

Project of Implementation of Economic Value Added concept for Increasing Financial Performance in the Selected Company

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MASTER'S THESIS ASSIGNMENT

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Thesis Guidelines:

Introduction

Define the objectives and the application methods used in the Master thesis.

I. Theoretical part

- Prepare a critical literature review focused on concepts of financial performance, management and measurement

II. Practical part

- Process the overview of the company, external and internal factors influencing the company's performance.
- Analyze the current situation in the company's financial performance, measurement and management.
- Prepare the project of the implementation of Economic Value Added as a part of Balanced Scorecard into the management system.
- Evaluate risk and costs associated with the implementation of Economic Value Added.

Conclusion

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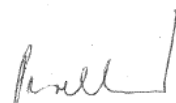
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ABSTRAKT

Tato diplomová práce je zaměřena na implementaci konceptu EVA, moderního přístupu k měření podnikové výkonnosti, v podniku ABC, a.s., který působí v rámci automobilového průmyslu v České republice. Na základě literární rešerše jsou popsány tradiční a moderní metody měření výkonnosti podniku. Zdůrazněny jsou zejména omezení tradičního systému měření výkonnosti podniku a výhody moderních metod měření. V rámci teoretické části je také detailně rozebrána problematika konceptu EVA. V analytické části této práce je nejprve analyzována finanční výkonnost, podoba managementu a současná podoba měření výkonnosti v podniku ABC, a.s., dále jsou na základě pyramidového rozkladu ukazatele EVA ilustrovány nevýhody tradičního systému měření výkonnosti podniku. Na základě výsledků analytické části je navržen proces implementace konceptu EVA a výhody zavedení tohoto konceptu jsou důrazněny pro budoucí využití managementem společnosti ABC, a.s.

Klíčová slova: Ekonomická přidaná hodnota, výkonnost, společnost, kapitál, měření výkonnosti, management, akcionář.

ABSTRACT

This Master's thesis is focused on the implementation of EVA – the modern approach of measuring corporate financial performance into the ABC, a.s. company working in the automotive industry in the Czech Republic. On the basis of the literature review, the traditional and modern performance measures are elaborated and the limitations of traditional performance measures and the advantages of modern ones are discussed and the detailed elaboration of EVA is executed. In the analytical part the financial performance, management and measurement in ABC, a.s. are analyzed and based on the pyramidal breakdown of EVA analysis, the disadvantages of traditional performance measures are revealed. Based on the analytical outcome, the implementation of EVA is proposed and its advantages are delivered to the company's managers.

Key words: Economic Value Added, performance, company, capital, measurement, management, shareholder.

MOTTO

“...the ones who are crazy enough to think that they can change the world, are the ones who do.”

Apple 1997

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I hereby declare that the print version of my Master's thesis and the electronic version of my thesis deposited in the IS/STAG system are identical.

