting the highest numbers in 2010 and the lowest in 2016.

Company's inventory is steady throughout the years 2006 to 2012. In the following years 2013 and 2014 it rapidly grows and then drops in 2015.

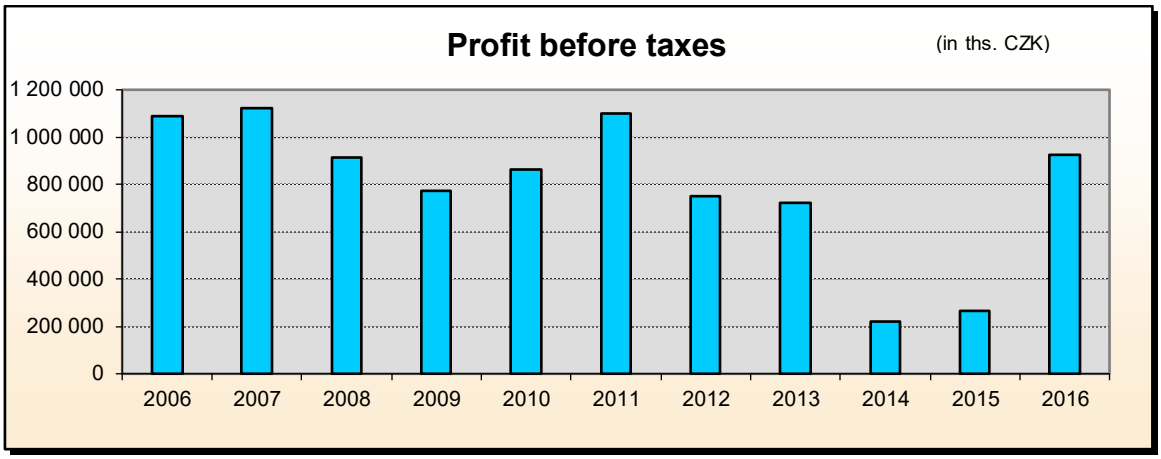


Chart 5 Profit before taxes

Source: FinAnalysis

As it was already mentioned the sudden drop of profit in 2014 is caused by the global crisis. The crisis started in 2009 but because of the long-term project development and planning. It influenced the company after 5 years in 2014.

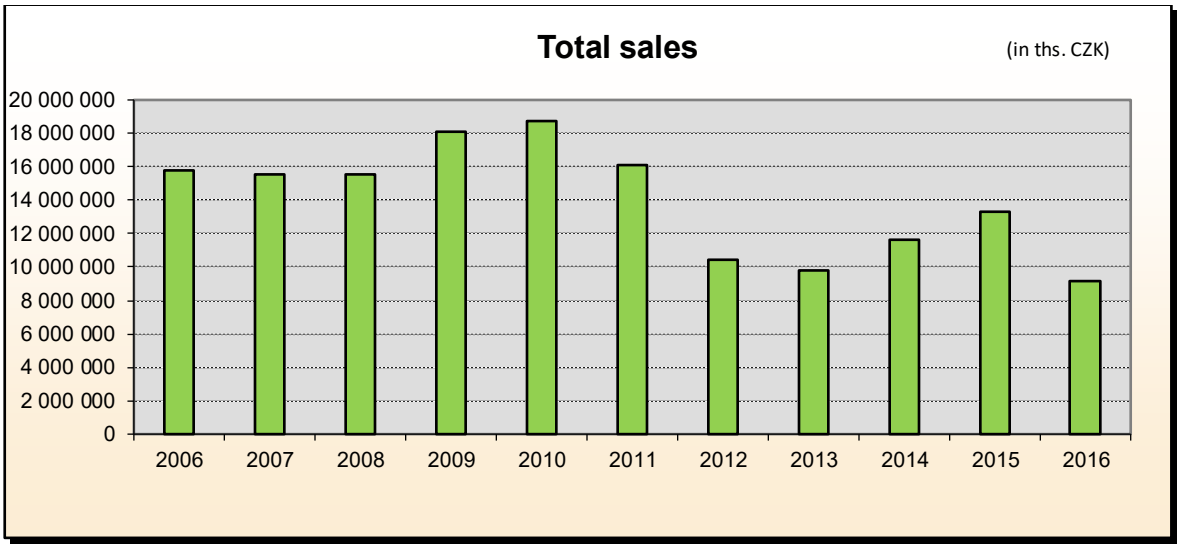


Chart 6 Total sales

Source: FinAnalysis

The same goes for the total sales which are strongly connected with the profit. As the number of new projects was dropping after 2009 and company's projects which started before 2009 were ending, the tolas sales, costs and revenue were decreasing.

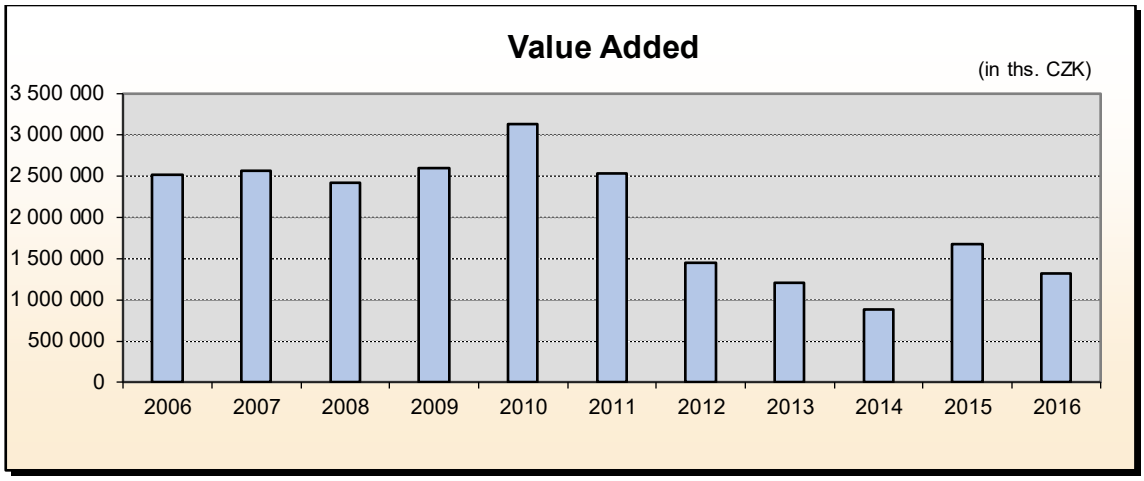


Chart 7 Value added

Source: FinAnalysis

The value added was its highest in 2010 and then was quickly dropping till 2014. The impact of crisis is distinctively seen in 2012 as the value added decreased a lot below the average amount.

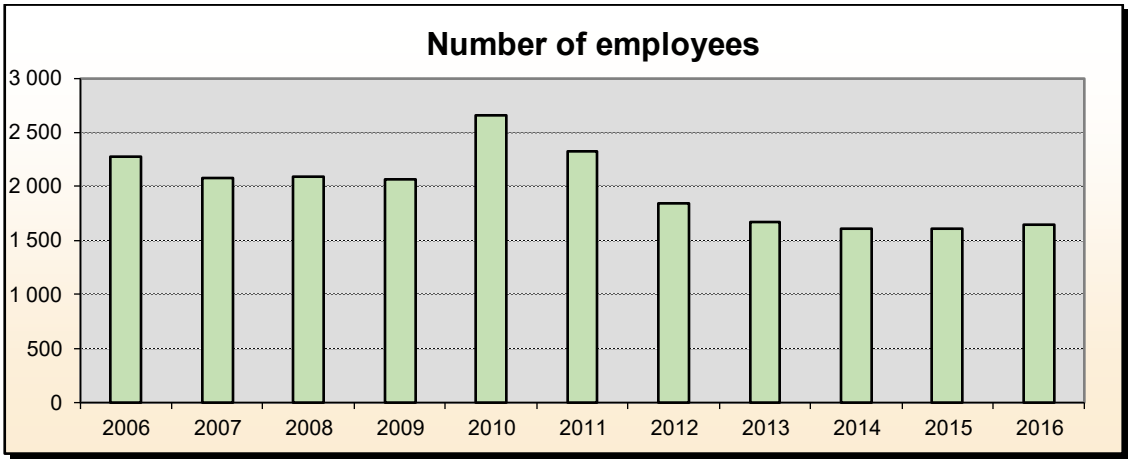


Chart 8 Number of employees

Source: FinAnalysis

Due to the crisis a lot of employees lost their jobs. One of the benefits of this situation may be the restructuring of the company which may be one of the reason why the number of employees does not increase a lot since 2013.

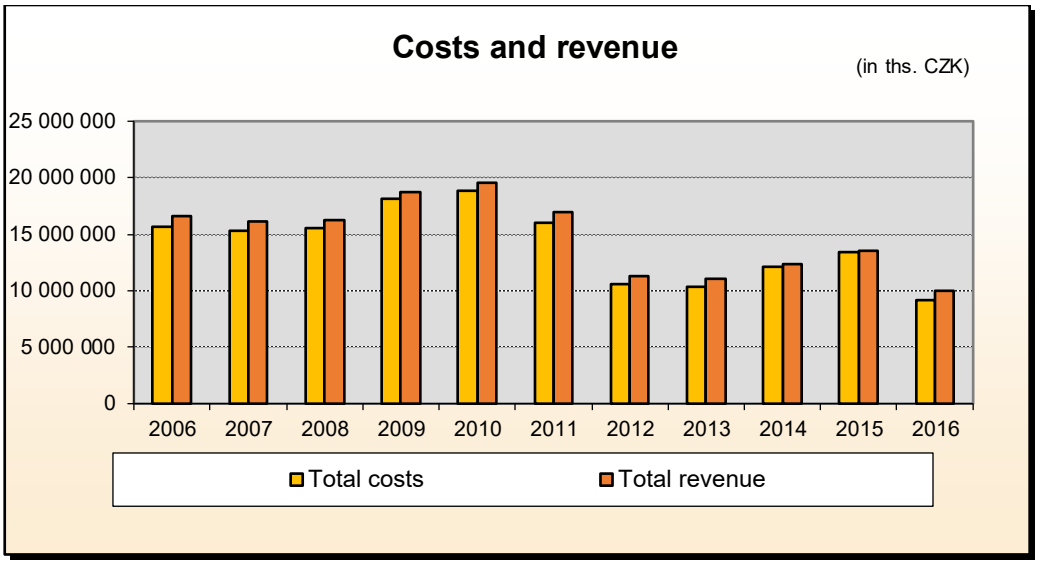


Chart 9 Costs and revenue

Source: FinAnalysis

Even with the crisis influencing the market, Eurovia managed to maintain profitable. Both costs and revenue were at the lowest in 2016. In 2014 and 2015 costs and revenue were almost even.

5.2.2 Cash Flow charts

Following charts focus on company's cash flow between years 2006 and 2016. In the state of cash flow in 2012, it very clearly shows the impact of the crisis

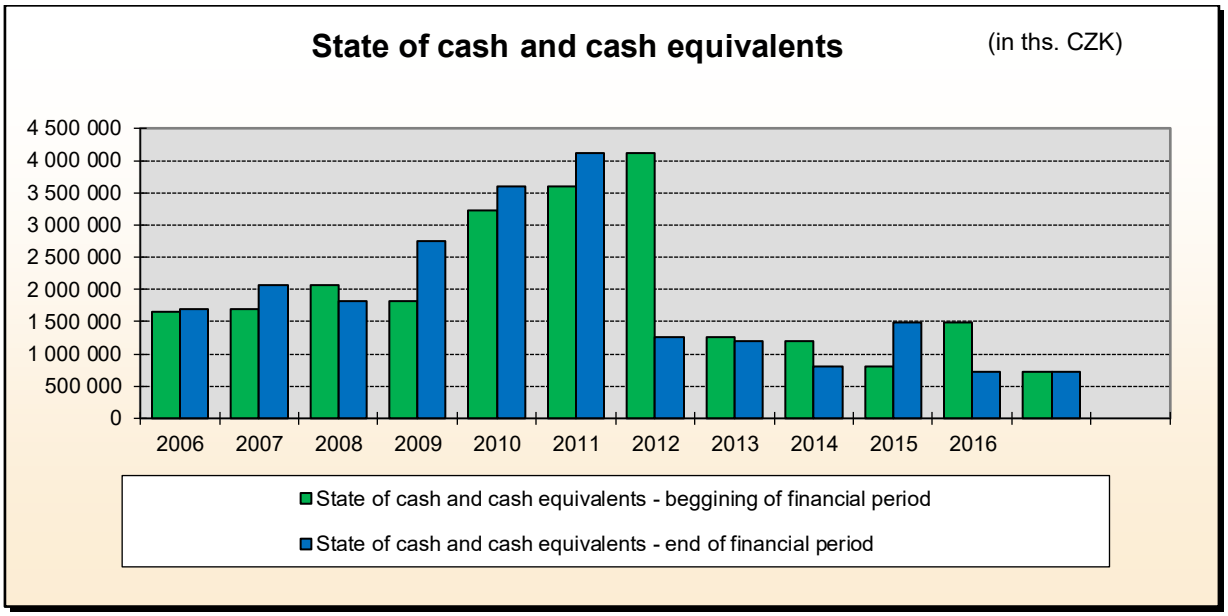


Chart 10 State of cash and cash equivalents

Source: FinAnalysis

In the previous years was the difference between the beginning of a financial period and its end not as significantly different as in year 2012, when the difference between the beginning and the end of a financial period was almost 3 mil CZK.

It is obvious that in the past five years was the development of cash flow from ratio hugely influenced by the crisis. The worst development of cash flow was so far, the year 2012, when cash flow from operation, investing and financing were all in red numbers. In year 2015 the company made big investments in equipment and company growth. Accept the years 2012, 2014 and 2016, the cash flow from operations were in positive numbers. On other hand the cash flow from investing was almost every year negative, which is normal, since company usually invests the extra cash in equipment, other companies or financial assets etc.

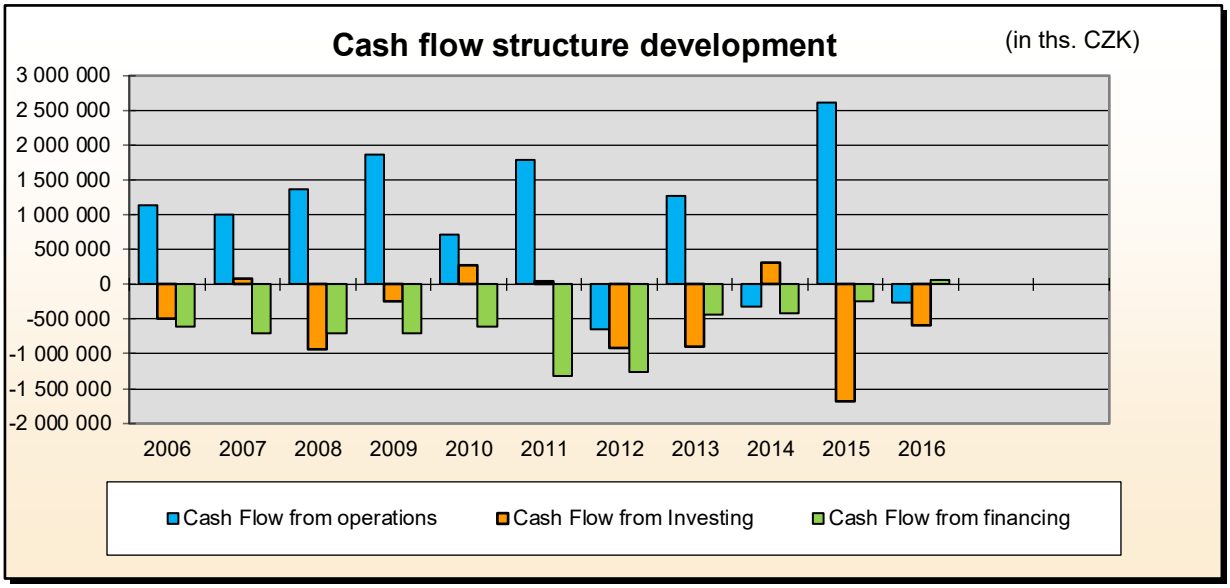


Chart 11 Cash Flow structure development

Source: FinAnalysis

Same as the cash flow from investing also the cash flow from financing was mainly negative, accept the year 2016. The cash flow from financing was at its lowest between 2011 and 2012. That can be very easily explained. Since the cash flow from financing comes from getting or paying back the financial sources, bond issues or dividend payout. It shows that in 2011 and 2012 the company needed to get outside financial sources to cover the impact of the crisis.

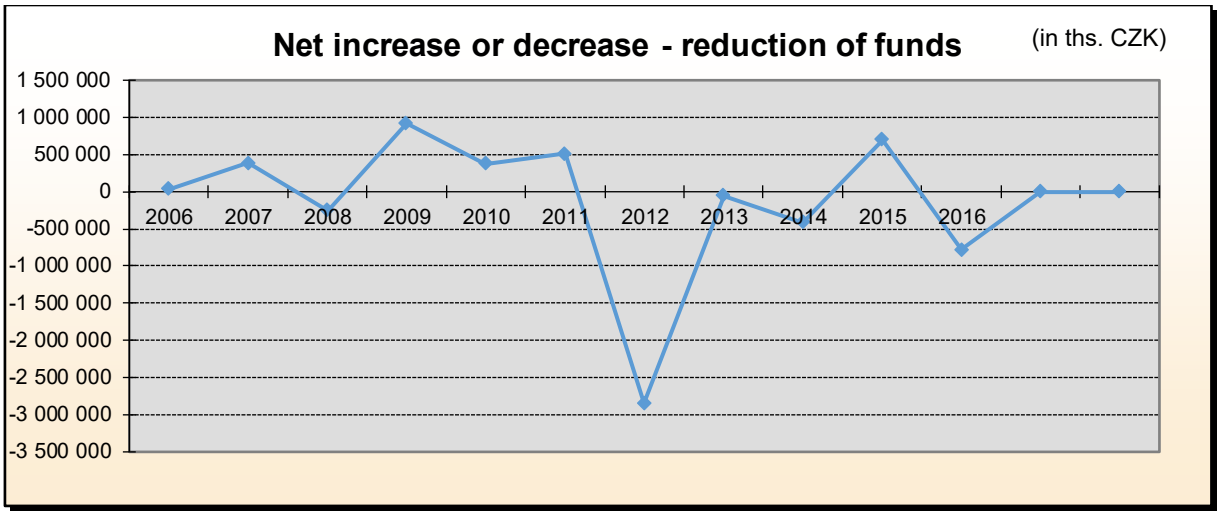


Chart 12 Net increase or decrease - reduction of funds

Source: FinAnalysis

The net increase or decrease – reduction of funds chart again clearly shows, that year 2012 was critical for the company. After 2012 the company manages its funds as in the years before 2012.

Following Chart 13 presents the structure of cash flow from operations. The cash flow development started to fluctuate in 2012. In 2012 the cash flow from operations were significantly lower than previous years. Accept the year 2015, the cash flow from operations is still significantly lower than in years before 2012.

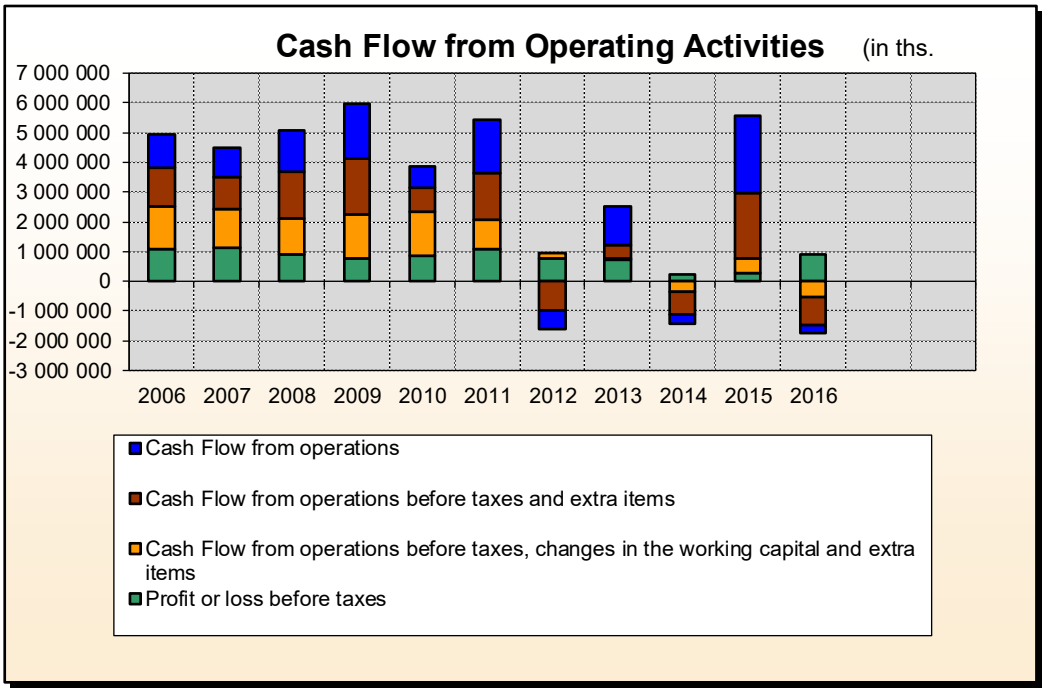


Chart 13 Cash Flow from operating activities

Source: FinAnalysis

5.2.3 Ratio analysis

The ratio analysis is an important part of financial analysis. Following ratios are considered the most important ones, which together form a good overview of company's financial health. Some ratios are being compared to industry's recommended values but most of them are being compared to the industry's average. The average was calculated using two other company values. It is also important to focus on the relationship between ratios or their increase/decrease throughout the years.

5.2.3.1 Profitability ratios

It is hard to set a certain value for each profitability ratio. Generally when it comes to profitability ratios it is the higher the better. The company Eurovia managed to keep their ROA above the industry average since 2006 until 2014. Between 2006 and 2010 was ROA quite close to the industry average. That changed in 2011 when the company was highly above. The same remains for years 2012 and 2013. In 2015 and 2016 was the company slightly below the average. Since the company was dealing with the effects of financial crisis, it is not that surprising to see, that they were creating profit less effectively than in the years before. Unlike the ROA ratio, the ROE ratio did not drop below industry average in the followed period. That implies that the company manages the equity effectively.

č.		2006	2007	2008	2009	2010	2011
	Profitability ratios						
1.1.	Return on assets (ROA)	9,44%	8,92%	7,96%	5,57%	5,12%	8,04%
	Industry average	6,96%	7,38%	6,54%	5,35%	4,15%	3,93%
1.2.	Return on equity (ROE)	28,87%	26,89%	23,69%	19,66%	19,15%	29,70%
	Industry average	23,80%	24,77%	23,25%	16,76%	13,46%	13,74%
1.3.	Return on sales (ROS)	5,48%	5,44%	4,89%	3,40%	3,70%	6,03%
	Industry average	4,36%	4,92%	4,48%	3,93%	3,60%	3,13%
1.4.	Return on capital employed (ROCE)	25,40%	24,25%	20,74%	16,79%	16,11%	23,76%
	Industry average	19,30%	20,23%	18,51%	13,69%	10,99%	10,92%
1.5.	Return on costs (ROC)	0,06	0,06	0,05	0,03	0,04	0,06
	Industry average	0,04	0,05	0,05	0,04	0,04	0,03

Table 24 Profitability ratios I

Source: FinAnalysis

č.		2012	2013	2014	2015	2016
	Profitability ratios					
1.1.	Return on assets (ROA)	7,48%	7,34%	2,60%	2,45%	11,20%
	Industry average	3,01%	1,42%	2,02%	2,80%	11,97%
1.2.	Return on equity (ROE)	26,04%	26,93%	9,16%	9,25%	28,03%
	Industry average	10,25%	7,28%	6,22%	8,12%	27,20%
1.3.	Return on sales (ROS)	6,73%	7,32%	1,90%	1,58%	9,61%
	Industry average	2,73%	0,79%	1,76%	2,64%	12,26%
1.4.	Return on capital employed (ROCE)	21,02%	21,91%	7,90%	7,86%	25,30%
	Industry average	8,12%	5,48%	5,14%	6,80%	24,61%
1.5.	Return on costs (ROC)	0,07	0,07	0,02	0,02	0,10
	Industry average	0,03	0,01	0,02	0,03	0,15

Table 25 Profitability ratios II

Source: FinAnalysis

In the beginning of the followed period was ROS slightly above or below the industry average, but that changed in 2011. Since 2011 to 2013 was ROS highly above the industry average. It could be considered beneficial for the company, but since company's inventory turnover period (which is described in chapter 4.2.2.3 Activity ratios) was greatly below the industry average in those years, it would be preferable for the company to have a lower value of ROS with a higher value of the inventory turnover period. In 2014 ROS dropped to 1,90% but the inventory turnover period was much higher than the industry average, which is why the decrease could be considered right for the company. ROCE was way above the industry average, which means that the company is using their long-term financial sources (both internal and external) very effectively. In 2014 and 2015 ROCE decreased but still managed to stay above the average. The return on costs was above the average between 2006 to 2013. ROC is showing how many CZK is spent to earn 1 CZK of profit. It is desirable to maintain a lower value. In 2014 and 2015 was ROC at its lowest but it increased in 2016, but so did the industry average. That could be explained with the general growth of material prices.

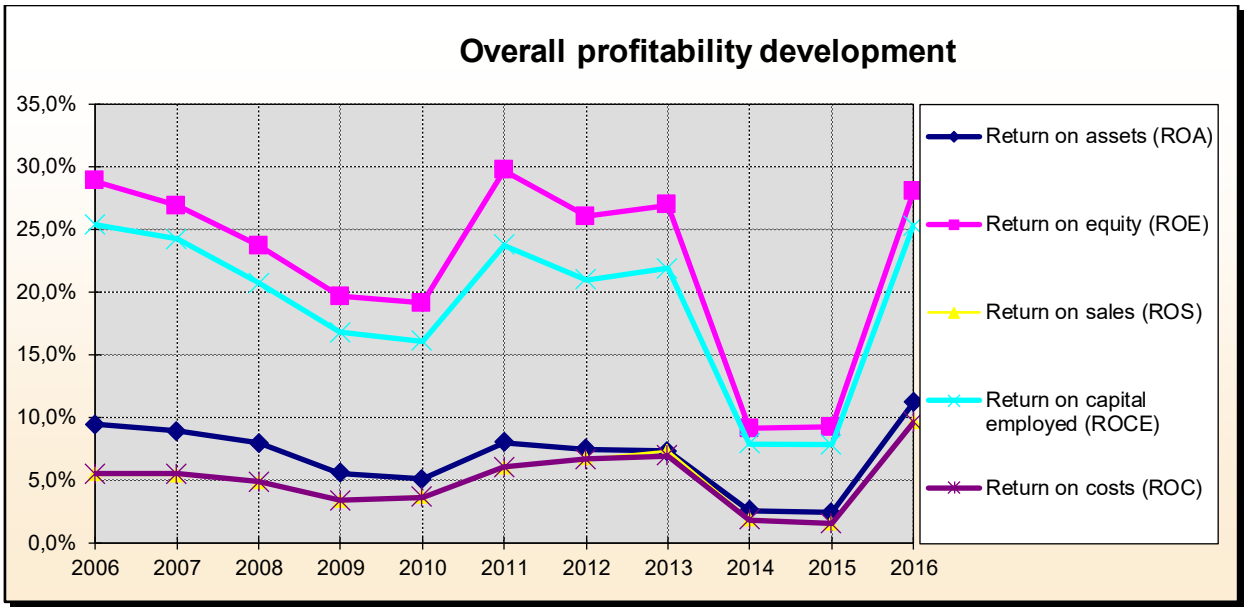


Chart 14 Overall profitability development

Source: FinAnalysis

The Chart 14 follows the development of profitability ratios. It shows that ROA and ROCE have similar development and ROS, ROCE and ROC as well.

5.2.3.2 Liquidity ratios

The Table 26 presents three main liquidity ratios and their values between the years 2006 and 2016. Values for the current ratio varies between 1 to 2,5 depending on company's strategy. For quick liquidity lie values between 0,4 to 1,5, again depending on the strategy. Cash position ratio's optimal value is from 0,2 to 0,5.