TABLE OF CONTENTS

INTRODUCTION	10
OBJECTIVES AND METHODS OF MASTER THESIS PROCESSING.....	12
THEORETICAL PART	13
1 FINANCIAL PERFORMANCE OF A COMPANY	14
2 PERFORMANCE MEASUREMENT	16
2.1 TRADITIONAL FINANCIAL MEASURES	16
2.1.1 COMMON SIZE FINANCIAL STATEMENTS	16
2.1.2 PROFITABILITY RATIOS.....	16
2.1.3 LEVERAGE RATIOS	17
2.1.4 MARKET VALUE MEASURES.....	18
2.1.5 FREE CASH FLOW (FCF)	18
2.1.6 LIMITATIONS OF TRADITIONAL PERFORMANCE MEASURES	19
2.2 MODERN PERFORMANCE MEASUREMENT	19
2.2.1 DISCOUNTED CASH FLOW	19
2.2.2 MARKET VALUE ADDED (MVA)	20
2.2.3 EXCESS RETURN.....	20
2.2.4 CASH VALUE ADDED (CVA)	21
2.2.5 ECONOMIC VALUE ADDED (EVA)	21
2.2.6 CASH FLOW RETURN ON INVESTMENTS (CFROI).....	21
2.2.7 ADVANTAGES OF MODERN PERFORMANCE MEASUREMENT	22
2.2.8 CONCLUSION	22
2.3 THE CONCEPT OF ECONOMIC VALUE ADDED (EVA)	23
2.3.1 MEASURING OF ECONOMIC VALUE ADDED.....	23
2.3.2 CALCULATION OF NOA, NOPAT AND THE COST OF CAPITAL (WACC)	26
2.3.3 POSSIBLE WAYS TO INFLUENCE EVA	29
2.3.4 ECONOMIC VALUE ADDED AS A TOOL FOR PERFORMANCE MEASURE.....	29
2.3.5 ECONOMIC VALUE ADDED AND MANAGEMENT COMPENSATION SYSTEMS	30
2.3.6 ADVANTAGES AND LIMITATION OF ECONOMIC VALUE ADDED.....	35
2.3.7 IMPLEMENTATION OF ECONOMIC VALUE ADDED.....	36
2.3.8 SIX MAIN FACTORS SUPPORTING SUCCESSFUL EVA IMPLEMENTATION	37
3 BUSINESS MANAGEMENT	39
3.1 VALUE-BASED MANAGEMENT (VBM)	39
3.2 STRATEGIC MANAGEMENT	40
3.2.1 PESTLE ANALYSIS	40
3.2.2 SWOT ANALYSIS	41
3.2.3 BALANCED SCORECARD	42
PRACTICAL PART	44
4 THE INDUSTRY AND THE COMPANY'S PROFILE	45
4.1 CORPORATE PROFILE.....	45
4.2 CZECH AUTOMOTIVE INDUSTRY.....	45

4.3	HISTORY AND MILESTONES OF ABC, A.S.	47
4.4	PRODUCTION PROCESS	47
4.4.1	PLANT GENERATOR.....	48
4.4.2	PLANT KARBURATOR	48
5	EXTERNAL AND INTERNAL FACTORS INFLUENCING THE COMPANY'S PERFORMANCE	50
5.1	PESTLE ANALYSIS	50
5.2	SWOT ANALYSIS	54
6	FINANCIAL ANALYSIS	61
6.1	FINANCIAL STATEMENT ANALYSIS	61
6.1.1	BALANCE SHEET ANALYSIS	61
6.1.2	INCOME STATEMENT ANALYSIS	63
6.2	FINANCIAL RATIO ANALYSIS	66
6.2.1	THE CONTROL ALTMAN Z-SCORE.....	69
6.2.2	THE CONTROL INDEX IN05	70
7	PERFORMANCE MANAGEMENT AND MEASUREMENT OF THE COMPANY	71
7.1	MANAGEMENT OF ABC, A.S.	71
7.2	MEASUREMENT OF ABC, A.S.	72
8	CALCULATION OF ECONOMIC VALUE ADDED	74
8.1	CALCULATION OF ADJUSTED NOA	74
8.2	CALCULATION OF ADJUSTED NOPAT	74
8.3	CALCULATION OF WACC	75
8.4	CALCULATION OF EVA	76
8.5	CALCULATION OF EVA ACCORDING TO THE ACCOUNTING MODEL	76
9	PYRAMIDAL BREAKDOWN OF EVA ANALYSIS	78
10	IMPLEMENTATION OF ECONOMIC VALUE ADDED CONCEPT	80
10.1	STEP 1: ESTABLISH BUY-IN AT THE BOARD AND TOP MANAGEMENT LEVEL	80
10.2	STEP 2: MAKE THE MAJOR STRATEGIC DECISIONS ON THE EVA PROGRAM	80
10.3	STEP 3: ESTABLISH THE TRAINING PROGRAM	89
10.4	STEP 3: DEVELOP AN IMPLEMENTATION PLAN	92
11	EVA AS A PART OF BALANCED SCORECARD	94
12	EVALUATION OF RISK AND COSTS ASSOCIATED WITH THE IMPLEMENTATION OF ECONOMIC VALUE ADDED	95
12.1	EVALUATION OF COSTS FOR ABC, A.S.	95
12.2	ASSESSMENT OF THE EVA IMPLEMENTATION RISK FOR ABC, A.S.	96
13	CONTRIBUTION OF THE EVA IMPLEMENTATION	97
	CONCLUSION	98
	REFERENCES	99