č.		2006	2007	2008	2009	2010	2011
	Liquidity ratios						
2.1.	Current (III. degree liquidity)	1,37	1,52	1,43	1,47	1,55	1,71
2.2.	Quick (II. degree liquidity)	1,30	1,45	1,36	1,42	1,49	1,65
2.3.	Cash position ratio (I. degree liquidity)	0,36	0,45	0,41	0,51	0,54	0,77
č.		2012	2013	2014	2015	2016	
	Liquidity ratios						
2.1.	Current (III. degree liquidity)	1,85	1,73	1,60	1,87	2,11	
2.2.	Quick (II. degree liquidity)	1,76	1,60	1,43	1,80	2,03	
2.3.	Cash position ratio (I. degree liquidity)	0,34	0,28	0,21	0,45	0,28	

Table 26 Liquidity ratios

Source: FinAnalysis

Between years 2006 and 2010, the company shows aggressive strategy because the values are < 1; 1,6 >.

Current (III. degree liquidity)

č.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2.1.	1,37	1,52	1,43	1,47	1,55	1,71	1,85	1,73	1,60	1,87	2,11

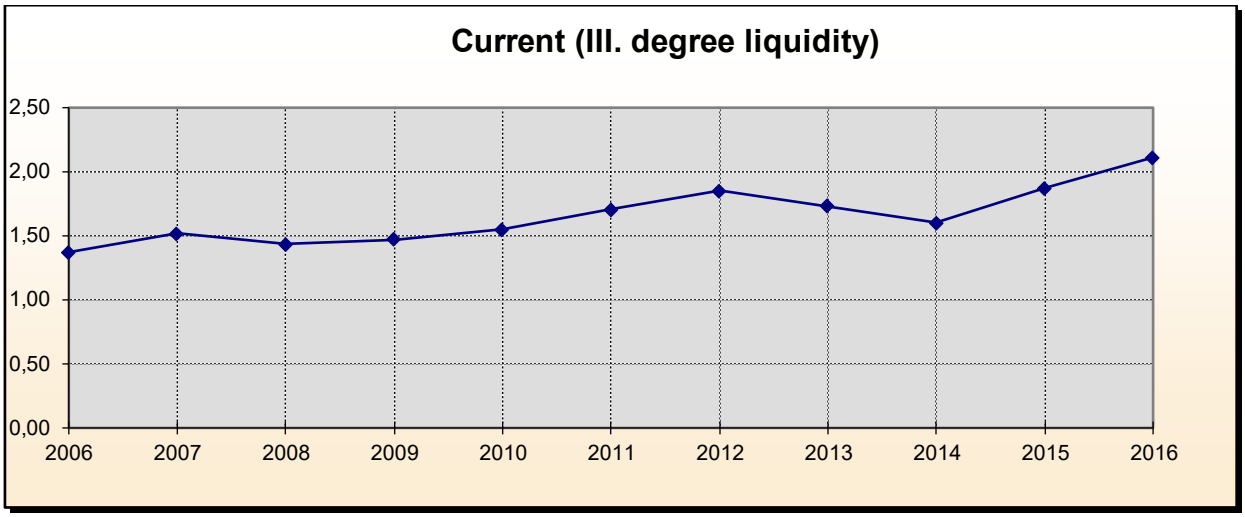


Chart 15 Current (III. degree liquidity)

Source: FinAnalysis

After 2010 the company switched to average strategy with values between < 1,6; 2,5 >. The average strategy means lower risk for the company but also lower profit.

Quick (II. degree liquidity)

č.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2.2.	1,30	1,45	1,36	1,42	1,49	1,65	1,76	1,60	1,43	1,80	2,03

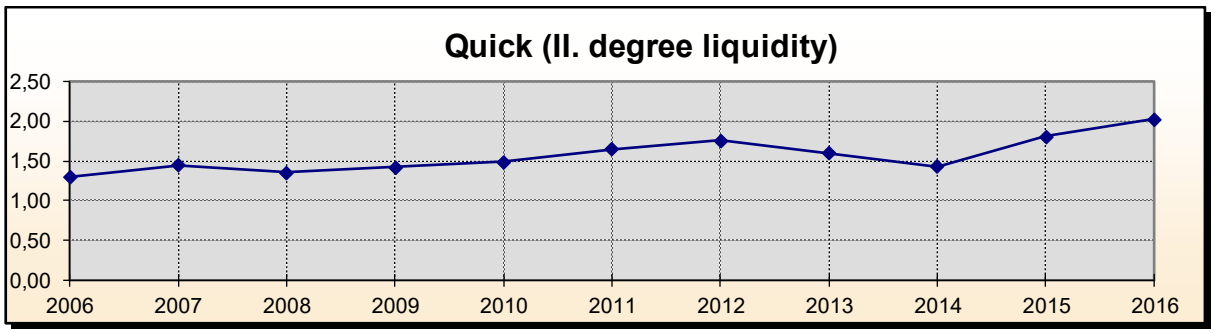


Chart 16 Quick liquidity

Source: FinAnalysis

Optimal values for the quick liquidity should be between < 0,4; 1,5 >, which the company accomplished till 2010. Since then the quick liquidity implies that the company had

low profitability (too big of a part of current assets was tied up in cash which brings very low or none profit) with values over 1,5.

Cash position ratio (I. degree liquidity)

č.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2.3	0,36	0,45	0,41	0,51	0,54	0,77	0,34	0,28	0,21	0,45	0,28

The company had values within < 0,2; 0,5 > every year accept 2009, 2010 and 2011. Those values imply that the company was not able to pay of short-term debts with their cash on hand on time.

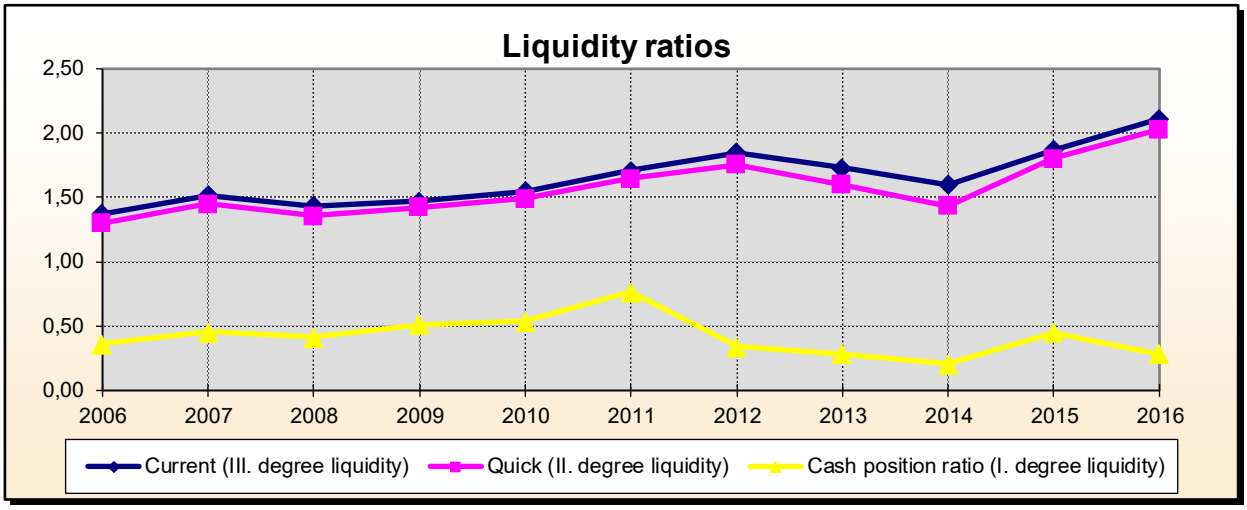


Chart 17 Liquidity ratios

Source: FinAnalysis

The Chart 17 shows the development of current, quick liquidity and cash position ratio. It is possible to say that the current and quick liquidity curves copy each other.

5.2.3.3 Activity ratios

The Table 27 follows the development of five important activity ratios. The total assets turnover should be more than one and other does not have a specific recommended value which is why they are being compared to the industry average.

Even though the total assets turnover does not reach the same values as it did before the crisis, it never dropped below the industry average in followed period. In 2012 and 2013 decreased to the lowest values. In 2013 the company managed to turn the total assets only once. When looking closely at the values of fixed asset and current asset turnover it shows that the fixed asset turnover dropped below the industry average twice, in 2008 and 2016, but the current assets turnover managed to still be above its industry average. The Table 27 also shows that both fixed and current assets are significantly lower than they were before the impacts of the financial crisis.

č.		2006	2007	2008	2009	2010	2011
	Activity ratios						
3.1.	Total assets turnover	1,72	1,64	1,63	1,64	1,38	1,33
	Industry average	1,56	1,51	1,46	1,40	1,15	1,08
3.2.	Fixed assets turnover	6,03	6,31	5,06	6,12	6,24	5,97
	Industry average	5,86	6,15	6,97	5,84	5,35	4,84
3.4.	Current assets turnover	2,46	2,24	2,46	2,29	1,81	1,76
	Industry average	2,20	2,04	1,98	1,89	1,49	1,42
3.5.	Inventory turnover	46,98	48,39	47,12	68,14	47,57	49,69
	Industry average	42,84	44,47	60,88	51,81	79,22	55,14
3.10.	Inventory turnover period (in days)	8	8	8	5	8	7
	Industry average	11	9	6	19	25	29
3.11.	Accounts receivable turnover period (in days)	101	107	98	98	124	107
	Industry average	127	127	134	129	149	168
3.12.	Debt turnover period (in days)	111	115	94	118	116	94
	Industry average	122	127	119	115	130	123
č.		2012	2013	2014	2015	2016	
	Activity ratios						
3.1.	Total assets turnover	1,11	1,00	1,37	1,55	1,17	
	Industry average	0,97	0,92	1,12	1,16	1,02	
3.2.	Fixed assets turnover	4,27	4,25	5,09	5,70	3,68	
	Industry average	4,04	4,12	4,36	5,00	4,04	
3.4.	Current assets turnover	1,52	1,32	1,90	2,14	1,71	
	Industry average	1,29	1,19	1,53	1,55	1,39	
3.5.	Inventory turnover	30,43	17,29	18,35	62,16	43,82	
	Industry average	33,03	13,17	28,30	89,52	74,06	
3.10.	Inventory turnover period (in days)	12	21	20	6	8	
	Industry average	33	35	14	8	13	
3.11.	Accounts receivable turnover period (in days)	184	210	147	124	177	
	Industry average	201	227	188	130	146	
3.12.	Debt turnover period (in days)	106	100	75	62	62	
	Industry average	125	117	98	51	52	

Table 27 Activity ratios

Source: FinAnalysis

The inventory turnover had the lowest values in 2013 and 2014, in those years Eurovia managed to turn their inventory to cash only 17,29 and 18,35 times. Those values are significantly lower than company's average. Also, the inventory turnover is below the industry average multiple times during followed period. The values of the inventory turnover imply that the company still did not find the best approach to turn the inventory to cash. The same applies for the inventory turnover period, which is a reverse value to the inventory turnover. The accounts receivable turnover period increases aplenty during the second half of followed

period. This growth is not beneficial for the company since the ratio tells how long in average it takes to cash out the accounts receivables. In the first half of the followed period was Eurovia quite below the industry average but in the second half Eurovia lost this difference and was slightly above the average. Increasing values of the industry average indicate that not just Eurovia was experiencing problems, but the whole industry was undergoing through difficulties. The debt turnover period, which is saying how long it takes to pay the creditors (and for how long is the company using that money as an interest free loan), has been decreasing since 2012. Decreasing trend is a good sign of company's financial health. Although the debt turnover period is decreasing, it is still above the industry average in the last two years.

5.2.3.4 Debt ratios

The Table 28 demonstrates the development of five debt ratios. Total debt of the company has a decreasing trend since 2013. It shows that the company has been decreasing its indebtedness. It is possible to see the same trend for the financial leverage, which states how many times is the total capital exceeding the equity. The numbers for the total debt and financial leverage were below the industry average between 2006 and 2009, after that they were above the average, but in 2015 the total debt dropped below the average.

č.		2006	2007	2008	2009	2010	2011
	Debt ratios						
4.3.	Total debt	0,55	0,52	0,51	0,53	0,54	0,51
	Industry average	0,62	0,60	0,61	0,56	0,54	0,50
4.7.	Financial leverage	3,06	3,01	2,98	3,53	3,74	3,69
	Industry average	3,47	3,40	3,59	3,14	3,17	3,01
4.8.	Interest coverage	198,26	217,20	46,33	74,79	196,46	101,22
	Industry average	170,71	175,01	227,87	101,57	111,10	251,98
4.10.	Total indebtedness	66,66%	66,04%	65,40%	70,16%	71,91%	71,16%
	Industry average	69,92%	68,89%	69,91%	66,17%	65,82%	63,38%
4.13.	Interest burden	0,50%	0,46%	2,16%	1,34%	0,51%	0,99%
	Industry average	2,20%	1,57%	1,47%	1,30%	1,48%	3,47%
č.		2012	2013	2014	2015	2016	
	Debt ratios						
4.3.	Total debt	0,46	0,50	0,49	0,44	0,37	
	Industry average	0,48	0,50	0,48	0,46	0,45	
4.7.	Financial leverage	3,48	3,67	3,53	3,77	2,50	
	Industry average	2,89	3,06	2,89	2,97	2,39	
4.8.	Interest coverage	156,88	4211,60	663,47	1102,69	5195,31	
	Industry average	76801,42	1419,40	285,20	761,10	4293,57	
4.10.	Total indebtedness	69,62%	71,24%	70,08%	71,38%	57,12%	
	Industry average	61,90%	63,83%	58,93%	62,88%	55,72%	
4.13.	Interest burden	0,64%	0,02%	0,15%	0,09%	0,02%	
	Industry average	4,73%	-0,31%	0,75%	0,46%	0,02%	

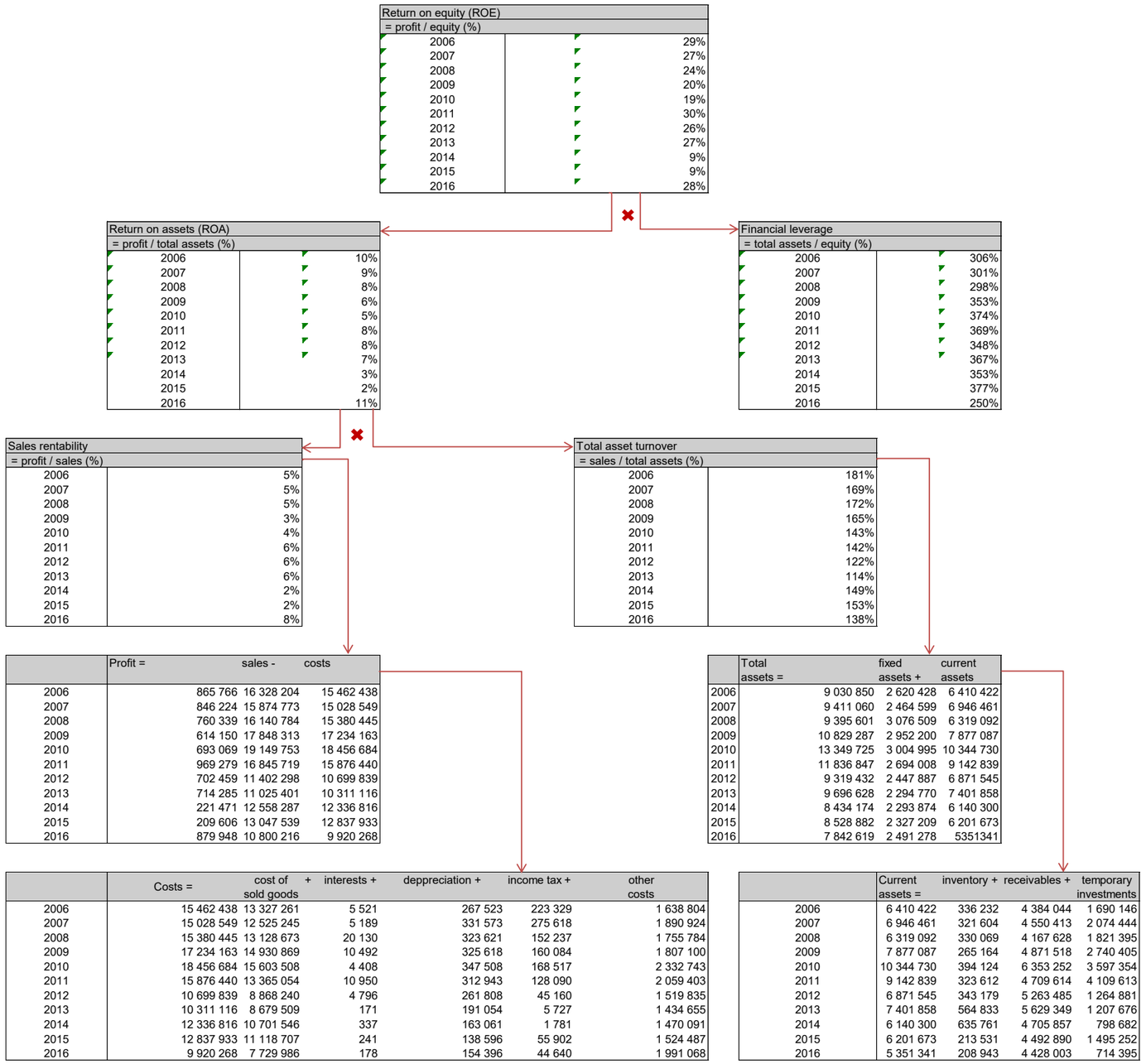
Table 28 Debt ratios

Source: FinAnalysis

Without repeating what is said above, all the debt ratios show a decrease in Eurovia's external financing. Since 2014 has been the interest coverage increasing, which is a good sign for the company because for example in 2016 would the operating profit have to drop over 5 000 times before the company would not be able to pay the interest. The total indebtedness was fluctuating between 65% to almost 72% in years 2006 to 2015, but it dropped rapidly in 2016 to only 57% and managed to bring itself closer to the industry average. It is interesting to

observe the numbers of the interest burden, which are low throughout the followed period (recommended maximal value is 40%). Based on the information from annual reports Eurovia did not use any bank loan in the followed period. It is possible that in time of need the company used some sort of internal bank or financing from its maternal company.

5.2.4 DuPont Analysis



Return on equity (ROE) = profit / equity (%)	
2006	29%
2007	27%
2008	24%
2009	20%
2010	19%
2011	30%
2012	26%
2013	27%
2014	9%
2015	9%
2016	28%

Return on assets (ROA) = profit / total assets (%)	
2006	10%
2007	9%
2008	8%
2009	6%
2010	5%
2011	8%
2012	8%
2013	7%
2014	3%
2015	2%
2016	11%

Financial leverage = total assets / equity (%)	
2006	306%
2007	301%
2008	298%
2009	353%
2010	374%
2011	369%
2012	348%
2013	367%
2014	353%
2015	377%
2016	250%

Sales rentability = profit / sales (%)	
2006	5%
2007	5%
2008	5%
2009	3%
2010	4%
2011	6%
2012	6%
2013	6%
2014	2%
2015	2%
2016	8%

Total asset turnover = sales / total assets (%)	
2006	181%
2007	169%
2008	172%
2009	165%
2010	143%
2011	142%
2012	122%
2013	114%
2014	149%
2015	153%
2016	138%

	Profit =	sales -	costs
2006	865 766	16 328 204	15 462 438
2007	846 224	15 874 773	15 028 549
2008	760 339	16 140 784	15 380 445
2009	614 150	17 848 313	17 234 163
2010	693 069	19 149 753	18 456 684
2011	969 279	16 845 719	15 876 440
2012	702 459	11 402 298	10 699 839
2013	714 285	11 025 401	10 311 116
2014	221 471	12 558 287	12 336 816
2015	209 606	13 047 539	12 837 933
2016	879 948	10 800 216	9 920 268

	Total assets =	fixed assets +	current assets
2006	9 030 850	2 620 428	6 410 422
2007	9 411 060	2 464 599	6 946 461
2008	9 395 601	3 076 509	6 319 092
2009	10 829 287	2 952 200	7 877 087
2010	13 349 725	3 004 995	10 344 730
2011	11 836 847	2 694 008	9 142 839
2012	9 319 432	2 447 887	6 871 545
2013	9 696 628	2 294 770	7 401 858
2014	8 434 174	2 293 874	6 140 300
2015	8 528 882	2 327 209	6 201 673
2016	7 842 619	2 491 278	5351341

	Costs =	cost of sold goods	+ interests +	deppreciation +	income tax +	other costs
2006	15 462 438	13 327 261	5 521	267 523	223 329	1 638 804
2007	15 028 549	12 525 245	5 189	331 573	275 618	1 890 924
2008	15 380 445	13 128 673	20 130	323 621	152 237	1 755 784
2009	17 234 163	14 930 869	10 492	325 618	160 084	1 807 100
2010	18 456 684	15 603 508	4 408	347 508	168 517	2 332 743
2011	15 876 440	13 365 054	10 950	312 943	128 090	2 059 403
2012	10 699 839	8 868 240	4 796	261 808	45 160	1 519 835
2013	10 311 116	8 679 509	171	191 054	5 727	1 434 655
2014	12 336 816	10 701 546	337	163 061	1 781	1 470 091
2015	12 837 933	11 118 707	241	138 596	55 902	1 524 487
2016	9 920 268	7 729 986	178	154 396	44 640	1 991 068

	Current assets =	inventory +	receivables +	temporary investments
2006	6 410 422	336 232	4 384 044	1 690 146
2007	6 946 461	321 604	4 550 413	2 074 444
2008	6 319 092	330 069	4 167 628	1 821 395
2009	7 877 087	265 164	4 871 518	2 740 405
2010	10 344 730	394 124	6 353 252	3 597 354
2011	9 142 839	323 612	4 709 614	4 109 613
2012	6 871 545	343 179	5 263 485	1 264 881
2013	7 401 858	564 833	5 629 349	1 207 676
2014	6 140 300	635 761	4 705 857	798 682
2015	6 201 673	213 531	4 492 890	1 495 252
2016	5 351 341	208 943	4 428 003	714 395

Chart 18 DuPont Analysis

Source: FinAnalysis

The pyramid layout of ROE brings out more how it is calculated. It is an additional information to profitability ratios. It gives a more detailed overview of the elements, which influence ROE or ROA.

In the bottom of the pyramid, there is the calculation of costs on the left side and calculation of current assets on the right side.

When you know the costs and current assets, it is possible to calculate the profit and total assets, which is shown in the second pyramid level.

After that is calculated the sales rentability and total asset turnover. The result of their multiplication is ROA.

Return on assets multiplied by the financial leverage results in ROE, which is on top of the pyramid.

When a company tries to improve their financial situation, it is efficient to assemble the DuPont Analysis. The analysis puts in perspective mutual relations between individual elements and it is easier to spot where the company should improve.

Eurovia managed to reduce its financial leverage, but in the last few years their costs and sales dropped, because they were probably dealing with the impact of the crisis. In 2016 the company managed to increase the profit, sales rentability, ROA and ROE.

5.2.5 Bankruptcy models

The bankruptcy models chosen for Eurovia were Altman Z-Score, which was modified for the Czech industry environment, the Taffler model and the Credibility Index IN 05. Those three models should provide good overview, since all of them operate with different probabilities of bankruptcy. The Altman Z-Score operates with 80% to 90% probability of success with 15% to 20% error rate. [27] The credibility index IN05 provides in total 77% probability of success when identifying the bankruptcy threat. It has a slightly higher probability for medium companies – 78% and slightly lower one for small companies – 74%. [28]

5.2.5.1 Altman Z-Score

Altman Z-Score is a very well-known bankruptcy model. It has two variations – for publicly and for privately traded company. A variation for a publicly traded company was chosen for EUROVIA CS a.s., since the company is established as joint-stock venture. The company took their stock of the market in 2006 and the sole owner is EUROVIA, S.A.

Variable	2006	2007	2008	2009	2010	2011
X1	0,19	0,25	0,20	0,23	0,27	0,31
X2	0,05	0,06	0,07	0,07	0,09	0,05
X3	0,12	0,12	0,10	0,07	0,06	0,09
X4	0,00	0,00	0,00	0,00	0,00	0,00
X5	1,72	1,64	1,63	1,64	1,38	1,33
Total Z-Score	**2,42**	**2,42**	**2,29**	**2,24**	**2,04**	**2,08**
Variable	2012	2013	2014	2015	2016	
X1	0,34	0,32	0,27	0,34	0,36	
X2	0,03	0,02	0,05	0,07	0,10	
X3	0,08	0,07	0,03	0,03	0,12	
X4	0,00	0,00	0,00	0,00	0,00	
X5	1,11	1,00	1,37	1,55	1,17	
Total Z-Score	**1,82**	**1,66**	**1,85**	**2,16**	**2,13**	

Table 29 Altman Z-Score

Source: FinAnalysis

Z >2,99	Good financial health
1,81 < Z < 2,99	Grey zone
Z < 1,81	High chance for bankruptcy

As it is shown in Table 29 before the financial crisis the company remained in the grey zone area. After 2009 the values started to decrease until they hit the lowest value 1,66 in 2013. In 2012 and 2013 was the company in deep financial problems which led to dropping of Z-Score bellow the grey zone to a place with a high chance of bankruptcy.

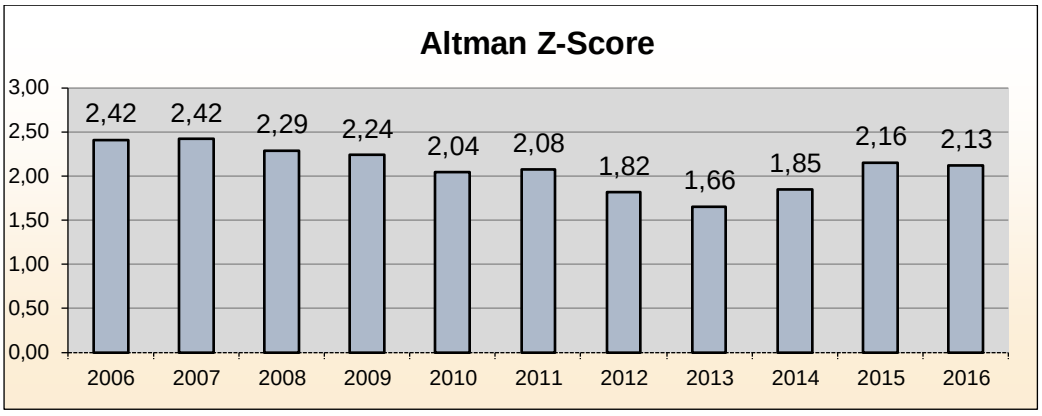


Chart 19 Altman Z-Score

Source: FinAnalysis

The Z-Score mainly changed in X_5, which is a variable considering the asset turnover. The second variable with higher changes is X_1 which concerns working capital and asset turnover.

5.2.5.2 Taffler Model

The total Z-Score numbers from the Taffler Model give a different view on company's financial health. Unlike the Altman Z-Score, all the total Taffler Model Z-Score are over 0,3 which means that they are in the zone with a low probability of bankruptcy. Same as the Altman model Z-Score, the numbers here were decreasing constantly until 2014 (2013 for the Altman Model). After 2014 (2013) the values started to increase again.

Variable	2006	2007	2008	2009	2010	2011
R1	0,23	0,25	0,21	0,14	0,13	0,20
R2	1,05	1,11	1,01	1,02	1,06	1,07
R3	0,51	0,48	0,46	0,49	0,49	0,44
R4	1,72	1,64	1,63	1,64	1,38	1,33
Total Z -Score	**0,63**	**0,62**	**0,58**	**0,56**	**0,52**	**0,54**
Variable	2012	2013	2014	2015	2016	
R1	0,20	0,17	0,06	0,08	0,36	
R2	1,05	1,07	1,03	1,02	1,19	
R3	0,40	0,44	0,45	0,39	0,32	
R4	1,11	1,00	1,37	1,55	1,17	
Total Z -Score	**0,49**	**0,47**	**0,46**	**0,49**	**0,59**	

Table 30 Taffler model

Source: FinAnalysis

TZ > 0,3	low probability of bankruptcy
0,2 < TZ < 0,3	grey zone
TZ < 0,2	higher probability of bankruptcy

Unlike the Altman model, where the dispersion is significantly higher, the numbers from Taffler Model do not differ as much with the highest value being 0,63 and the lowest 0,46.