LIST OF ABBREVIATIONS	102
LIST OF FIGURES	104
LIST OF TABLES	105
APPENDICES	106
APPENDIX P I. TRANSLATED FINANCIAL STATEMENTS.....	106

INTRODUCTION

Successful financial performance and competitive advantage are the most desirable conditions that organizations try to achieve nowadays. They are vital for successful existence of a company or, in other words, for creating financial performance that is enough to satisfy its owners. Not doing this, a company does not attract new investors and stimulates its shareholders to leave the business.

For decades, organizations have been measuring their financial performance by using the traditional performance measures, such as profitability or cash flow ratios. However, in 1982 a new concept of shareholder's value orientation was elaborated and called Economic Value Added (EVA)¹, which attempts to capture the true economic profit of a company. Properly implemented, EVA frees the measurement of business performance from the vagaries of accounting conventions and aligns the interests of managers with those of owners, ending a decades-long conflict of interest.

The chosen company ABC, a.s. uses the traditional performance measures and mainly focuses on its sales and EBIT. Their management compensation system is only focused on targeted accounting figures and represents the fixed reward achieved which, the top managers are sure that the rewards are theirs and whatever they would do at the end of a year, they will not have a change of their already achieved rewards. I believe that their methods are obsolete and do not stimulate the company's managers enough especially at the end of a year. I suppose that EVA more effectively embraces all activities in the company, contributes better into the creation of the economic profit, more effectively stimulates managers and eventually creates more wealth for the company's owners.

The main goal of this thesis is to investigate all opportunities and strengths of the Economic Value Added concept and after that to elaborate the proposal of the Economic Value Added implementation into the management system of the ABC, a.s. company.

The thesis is divided into theoretical and practical parts.

Within the theoretical part of the thesis the critical literature review of the company's financial performance and business management is presented. Furthermore, the traditional

¹ EVA is a registered trademark of Stern Stewart & Company.

and modern financial performance measurement is compared for demonstration of disadvantages of the traditional financial measurement and advantages of modern performance measures. The theoretical part includes the detailed theoretical elaboration of the Economic Value Added concept and its application and is concluded by examination of business management tools.

Within the practical part the chosen organization is introduced and financially analyzed. The traditional performance measures and Economic Value Added are computed and their figures are explained. Moreover, the pyramidal breakdown analysis of EVA is introduced and usefulness of this analysis is explained. The appropriate steps related to the EVA implementation are fulfilled, and the contribution of the EVA concept to the company is described.

OBJECTIVES AND METHODS OF MASTER THESIS PROCESSING

The main objective of this thesis is to propose the implementation of EVA into the Selected Company and elaborate the EVA based management compensation schemes and all the required steps of EVA implementation into the firm. The sub-objectives are execution of financial analysis based on the traditional and modern performance measures and explanation of their results, carrying out the pyramidal breakdown of EVA analysis and the assessment of the current management and measurement systems in the Selected Company. The last sub-objective is to prepare the critical literature review concerning to all the practical part's activities.

Research questions:

1. What are the disadvantages of use of the traditional performance measurement methods?
2. What are the advantages of implementation of EVA concept?
3. What is the best way of implementation of EVA concept?
4. How should management compensation scheme be adjusted to promote implementation of EVA concept?

Methodological approach:

The author uses available literature sources, such as books, articles and the information from the official resources in order to complete the literature review. The current situation and trends in the automotive industry of the Czech Republic are explained by the use of the secondary data and surveys provided by organizations with reputation. The quantitative data is applied for the performance analysis of the Selected Company operating in Czech automotive industry. In the scope of this thesis, the author uses the following research methods – synthesis, analysis, deduction, induction, and mathematical methods.