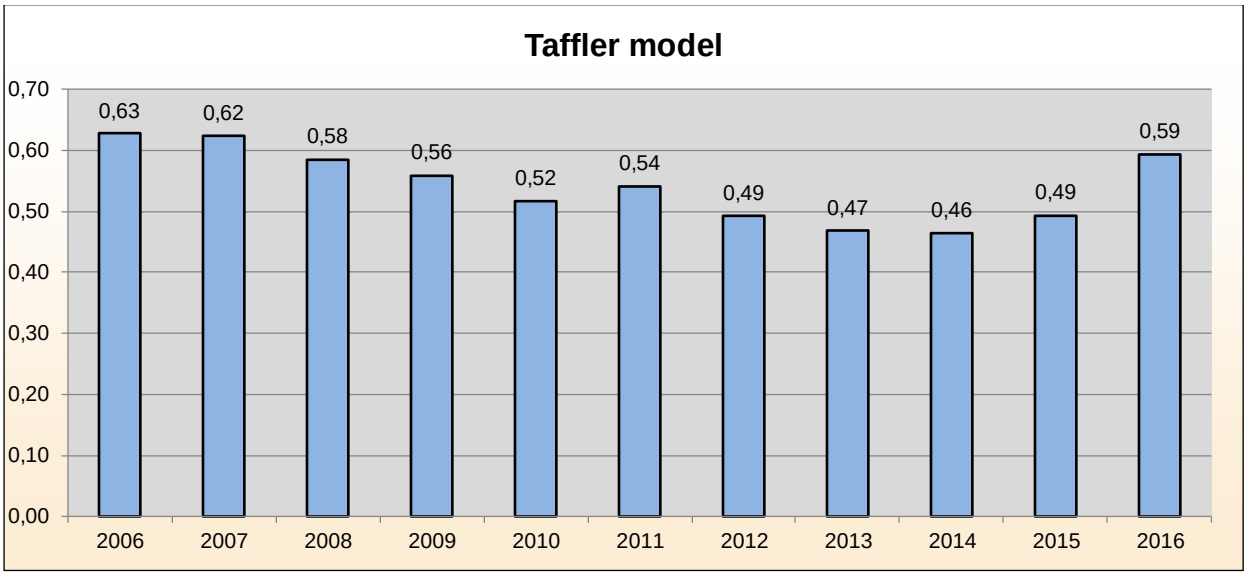


Chart 20 Taffler model

Source: FinAnalysis

5.2.5.3 Credibility index IN05

The EBIT/interest index was showing very high numbers. Because it was not possible to obtain more information about the interests, those numbers were replaced by the maximal recommended value 9,00.

Index	2006	2007	2008	2009	2010	2011
total assets / total liabilities	1,50	1,51	1,53	1,43	1,39	1,41
EBIT / interests	198,26	217,20	46,33	74,79	196,46	101,22
altered value	9,00	9,00	9,00	9,00	9,00	9,00
EBIT / total assets	0,12	0,12	0,10	0,07	0,06	0,09
revenue / total assets	1,72	1,64	1,63	1,64	1,38	1,33
current assets / short-term liabilities	1,37	1,52	1,43	1,47	1,55	1,71
Total index	**1,51**	**1,51**	**1,42**	**1,30**	**1,22**	**1,34**

Index	2012	2013	2014	2015	2016
total assets / total liabilities	1,44	1,40	1,43	1,40	1,75
EBIT / interests	156,88	4 211,60	663,47	1 102,69	5 195,31
altered value	9,00	9,00	9,00	9,00	9,00
EBIT / total assets	0,08	0,07	0,03	0,03	0,12
revenue / total assets	1,11	1,00	1,37	1,55	1,17
current assets / short-term liabilities	1,85	1,73	1,60	1,87	2,11
Total index	**1,26**	**1,20**	**1,08**	**1,16**	**1,49**

Table 31 Credibility index IN05

Source: FinAnalysis

IN05 > 1,6 healthy company

0,9 < IN05 < 1,6	grey zone
IN05 < 0,9	unhealthy company

Between years 2006 and 2016 was the company in the grey zone, which means that the company was not having any significant financial issues but overall was not doing its best either. In years 2006 and 2007 was the company closest to the healthy company zone and in 2014 was the closest to the unhealthy company zone. Since 2011 were the numbers decreasing from 1,34 to 1,08 most likely because of the impact of the financial crisis. The company has been improving their result since and in 2016 reached the number 1,49.

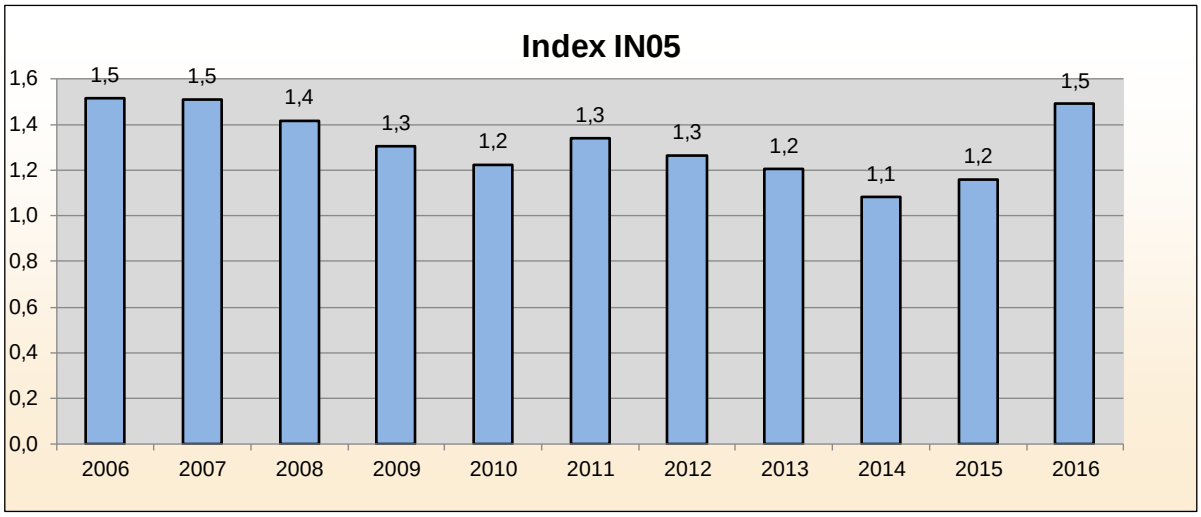


Chart 21 Index IN05

Source: FinAnalysis

The numbers show that the company reached the same numbers as in years before the crisis, which could mean that they finally overcome the impact of the crisis.

5.2.6 Solvency models

Solvency model predicts the financial health of examined company. The solvency model chosen for the analysis is the Kralicek Quick Test. The test was modified for the Czech environment by Mrs. Kislingerová. Mrs. Kislingerová chose to calculate the cash flow differently than Mr. Kralicek.

$$CF\ Kralicek = profit\ (loss) + depreciation + reserve\ funds + allcation\ to\ reserves - dissolution\ of\ reserve\ funds - dissolution\ of\ reserves$$

$$CF\ Kislingerová = profit\ (loss) + depreciation + change\ of\ reserve\ status$$

This index states how long it takes for the company to pay its accounts payables.

5.2.6.1 Kralicek Quick Test

Kralicek Quick Test evaluates the company based on four categories. Those categories are afterwards evaluated again which results in receiving the final score of the test.

Variable	2006	2007	2008	2009	2010	2011
equity / total assets	32,68	33,17	33,60	28,31	26,72	27,08
debt repayment period	2,51	1,95	2,53	2,18	2,55	1,55
cash flow in % of business performance	10,70	13,33	11,71	15,17	19,19	25,56
return on total capital	9,48	8,96	8,13	5,64	5,14	8,12
Variable	2012	2013	2014	2015	2016	
equity / total assets	28,73	27,26	28,34	26,51	39,96	
debt repayment period	3,91	4,13	26,79	2,51	7,95	
cash flow in % of business performance	12,11	12,37	6,85	11,26	7,80	
return on total capital	7,52	7,34	2,60	2,45	11,20	

Table 32 Kralicek Quick Test results

Source: FinAnalysis

Results of the calculations get rewarded 1 to 5 points, based on the criteria from Table 32. One point means that the company is doing well and five points mean that the company is very weak.

Variable	Very good **(1)**	Good **(2)**	Average **(3)**	Weak **(4)**	Very weak **(5)**
A	> 30 %	> 20 %	> 10 %	> 0 %	negative
B	< 3 years	< 5 years	< 12 years	> 12 years	> 30 years
C	> 10 %	> 8 %	> 5 %	> 0 %	negative
D	> 15 %	> 12 %	> 8 %	> 0 %	negative

Table 33 Kralicek Quick Test criteria

Source: FinAnalysis

With the results from Table 34 it is possible to see that the company's situation got worse after 2008, which was the year of the crisis. Since 2009 to 2013 the company was in the grey zone, but in 2014 their situation worsens, with a value over 3,0, which signalizes company in a bad financial situation.

Final evaluation	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
equity / total assets	1	1	1	2	2	2	2	2	2	2	1
debt repayment period	1	1	1	1	1	1	2	2	4	1	3
cash flow in % of business performance	1	1	1	1	1	1	1	1	3	1	3
return on total capital	3	3	3	4	4	3	4	4	4	4	3
Final score	**1,5**	**1,5**	**1,5**	**2,0**	**2,0**	**1,8**	**2,3**	**2,3**	**3,3**	**2,0**	**2,5**

Table 34 Kralicek Quick Test final results

Source: FinAnalysis

final score < 2	company is very good
2 < final score < 3	grey zone
final score > 3	company in bad financial situation

The year 2014 seems to be very critical for the company because it is the year which was the most effected with the crisis. After 2014 the situation calmed down and the company shows again grey zone numbers.

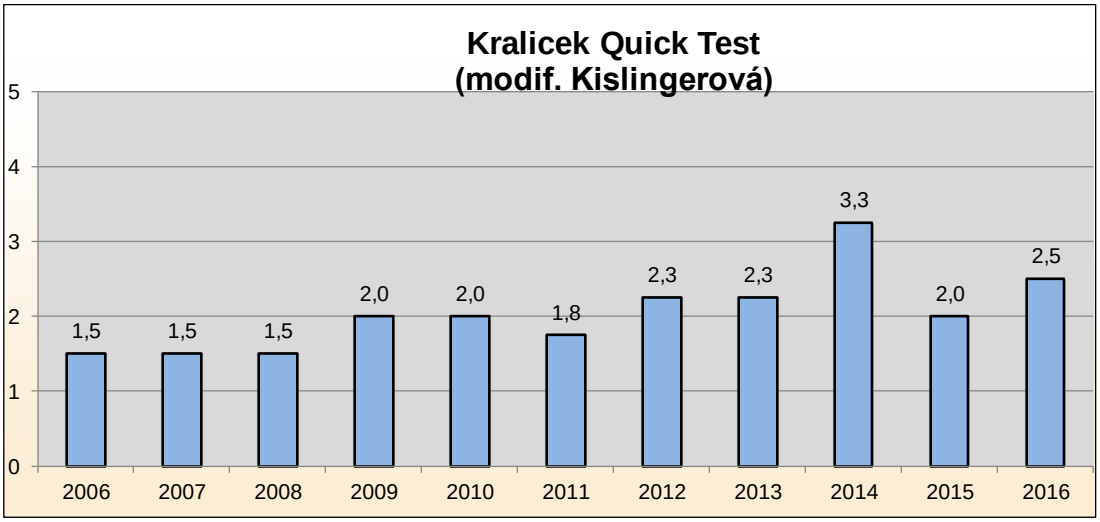


Chart 22 Kralicek Quick Test

Source: FinAnalysis

5.2.7 Profit on 1 employee

The Table 35 was made as a comparison between three equally big Czech construction companies – Eurovia, Skanska and Metrostav. This comparison of profit on one employee presents the development of the profit for the followed period.

	EUROVIA			SKANSKA			METROSTAV		
	Number of employees	Profit or loss for regular activities	Profit on 1 employee	Number of employees	Profit or loss for regular activities	Profit on 1 employee	Number of employees	Profit or loss for regular activities	Profit on 1 employee
2006	2 278	865 766 CZK	380 CZK	2 967	378 211 CZK	127 CZK	3 515	1 084 135 CZK	308 CZK
2007	2 079	846 224 CZK	407 CZK	2 862	901 835 CZK	315 CZK	3 635	816 050 CZK	224 CZK
2008	2 088	760 339 CZK	364 CZK	2 818	893 155 CZK	317 CZK	3 520	811 871 CZK	231 CZK
2009	2 073	614 150 CZK	296 CZK	3 521	1 455 787 CZK	413 CZK	3 126	718 603 CZK	230 CZK
2010	2 655	693 069 CZK	261 CZK	5 576	763 740 CZK	137 CZK	3 109	714 210 CZK	230 CZK
2011	2 326	969 279 CZK	417 CZK	3 635	15 408 CZK	4 CZK	3 166	704 454 CZK	223 CZK
2012	1 847	702 459 CZK	380 CZK	3 491	8 876 CZK	3 CZK	3 201	288 578 CZK	90 CZK
2013	1 667	714 285 CZK	428 CZK	3 225	-693 512 CZK	-215 CZK	3 006	286 666 CZK	95 CZK
2014	1 607	221 471 CZK	138 CZK	3 048	149 124 CZK	49 CZK	2 889	453 012 CZK	157 CZK
2015	1 610	209 606 CZK	130 CZK	2 903	475 007 CZK	164 CZK	2 985	451 598 CZK	151 CZK
2016	1 645	879 948 CZK	535 CZK	2 798	2 527 011 CZK	903 CZK	2 939	495 621 CZK	169 CZK

Table 35 Profit on 1 employee

Source: own source

Eurovia's profit on one employee was decreasing from 2007 to 2010, in 2011 it increased and dropped again in 2012. The company hit the lowest number in 2015, with having only 130 CZK profit on one employee. Skanska's profit on one employee shows very inconsistent pattern of decreasing and increasing. In 2013 the company was in red numbers and had -215 CZK profit on one employee. The profit was decreasing since 2010 but increased highly in 2016 to 903 CZK. Metrostav had more or less the same profit on one employee between 2007 and 2011. After 2011 their profit on one employee hit its lowest number 90 CZK. Since that the profit on one employee has been slowly increasing again and in 2016 it was 169 CZK.

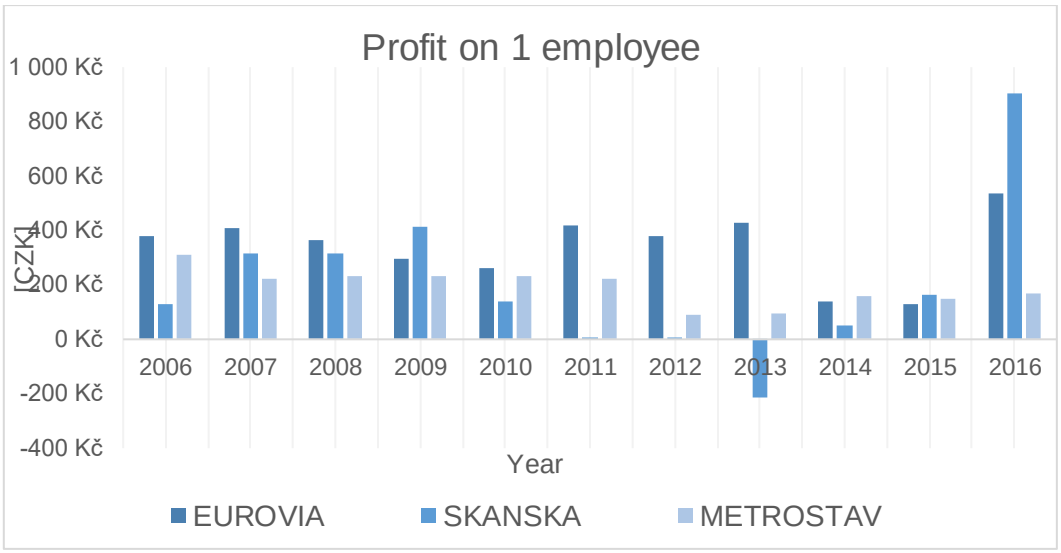


Chart 23 Profit on 1 employee

Source: own source

Overall, the company Skanska had the highest profit on one employee, but it is also the only company (out of these three) which had loss instead of profit on one employee in 2013. Unlike Skanska, Metrostav has a consistent profit on one employee, especially in the first followed period. Between 2011 and 2014 had Eurovia higher profit on one employee than both Skanska and Metrostav, but in 2016 Skanska had increased its profit for more than five times and had almost double profit on one employee than Eurovia.

5.2.8 Horizontal analysis of the balance sheet

The horizontal analysis looks into the changes in the assets and equity and the total liabilities between each year of the followed period (2006 – 2016). These changes are expressed as a total value as well as with the total index.

Mark		TEXT	line	Change 2006 - 2007		Change 2007 - 2008		Change 2008 - 2009		Change 2009 - 2010		Change 2010 - 2011	
				abs.	index	abs.	index	abs.	index	abs.	index	abs.	index
	a	b	c	14	15	16	17	18	19	20	21	22	23
		TOTAL ASSETS	1	310 417	3,38	64 410	0,68	1 482 026	15,52	2 514 611	22,79	-1 496 153	-11,04
A.		**Receivables for subscribed capital**	**2**	**0**		**0**		**0**		**0**		**0**	
B.		**Long-term assets**	**3**	**-155 829**	**-5,95**	**611 910**	**24,83**	**-124 309**	**-4,04**	**52 795**	**1,79**	**-310 987**	**-10,35**
B.	II.	Long-term tangible assets	13	-168 879	-9,83	-9 046	-0,58	-215 960	-14,02	205 234	15,49	-238 426	-15,58
B.	III.	Long-term financial assets	23	14 343	1,59	621 829	68,06	91 751	5,98	-152 392	-9,36	-72 471	-4,91
C.		**Current assets**	**31**	**536 039**	**8,36**	**-627 369**	**-9,03**	**1 557 995**	**24,66**	**2 467 643**	**31,33**	**-1 201 891**	**-11,62**
C.	I.	Inventory	32	-14 628	-4,35	8 465	2,63	-64 905	-19,66	128 960	48,63	-70 512	-17,89
C.	II.	Long-term receivables	39	-103 701	-22,64	236 074	66,61	456 655	77,34	-73 571	-7,03	250 705	25,75
C.	III.	Short-term receivables	48	270 070	6,88	-618 859	-14,75	247 235	6,91	1 555 305	40,67	-1 894 343	-35,21
C.	IV.	Shot-term financial assets	58	384 298	22,74	-253 049	-12,20	919 010	50,46	856 949	31,27	512 259	14,24
D.		**Depreciation of assets**	**63**	**-69 793**	**-48,11**	**79 869**	**106,11**	**48 340**	**31,16**	**-5 827**	**-2,86**	**16 725**	**8,46**
Mark		TEXT	line	Change 2011 - 2012		Change 2012 - 2013		Change 2013 - 2014		Change 2014 - 2015		Change 2015 - 2016	
				abs.	index	abs.	index	abs.	index	abs.	index	abs.	index
	a	b	c	24	25	26	27	28	29	30	31	32	33
		TOTAL ASSETS	1	-2 661 531	-22,09	338 122	3,60	-1 198 633	-12,32	19 573	0,23	-690 462	-8,08
A.		**Receivables for subscribed capital**	**2**	**0**		**0**		**0**		**0**		**0**	
B.		**Long-term assets**	**3**	**-246 121**	**-9,14**	**-153 117**	**-6,26**	**-896**	**-0,04**	**33 335**	**1,45**	**164 069**	**7,05**
B.	II.	Long-term tangible assets	13	-200 565	-15,53	-152 054	-13,94	-56 333	-6,00	41 439	4,70	143 803	15,56
B.	III.	Long-term financial assets	23	-45 735	-3,26	-1 000	-0,07	55 500	4,09	-8 027	-0,57	20 314	1,45
C.		**Current assets**	**31**	**-2 271 294**	**-24,84**	**530 313**	**7,72**	**-1 261 558**	**-17,04**	**61 373**	**1,00**	**-850 332**	**-13,71**
C.	I.	Inventory	32	19 567	6,05	221 654	64,59	70 928	12,56	-422 230	-66,41	-4 588	-2,15
C.	II.	Long-term receivables	39	-499 447	-40,80	-43 127	-5,95	158 240	23,21	-201 898	-24,04	-68 659	-10,76
C.	III.	Short-term receivables	48	1 053 318	30,22	408 991	9,01	-1 081 732	-21,86	-11 069	-0,29	3 772	0,10
C.	IV.	Shot-term financial assets	58	-2 844 732	-69,22	-57 205	-4,52	-408 994	-33,87	696 570	87,21	-780 857	-52,22
D.		**Depreciation of assets**	**63**	**-144 116**	**-67,23**	**-39 074**	**-55,62**	**63 821**	**204,66**	**-75 135**	**-79,09**	**-4 199**	**-21,13**

Table 36 Horizontal analysis of the balance sheet - the assets

Source: FinAnalysis

First, we look on the total assets and their changes between 2006 and 2016. The receivables for subscribed capital remained without changes. The long-term assets had a descending tendency since 2010 to 2014. It was the long-term tangible assets which mainly caused the decrease. It is possible that the company was selling its tangible assets, because they were not generating enough profit and cash from the sale was more useful to the company. Since 2014 are the tangible assets increasing again, which could mean that the company has been buying new equipment in order to have more work. Company's long term financial assets were increasing until 2010. Eurovia was most likely cashing out their long-term financial assets because they needed more cash on hand. Unlike the long-term tangible assets, the long-term financial assets decreased again slightly in 2015. The current assets increased/decreased almost regularly every year. The only exceptions are years 2009 and 2010. The company was increasing the amount of the short-term financial assets since 2009 till 2012 most likely for the same reason which is mentioned above – having more cash. In 2015 Eurovia reduced its inventory significantly compared to the other years. The depreciation of assets changed a lot in the followed period. In the second half of the followed period it was mainly decreasing, which makes sense since the company was selling their tangible assets.

Overall had the total assets a descending tendency since 2010 (except the year 2013 and 2015. The most noticeable growth of the total assets happened in years 2009 and 2010 and the most noticeable drop was in year 2012. Those deflections were mainly caused by the change in the current assets – short-term receivables and short-term financial assets. As it is mentioned in the previous paragraph, those significant changes were possibly caused by the need of cash, which the company needs for its operations. Those years were influenced by the financial crisis, which is why they stand out so much.

Mark			TEXT	line	Change 2006 - 2007		Change 2007 - 2008		Change 2008 - 2009		Change 2009 - 2010		Change 2010 - 2011	
					abs.	index	abs.	index	abs.	index	abs.	index	abs.	index
a			b	c	14	15	16	17	18	19	20	21	22	23
			EQUITY AND TOTAL LIABILITIES	67	310 417	3,38	64 410	0,68	1 482 026	15,52	2 514 611	22,79	-1 496 153	-11,04
A.			**Equity**	**68**	**148 655**	**4,96**	**61 958**	**1,97**	**-85 694**	**-2,67**	**496 433**	**15,89**	**-356 074**	**-9,84**
A.	I.		Equity	69	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
A.	II.		Capital funds	73	0		0		0		0		0	
A.	III.		Funds from profits	80	44 815	17,10	43 414	14,15	4 002	1,14	1 306	0,37	-335	-0,09
A.	IV.		Profit / loss from previous years	83	123 382	25,47	104 429	17,18	56 493	7,93	416 208	54,14	-631 949	-53,33
A.	V.	1.	Profit / loss from current period (+/-)	87	-19 542	-2,26	-85 885	-10,15	-146 189	-19,23	78 919	12,85	276 210	39,85
		2.	Decision about the advanced payment of profit share (-)	88	0		0		0		0		0	
B.			**Liabilities**	**89**	**148 440**	**2,43**	**-19 117**	**-0,31**	**1 494 475**	**23,93**	**2 000 870**	**25,85**	**-1 165 740**	**-11,97**
B.	I.		Reserves	90	315 187	30,51	29 370	2,18	475 957	34,55	527 390	28,45	24 148	1,01
B.	II.		Long-term account payables	95	-67 654	-16,47	114 749	33,45	76 291	16,66	147 805	27,67	133 126	19,52
B.	III.		Short-term account payables	106	-99 093	-2,12	-163 236	-3,57	942 227	21,36	1 325 675	24,77	-1 323 014	-19,81
B.	IV.		Bank loans	118	0		0		0		0		0	
C.			**Accrual deferrals**	**122**	**13 322**	**21,89**	**21 569**	**29,08**	**73 245**	**76,49**	**17 308**	**10,24**	**25 661**	**13,77**
C.	I.	1.	Expenses for the upcoming period	123	14 470	24,24	21 506	29,00	73 329	76,65	17 021	10,07	25 948	13,95
		2.	Deferred income	124	-1 148	-98,20	63	300,00	-84	-100,00	287		-287	-100,00

Mark			TEXT	line	Change 2011 - 2012		Change 2012 - 2013		Change 2013 - 2014		Change 2014 - 2015		Change 2015 - 2016	
					abs.	index	abs.	index	abs.	index	abs.	index	abs.	index
a			b	c	24	25	26	27	28	29	30	31	32	33
			EQUITY AND TOTAL LIABILITIES	67	-2 661 531	-22,09	338 122	3,60	-1 198 633	-12,32	19 573	0,23	-690 462	-8,08
A.			**Equity**	**68**	**-566 256**	**-17,35**	**-45 400**	**-1,68**	**-234 843**	**-8,86**	**-150 962**	**-6,25**	**873 555**	**38,55**
A.	I.		Equity	69	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
A.	II.		Capital funds	73	0		0		0		0		0	
A.	III.		Funds from profits	80	1 237	0,35	-1 682	-0,47	-1 378	-0,39	-278 586	-78,82	-443	-0,59
A.	IV.		Profit / loss from previous years	83	-300 673	-54,38	-55 544	-22,02	259 349	131,82	139 489	30,58	203 656	34,19
A.	V.	1.	Profit / loss from current period (+/-)	87	-266 820	-27,53	11 826	1,68	-492 814	-68,99	-11 865	-5,36	670 342	319,81
		2.	Decision about the advanced payment of profit share (-)	88	0		0		0		0		0	
B.			**Liabilities**	**89**	**-2 038 251**	**-23,77**	**392 338**	**6,00**	**-952 256**	**-13,74**	**124 950**	**2,09**	**-1 614 021**	**-26,45**
B.	I.		Reserves	90	-228 241	-9,49	-134 767	-6,19	-285 384	-13,98	625 862	35,63	-766 669	-32,18
B.	II.		Long-term account payables	95	-170 696	-20,94	-35 897	-5,57	-223 740	-36,77	16 909	4,40	-63 264	-15,75
B.	III.		Short-term account payables	106	-1 639 314	-30,61	563 002	15,15	-443 132	-10,36	-517 821	-13,50	-784 088	-23,63
B.	IV.		Bank loans	118	0		0		0		0		0	
C.			**Accrual deferrals**	**122**	**-57 024**	**-26,90**	**-8 816**	**-5,69**	**-11 534**	**-7,89**	**45 585**	**33,87**	**50 004**	**27,75**
C.	I.	1.	Expenses for the upcoming period	123	-57 433	-27,10	-13 998	-9,06	-6 083	-4,33	45 725	34,01	50 004	27,75
		2.	Deferred income	124	409		5 182	1 266,99	-5 451	-97,50	-140	-100,00	0	

Table 37 Horizontal analysis of the balance sheet - equity and total liabilities

Source: FinAnalysis

The equity had the rising tendency in first two years of the followed period. After that is started to decrease each year (except for 2010 and 2016). The equity itself and capital funds remained without any changes. The profit from previous years decreased multiple times (in 2011, 2012 and 2013). The profit from the current period fluctuated aplenty. Surprisingly, it dropped a lot in 2014, which seems a bit strange, but in the annual report of the company it states that the company was still dealing with the impact of the crisis. The liabilities were almost regularly changing from positive to negative numbers every year. The biggest changes occurred in short-term account payables, which are decreasing since 2012 (except for 2013). The reserves had a rising tendency in the first half of the followed period but since 2012 the reserves have been reducing. Because of the crisis the company was probably using them to cover the losses. The accrual deferrals varied mainly because of the expenses for the upcoming period. The biggest increase in the equity and total liabilities was in year 2010 and the highest decrease happened in year 2012. In both of these cases the increase/decrease was caused by the increase/decrease of liabilities.