THEORETICAL PART

1 FINANCIAL PERFORMANCE OF A COMPANY

No matter if it is a start-up or already a long-term operating company, a financial manager has to answer the following questions in some form or another:

1. Where will a financial manager get the long-term financing to pay for an investment? Will the manager bring in other owners or will he or she borrow the money?
2. How will the manager manage the everyday financial activities such as collecting from customers and paying to suppliers?

Undoubtedly, answering those questions is important for running a business on a day-to-day basis. However, they are not the main goals that a financial manager should pursue working in a company. The financial management aim is to maximize the current value per share of the existing stock (Ross et al., 2016). Despite that we regularly see that senior executives are too often paid to worry about different things other than creating value (Young, O'Byrne, 2001). This phenomenon can be explained in the words of two different authors who look at that problem from the opposite points of view:

“A striking feature of large companies is that the shareholders are generally not directly involved in decision making processes of those companies, particularly on a day-to-day basis. Instead, the corporation employs managers to represent the owners' interests and make decisions on their behalf” (Ross et al., 2016, p.2).

“When managers don't own the companies they manage, or own only a small percentage of the outstanding shares, it's hardly surprising if value creation is not their top priority, because the value they may create belongs to others” (Young, O'Byrne, 2001, p.4).

According to Ross et al. (2016), relying only on Value-Based management does not bring the desirable value creation results. Because the total value of the stock in a company is primarily equal to the value of the stockholder's equity and owners are those who get paid only when employees, suppliers and creditors are paid and satisfied, there is a vicious circle in which if any of those stakeholders goes unpaid, the owners get nothing. That brings us to the very important conclusion from the value creation strategy: if the shareholders are winning in the sense that the leftover, residual portion is growing, it has to be true that the other stakeholders are winning, too. This evidence suggests that organizations deliver value to their shareholders only when they deliver value to their other constituencies (Young, O'Byrne, 2001).

Young and O'Byrne also provide the example of the philosophical approach of Coca-Cola managers, which states that "Coca-Cola provides value to everyone who touches it". In contradiction to that other authors claim that the company should prefer stockholder's value creation because owners comprise the main group of stakeholders who bear the highest level of risk (Neumaierova, Neumaier, 2002).

To a varying degree, all authors are right. If customers or suppliers are not paid well, they will leave the business and the company's value will decrease. However, if the owners are not satisfied, they also will leave the business and that is the worst scenario because a company will cease to exist. A financial manager should take both factors in consideration and, in order to do that successfully, he or she needs sophisticated performance measurement and incentive compensation systems that will protect all stakeholders from the managerial behavior that can destroy the shareholder's value, even if wealth creation is proclaimed as the organization's primary mission.

The following chapter will present the traditional and modern performance measurement that is widely used by organizations all over the world and protects owners from bad managerial decisions influencing the value creation strategy. The measurement chapter will end with the introduction of the Economic Value added concept (EVA), the implementation of which into an organization management system will show the alternative and modern way of creating the shareholder's value.

2 PERFORMANCE MEASUREMENT

Making the value creation strategy the main corporate goal is just the beginning. Corporate executives must also have an ability to measure their progress in fulfilling it. Determining the appropriate measurement criteria that will be utilized and establishing guidelines for interpreting the results is important in the first stages of designing and implementing the concept of Economic Value Added (Young, O'Byrne, 2001). Undertaking that step, the measures can be connected to management compensation in the interest of uniting the aims of managers and stockholders.

2.1 Traditional financial measures

Hawkins (2010) suggests that financial statement analysis embraces the use of elementary mathematical tools, an understanding of accounting and an appreciation of an organization's strategy to gain insights into the reporting organization's history, current position and future prospects through an examination of the company's financial statement.

Ratios often permit a financial analyst or a decision maker to piece together a story about where a company has come from, its possible future and its current condition (Bruns, 2004). However, although Simko and Allen (2016) claim that there is no fixed set of such measures and individual financial analysts simply count on their own personal group of assessment technics, there is a core set used by most of the financial community.

2.1.1 Common size financial statements

According to Bruns (2004), many analysts like to prepare common size financial statements in the percentage format. Such statements facilitate the comparison of organizations, for example, of different sizes or over time.