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5.2.9 Vertical analysis of the balance sheet

The vertical analysis shows the composition of total assets and equity and total liabilities each year. The composition is shown in percentage.

Mark			TEXT	line	index	index	index	index	index	index	index	index	index	index	index
	a		b	c	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
			TOTAL ASSETS	1	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
A.			**Receivables for subscribed capital**	**2**	**0,0%**	**0,0%**	**0,0%**	**0,0%**	**0,0%**	**0,0%**	**0,0%**	**0,0%**	**0,0%**	**0,0%**	**0,0%**
B.			**Long-term assets**	**3**	**28,6%**	**26,0%**	**32,2%**	**26,8%**	**22,2%**	**22,4%**	**26,1%**	**23,6%**	**26,9%**	**27,2%**	**31,7%**
B.	I.		Long-term intangible assets	4	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
B.	II.		Long-term tangible assets	13	18,7%	16,3%	16,1%	12,0%	11,3%	10,7%	11,6%	9,7%	10,3%	10,8%	13,6%
B.	III.		Long-term financial assets	23	9,8%	9,6%	16,1%	14,7%	10,9%	11,6%	14,4%	13,9%	16,5%	16,4%	18,1%
C.			**Current assets**	**31**	**69,9%**	**73,2%**	**66,2%**	**71,4%**	**76,4%**	**75,9%**	**73,2%**	**76,1%**	**72,0%**	**72,5%**	**68,1%**
C.	I.		Inventory	32	3,7%	3,4%	3,5%	2,4%	2,9%	2,7%	3,7%	5,8%	7,5%	2,5%	2,7%
C.	II.		Long-term receivables	39	5,0%	3,7%	6,2%	9,5%	7,2%	10,2%	7,7%	7,0%	9,8%	7,5%	7,2%
C.	III.		Short-term receivables	48	42,8%	44,2%	37,5%	34,7%	39,7%	28,9%	48,3%	50,9%	45,3%	45,1%	49,1%
C.	IV.		Short-term financial assets	58	18,4%	21,9%	19,1%	24,8%	26,6%	34,1%	13,5%	12,4%	9,4%	17,5%	9,1%
D.			**Depreciation of assets**	**63**	**1,6%**	**0,8%**	**1,6%**	**1,8%**	**1,5%**	**1,8%**	**0,7%**	**0,3%**	**1,1%**	**0,2%**	**0,2%**
Mark			TEXT	line	index	index	index	index	index	index	index	index	index	index	index
	a		b	c	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
			EQUITY AND TOTAL LIABILITIES	67	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
A.			**Equity**	**68**	**32,7%**	**33,2%**	**33,6%**	**28,3%**	**26,7%**	**27,1%**	**28,7%**	**27,3%**	**28,3%**	**26,5%**	**40,0%**
A.	I.		Equity	69	15,1%	14,6%	14,5%	12,6%	10,2%	11,5%	14,8%	14,2%	16,3%	16,2%	17,6%
A.	II.		Capital funds	73	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
A.	III.		Funds from profits	80	2,9%	3,2%	3,7%	3,2%	2,6%	2,9%	3,8%	3,6%	4,1%	0,9%	0,9%
A.	IV.		Profit / loss from previous years	83	5,3%	6,4%	7,5%	7,0%	8,7%	4,6%	2,7%	2,0%	5,3%	7,0%	10,2%
A.	V.	1.	Profit / loss from current period (+/-)	87	9,4%	8,9%	8,0%	5,6%	5,1%	8,0%	7,5%	7,3%	2,6%	2,5%	11,2%
B.			**Liabilities**	**89**	**66,7%**	**66,0%**	**65,4%**	**70,2%**	**71,9%**	**71,2%**	**69,6%**	**71,2%**	**70,1%**	**71,4%**	**57,1%**
B.	I.		Reserves	90	11,3%	14,2%	14,4%	16,8%	17,6%	20,0%	23,2%	21,0%	20,6%	27,9%	20,6%
B.	II.		Long-term account payables	95	4,5%	3,6%	4,8%	4,8%	5,0%	6,8%	6,9%	6,3%	4,5%	4,7%	4,3%
B.	III.		Short-term account payables	106	50,9%	48,2%	46,2%	48,5%	49,3%	44,4%	39,6%	44,0%	45,0%	38,8%	32,2%
B.	IV.		Bank loans	118	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
C.			**Accrual deferrals**	**122**	**0,7%**	**0,8%**	**1,0%**	**1,5%**	**1,4%**	**1,8%**	**1,7%**	**1,5%**	**1,6%**	**2,1%**	**2,9%**
C.	I.	1.	Expenses for the upcoming period	123	0,7%	0,8%	1,0%	1,5%	1,4%	1,8%	1,6%	1,4%	1,6%	2,1%	2,9%
		2.	Deferred income	124	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%

Table 38 Vertical analysis of the balance sheet

Source: FinAnalysis

Since 2009 the current assets made up over 70% of total assets. That lasted until 2015 and in 2016 the current assets dropped to 68,1%, which is the second lowest in the followed period. The increase in the middle of the followed period was caused by reduction in the long-term assets (tangible and financial). It seems that in 2016 the company invested in the long-term tangible and financial assets, most likely because the crisis stopped influencing the company. The Table 38 shows that between years 2007 and 2015 Eurovia was decreasing equity and increasing the total liabilities. That changed in 2016 when the company increased the equity up to 40% and decreased the liabilities to 57%. The biggest was the increase in the profit from the current period. The company also deducted the reserves and the short-term account payables, which decreased the liabilities. It is said that for the companies in the construction business is the optimal ration between equity and total liabilities 1:2. Eurovia fluctuates around that ration through the whole followed period, excluding the 2016. The accrual deferrals (the expenses for the upcoming period) increased to 2,9% in 2016, they were the lowest in the beginning of the followed period in 2006 with just 0,7%.

5.2.10 EVA

The economic value added for Eurovia was calculated using the following formula:

$$EVA = EBIT * (1 - tax\ rate) - WACC * C$$

C stands for the company's capital and is calculated as a difference between the total liabilities and equity and short-term liabilities from business relations. The value of C is revealed in Table 38 for each year of the followed period.

$$C = total\ liabilities\ and\ equity - shortterm\ liabilities\ from\ business\ relations$$

(in ths CZK)	2006	2007	2008	2009	2010	2011
Total liabilities and equity	9 175 910	9 486 327	9 550 737	11 032 763	13 547 374	12 051 221
Short-term liabilities from business relations	4 047 822	3 938 601	3 365 478	4 820 952	4 962 253	3 427 553
C	**5 128 088**	**5 547 726**	**6 185 259**	**6 211 811**	**8 585 121**	**8 623 668**
	2012	**2013**	**2014**	**2015**	**2016**	
Total liabilities and equity	9 389 690	9 727 812	8 529 179	8 548 752	7 858 290	
Short-term liabilities from business relations	2 580 623	2 373 72	2 190 469	1 880 964	1 304 898	
C	**6 809 067**	**7 354 092**	**6 338 710**	**6 667 788**	**6 553 392**	

Table 39 EVA – C calculation

Source: own source

C was not the only value which needed a proper calculation, company's WACC was calculated based on the manual from the Ministry of Industry and Trade and it is described in the chapter 4.2.10.1. EBIT was taken from income statements from year 2006 to year 2016.

(in ths CZK)	2006	2007	2008	2009	2010	2011
EBIT	1 094 616	1 127 031	932 706	784 726	865 994	1 108 319
tax rate	24,00 %	24,00 %	21,00 %	20,00 %	19,00 %	19,00 %
WACC	3,77 %	4,28 %	4,55 %	4,67 %	3,71 %	3,51 %
C	5 128 088	5 547 726	6 185 259	6 211 811	8 585 121	8 623 668
EVA	**638 503**	**619 101**	**455 408**	**337 689**	**382 947**	**595 048**
	2012	**2013**	**2014**	**2015**	**2016**	
EBIT	752 415	720 183	223 589	265 749	924 76	
tax rate	19,00 %	19,00 %	19,00 %	19,00 %	19,00 %	
WACC	2,85 %	2,98 %	3,60 %	3,78 %	0,48 %	
C	6 809 067	7 354 092	6 338 710	6 667 788	6 553 392	
EVA	**415 109**	**364 209**	**- 47 047**	**-36 853**	**717 604**	

Table 40 EVA

Source: own source

Most of the time the EVA value managed to stay in positive numbers, which means that the company was creating an actual value for the shareholders. In 2014 and 2015 was EVA negative but in 2016 the company managed to achieve the highest value of EVA throughout the whole followed period. As it could be easily spotted in Chart 24, between years 2011 and

2014, EVA had a descending tendency. That is probably caused by the financial crisis from 2008. Eurovia's economic value added was also decreasing since 2007 to 2009, which is when the company hit the lowest positive number 337 689 000 CZK.

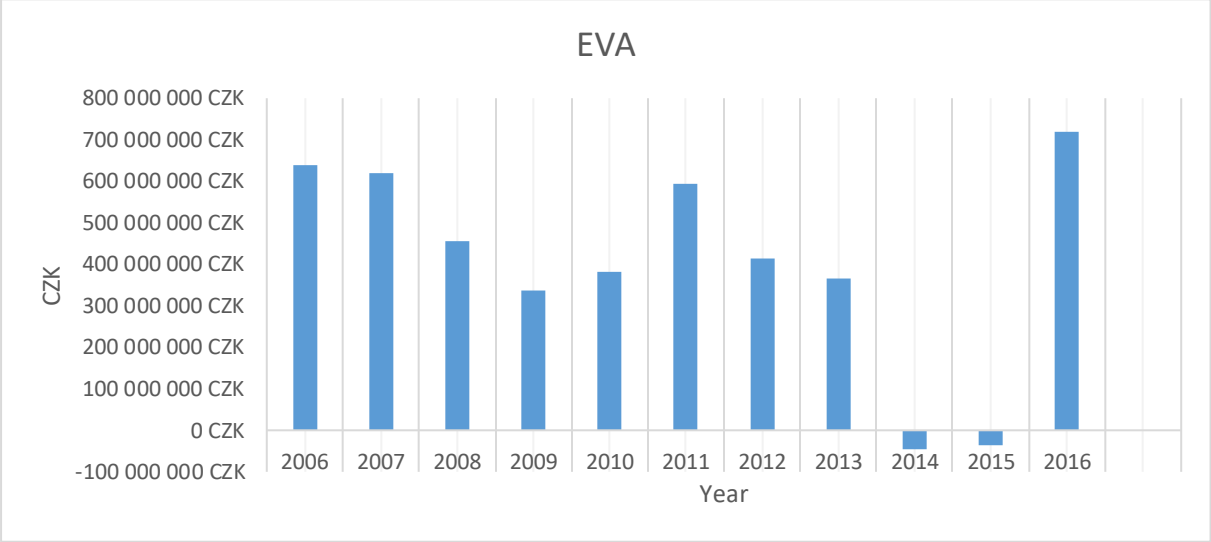

Chart 24 EVA

Source: own source

Following Chart 25 presents the EVA value of Eurovia as well as the industry average. It is clear that Eurovia did not reach the industry average in the first part of the followed period but managed to stay way above the average since 2010.

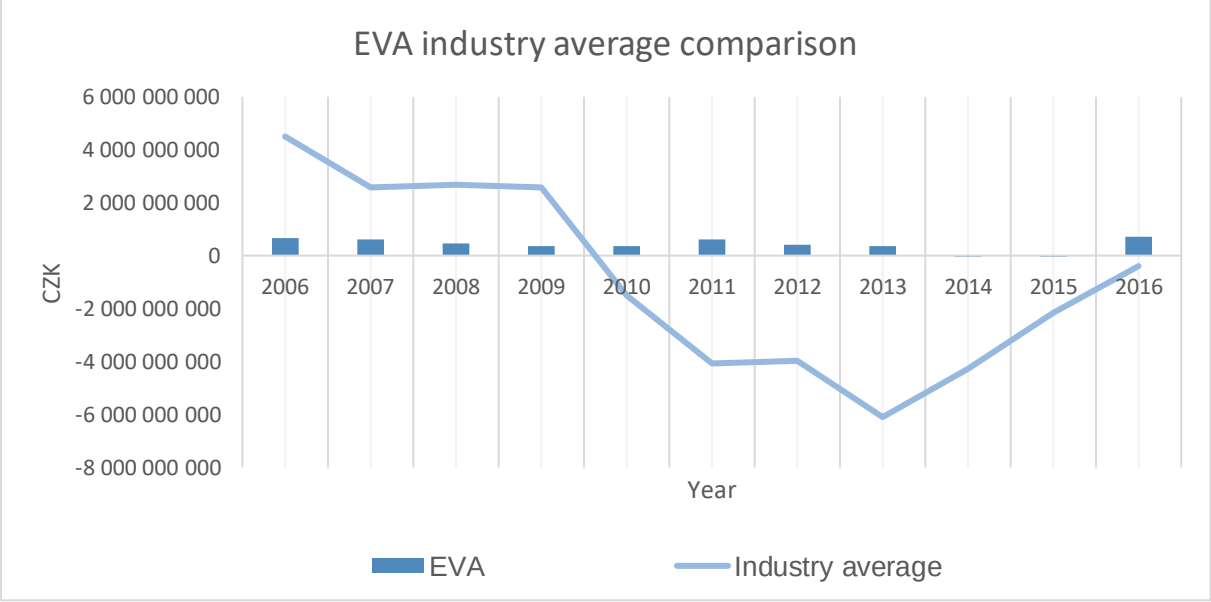

Chart 25 EVA industry average comparison

Source: own source

5.2.10.1 WACC

The process of the WACC calculation was taken from the Ministry of Industry and Trade as well as some values. This calculation is based on a rating model, which determines the WACC as a sum of the exact mark-ups for potential risks, which weigh down the company's capital. Before calculating the economic value added, it is necessary to know the weighted average cost of capital. The WACC was calculated using the following formula:

$$WACC = r_f + r_{LA} + r_{pod} + r_{FinStab}$$

$$r_f = risk\ free\ rate$$

$$r_{LA} = index\ considering\ the\ size\ of\ the\ company$$

$$r_{pod} = index\ considering\ how\ the\ production\ power\ is\ made$$

$$r_{FinStab} = index\ considering\ the\ relation\ between\ the\ assets\ and\ liabilities$$

Equation 36 WACC rates

The risk-free rate values were taken from the Ministry of Industry and Trade website, which is why there is no process of calculations.

In order to find the r_{LA} it is necessary to calculate the money sources first. The money sources consist of the equity, bank loans and obligations. The index r_{LA} varies between 0% to 5%, depending on how large the money sources are.

MS > 3 bil CZK	r_{LA} = 0,00 %
MS < 100 mil. CZK	r_{LA} = 5,00 %
100 < MS < 3 bil CZK	r_{LA} = (3 bil CZK - UZ)²/ 168,2

(in ths CZK)	2006	2007	2008	2009	2010	2011
Equity	2 998 419	3 147 074	3 209 032	3 123 338	3 619 771	3 263 697
Bank loans	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK
Obligations	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK
Money sources	**2 998 419**	**3 147 074**	**3 209 032**	**3 123 338**	**3 619 771**	**3 263 697**
	2012	**2013**	**2014**	**2015**	**2016**	
Equity	2 697 441	2 652 041	2 417 198	2 266 236	3 139 791	
Bank loans	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	
Obligations	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	
Money sources	**2 697 441**	**2 652 041**	**2 417 198**	**2 266 236**	**3 139 791**	

Table 41 Money sources

Source: own source

Following Table 42 present how was the r_{LA} determined and its final values.

(in ths CZK)	2006	2007	2008	2009	2010	2011
Money sources	2 998 419	3 147 074	3 209 032	3 123 338	3 619 771	3 263 697
r_{LA}	rLA = (3 bil CZK - UZ)²/ 168,2	rLA = 0,00 %	rLA = 0,00 %	rLA = 0,00 %	rLA = 0,00 %	rLA = 0,00 %
r_{LA}	**0,0015%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**
	2012	**2013**	**2014**	**2015**	**2016**	
Money sources	2 697 441	2 652 041	2 417 198	2 266 236	3 139 791	
r_{LA}	rLA = (3 bil CZK - UZ)²/ 168,2	rLA = (3 bil CZK - UZ)²/ 168,2	rLA = (3 bil CZK - UZ)²/ 168,2	rLA = (3 bil CZK - UZ)²/ 168,2	rLA = 0,00 %	
r_{LA}	**0,54%**	**0,72%**	**2,02%**	**3,20%**	**0,00%**	

Table 42 rLA calculation

Source: own source

Before calculating the r_{pod}, it was needed to determine the X1 and EBIT/Assets ratio. The X1 consists of equity, bank loans, obligations, assets and an interest rate. The X1 equals 0,00 for the whole period because the company does not have any bank loans or publicly known interest rates.

(in ths CZK)	2006	2007	2008	2009	2010	2011
Equity	2 998 419	3 147 074	3 209 032	3 123 338	3 619 771	3 263 697
Bank loans	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK
Obligations	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK
Assets	9 175 910	9 486 327	9 550 737	11 032 763	13 547 374	12 051 221
Interest rate	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
X1	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
	2012	**2013**	**2014**	**2015**	**2016**	
Equity	2 697 441	2 652 041	2 417 198	2 266 236	3 139 791	
Bank loans	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	
Obligations	0 CZK	0 CZK	0 CZK	0 CZK	0 CZK	
Assets	9 389 690	9 727 812	8 529 179	8 548 752	7 858 290	
Interest rate	0,00%	0,00%	0,00%	0,00%	0,00%	
X1	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	

Table 43 X1 calculation

Source: own source

The EBIT to Assets ratio was created using the values form the balance sheet and the income statement. When having both X1 and EBIT/Assets it was possible to calculate the r_{pod}.

(in ths CZK)	2006	2007	2008	2009	2010	2011
EBIT	1 095	1 127	933	785	866	1 108
Assets	9 175 910	9 486 327	9 550 737	11 032 763	13 547 374	12 051 221
EBIT/Assets	**0,00012**	**0,00012**	**0,00010**	**0,00007**	**0,00006**	**0,00009**
	2012	**2013**	**2014**	**2015**	**2016**	
EBIT	752	720	224	266	925	
Assets	9 389 690	9 727 812	8 529 179	8 548 752	7 858 290	
EBIT/Assets	**0,00008**	**0,00007**	**0,00003**	**0,00003**	**0,00012**	

Table 44 EBIT/Assets

Source: own source

The r_{pod} was determined based on the comparison of X1 and EBIT/Assets. As it is stated in Table 45 the EBIT/Assets ratio was always higher that X1, which make the r_{pod} equal to 0,00%.

EBIT/A > X1 r_{pod} = 0,00 %
EBIT/A < 0 r_{pod} = 10,00 %

	2006	2007	2008	2009	2010	2011
X1	0,00000	0,00000	0,00000	0,00000	0,00000	0,00000
EBIT/Assets	0,00012	0,00012	0,00010	0,00007	0,00006	0,00009
comparison	EBIT/A > X1	EBIT/A > X1	EBIT/A > X1	EBIT/A > X1	EBIT/A > X1	EBIT/A > X1
r_{pod}	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**
	2012	**2013**	**2014**	**2015**	**2016**	
X1	0,00000	0,00000	0,00000	0,00000	0,00000	
EBIT/Assets	0,00008	0,00007	0,00003	0,00003	0,00012	
comparison	EBIT/A > X1	EBIT/A > X1	EBIT/A > X1	EBIT/A > X1	EBIT/A > X1	
r_{pod}	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	

Table 45 rpod calculation

Source: own source

The same as when calculating the r_{pod}, before calculating the $r_{FinStab}$, some auxiliary calculations must be made. Starting with XL determination, which depends on the comparison to the construction industry average L3. L3 was taken from the Ministry of Industry and Trade data, which are put up on their website.

L3 < 1,25 XL = 1,25
L3 > 1,25 XL = L3

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
L3 (construction industry average)	1,25	1,25	1,43	1,66	1,84	1,88	1,82	1,87	1,93	1,75	2,06
comparison	L3 < 1,25	L3 < 1,25	L3 > 1,25	L3 > 1,25	L3 > 1,25	L3 > 1,25	L3 > 1,25	L3 > 1,25	L3 > 1,25	L3 > 1,25	L3 > 1,25
XL	**1,25**	**1,25**	**1,43**	**1,66**	**1,84**	**1,88**	**1,82**	**1,87**	**1,93**	**1,75**	**2,06**

Table 46 XL

Source: own source

For all the followed years the company's current liquidity remained higher than the construction industry average L3, which is why $r_{FinStab}$ equals 0,00%.

Current liquidity >XL	$r_{FinStab}$ = 0,00%
Current liquidity < 1	$r_{FinStab}$ = 10,00 %
XL < Current liquidity < 1	$r_{FinStab}$ = (XL - Current liquidity) ²/ 10*(XL-1) ²

The current liquidity was calculated before, for the ratio analysis.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Current liquidity	1,37	1,52	1,43	1,47	1,55	1,71	1,85	1,73	1,60	1,87	2,11
XL	1,25	1,25	0,86	1,34	1,25	1,25	1,25	1,25	1,25	1,75	2,06
comparison	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL	Current liquidity >XL
$r_{FinStab}$	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**	**0,00%**

Table 47 rFinStab calculation

Source: own source

After having all the indexes, which go in the calculation of WACC, it was easy to get the final number. This approach of calculating the WACC is made by the Ministry of Industry and Trade and it is suited for medium to small companies.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
r_f	3,77%	4,28%	4,55%	4,67%	3,71%	3,51%	2,31%	2,26%	1,58%	0,58%	0,48%
r_{LA}	0,0015%	0,00%	0,00%	0,00%	0,00%	0,00%	0,54%	0,72%	2,02%	3,20%	0,00%
r_{pod}	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
$r_{FinStab}$	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
WACC	**3,77%**	**4,28%**	**4,55%**	**4,67%**	**3,71%**	**3,51%**	**2,85%**	**2,98%**	**3,60%**	**3,78%**	**0,48%**

Table 48 WACC calculation

Source: own source

5.3 Recommendations

To summarize the financial position of the company, it is necessary to talk about the overall situation in the construction industry first. As it is seen in the ratio analysis (5.2.3) or in profit on 1 employee (5.2.7), the construction industry started showing decreasing values since 2011. The global financial crisis had impact on the industry for several years. The industry started recovering approximately after 2014 and has been showing increasing values ever since.

The analysis showed that even with few difficult years, Eurovia managed to withstand the pressure from the crisis. The main recommendation for the company would be to use more external bank financing. The company did not use any bank loans between 2006 and 2016 and decreased the total liabilities throughout those years. The advantage of the external capital is its price. It is less expensive than financing with equity, because the shareholders always require higher valorization. The cost of the external financing, interests, is lower than the valorization. The liquidity ratio analysis showed also increasing liquidity, which combined with low indebtedness could cause lower profitability of the capital. The low indebtedness of the company could be also presented positively. If another crisis occurs, the company will not have any problem with obtaining external financing, since the low indebtedness would make them trustworthy to the creditors.

The results of the analysis imply that to worst year of the followed period was 2014. The Kralicek Quick Test final score was 3,3 that year (recommended value is less than 3,0) and it was the highest value in the followed period. The analysis uses classical methods but also modern ones, such as EVA. EVA also had the worst value in 2014 (- 47 047 000 CZK), which means that the company was not creating value for the shareholders, it does not necessarily mean that the company did not have any profit. The importance of EVA consists in the fact that it calculates with the weighted average cost of capital. WACC considers not just the cost of external financing but also the cost of company's own capital. WACC remains low throughout the followed period, which is not surprising since the company does not have any bank loans.

The main employers of the company are the state government and the regional and municipal government. Even though those employers should remain company's main focus, it could also expand a little bit more in the private industry. Overall Eurovia showed a firm structure, which can withstand the pressure of the crisis and there for should remain without any significant changes.

6 Conclusion

This diploma thesis researched the topic of financial analysis. In the beginning of the thesis there are theoretical information about the financial analysis, its methods and approaches and the sources of information. After the theoretical part, there is the financial analysis of the company Eurovia CS, a.s. between years 2006 and 2016. The thesis also deals with the impact of the financial crisis on the financial health of the company.

The financial analysis of the company was partly done with the use of software tool FinAnalysis. The information from the financial statements and annual reports were used as an input data for the program. The outputs of the program were mainly in the form of tables and charts. The program provided very detailed information about the company, which made a sufficient base for the financial analysis.

In the first part of the financial analysis there are some general information about the company, for example number of employees, profit, total sales and total costs and its changes throughout the years. The general company information is followed with the cash flow charts. Those charts provide solid information about company's cash flow changes in the followed period. Next part of the practical part focuses on the ratio analysis of profitability, liquidity, activity and debt, which is a classic part of the financial analysis. In each category the most important and informative ratios were chosen. Development and values of those ratios were further analysed. The industry averages and recommended values were also used for their better understanding in this part. The average was calculated using ratios from two more major Czech construction companies - Skanska CZ and Metrostav. The DuPont analysis shows the decomposition of ROE/ROA. This serves as an additional information for the profitability ratios, because it gives a detailed view of each component, which is used in the calculation of ROE/ROA. Following part are the bankruptcy and solvency models – Altman Z-Score, Taffler model, IN05 and the Kralicek Quick Test. The Altman Z-Score and the Taffler model showed slightly different results, but neither show the numbers for bankruptcy. The IN05 index needed to be altered to provide more accurate results. After the alteration it showed similar results with the Altman Z-Score. Kralicek Quick Test, which is the only solvency model used in the analysis, gave a sufficient overview of the company's financial state in the followed period. The horizontal and vertical analysis of the balance sheet analyse the motion of the assets, equity and liabilities. It is used to show the changes between years and also changes within the categories. The motion of the assets, equity and liabilities provides a solid picture of company's financial health. The outputs from the software tool FinAnalysis were used in these categories.

Profit on one employee presents the comparison between three construction companies – Eurovia, Skanska CZ and Metrostav. Their profit is divided between the number of

employees, which makes it easier to compare. The profit is compared between the companies and also its development in the followed period. The economic value added (EVA) is a modern ratio with great informative value. Its calculation considers the price of the equity as well as the price of debt - the weighted average cost of capital (WACC). Calculation of WACC was done based on the process of the Ministry of Industry and Trade. This process of calculation is used for the small and medium companies.

The analysis followed three basic steps – collect data, analyse and evaluate. The evaluation provides a solid image of Eurovia's financial health and points out the impact of the financial crisis from 2008 on the company. Based on the results from the financial analysis the company was given some recommendations to consider. Eurovia did not use any external bank loan between 2006 and 2016 because they most likely use some sort of internal financing from the maternal company. One of the recommendations for the company is using more external financing, since the cost of the external financing (interests) is lower than the cost of company's equity. The advantage of the external capital is its price. It is less expensive than financing with equity, because the shareholders always require higher valorization. The results of the ratio analysis also show high liquidity, which combined together with low indebtedness could cause low profitability of company's capital. Positive side of Eurovia's low indebtedness is that when in need of external financing due to another global financial crisis or the company's own crisis, any bank institution would probably provide the company with a loan, because the company would be trustworthy for the creditors. The fact that Eurovia is in dispute with the Road and Motorway Directorate of the Czech Republic (ŘSD) since 2011 is also worth mentioning. Their dispute concerns the highway D47 (now part of D1), which developed wavy surface shortly after its opening. The dispute remains open till today and possibly also influences the company financially.

Overall do the results of the financial analysis indicate that the company managed to overcome the impact of the global crisis from 2008. The impact of the crisis showed up in the financial statements in 2012 and it seems that up until 2016 Eurovia was dealing with the consequences.

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