Although organizations can be in the same industry, they may be substantially different in size, and common size financial statements permit a financial analyst to focus on the efficiency with which managers of different companies have created a capital structure and have achieved efficient operations.

2.1.2 Profitability ratios

Mimick (2016) explains that profitability ratios are applied to evaluate the operating efficiency and overall financial performance of a company. Financial analysts look at

profits in two ways: firstly, as a percentage of net sales; secondly, as a return on the capital invested in the company (Hawkins, 2010).

a) Return on Investments (ROI)

An acceptable return on invested capital compensates investors for the use of their investment and for the riskiness of their invested funds (Mimick, 2016). This measure specifies how well managers have managed the permanent investments at their disposal (Hawkins, 2010).

$$ROI = \frac{\text{Earnings before-or after-tax basis}}{\text{Invested capital}} \quad (1)$$

b) Return on Assets (ROA)

This measure is very useful because of the effectiveness of resource utilization with no concern as to how those resources have been gained and financed (Mimick, 2016).

$$ROA = \frac{\text{Income}}{\text{Assets}} \quad (2)$$

c) Return on Equity (ROE)

According to Hawkins (2010), companies are able to generate high ROEs for their stockholders if they are in a superior industry, if they make riskier investments and therefore must provide investors with more spectacular return, or if they are able to realize their strategy more effectively than their rivals.

$$ROE = \frac{\text{Net Income}}{\text{Book Value of Shareholder's Equity}} \quad (3)$$

ROE Drivers:

Understanding the interrelationship between ratios helps managers to think about the strategies that they use in order to achieve the overall objective of increasing return to stockholders (Hovert, 2013).

$$\frac{\text{Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Owners' Equity}} = \text{Return on Owner's Equity} \quad (4)$$

2.1.3 Leverage ratios

While there are lots of elements to financial strategy, a key element is the utilization of debt or financial leverage (Hevert, 2013). The shareholders of a company having a high debt are privileged as the profits gained after payment of interest accrue to a smaller group

of owners (Simko and Allen, 2016). However, if an organization is highly levered, risk grows when profits and cash flow fall.

a) Total Debt Ratio

$$\text{Total Debt Ratio} = \frac{\text{Total debt}}{\text{Total Assets}} \quad (5)$$

b) Debt–Equity Ratio

Instead of yielding a percentage, this ratio describes how huge the company’s liabilities are relative to the company’s total equity (Mimick, 2016).

$$\text{Debt to Equity} = \frac{\text{Total liabilities}}{\text{Shareholders' Equity}} \quad (6)$$

2.1.4 Market value measures

a) Earnings Per Share (EPS)

Hawkins (2010) suggests that the EPS ratio represents a portion of an organization’s profit allocated to each outstanding share of common stock.

$$\text{EPS} = \frac{(\text{Net income} - \text{Preferred stock dividends})}{\text{Average number of common shares outstanding}} \quad (7)$$

This earnings-per-share figure is known as “basic earnings per share”.

b) Price-Earnings Ratio (P/E)

Since the capital market is sensitive to anticipated earnings-per-share estimates, the price-earnings ratio is frequently quoted using the organization’s earnings-per-share value expected next year (Hawkins, 2010).

$$P/E \text{ ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}} \quad (8)$$

2.1.5 Free Cash Flow (FCF)

According to Young and O’Byrne (2001), Free Cash Flow can be viewed as the portion of cash flow left over from the organization’s operating activities after expected investments have been made. Free cash flow plays a very important role in running a business. It represents a source of money that can be utilized to reduce a debt, make acquisition, create a new product, pay dividends and buy back shares. It is the key indicator to increase shareholder’s value. However, it is not always bad to have negative FCF. An example can be a large investment that caused a negative FCF value but earns a spectacular return.

The free cash flow for any period can be computed as follows:

EBITDA

– Depreciation and amortization

– Taxes

= Net Operating Profit After Tax (NOPAT)

+ Depreciation and amortization

– Capital expenditures

– Changes in the Working Capital Requirement (WCR)

= **Free Cash Flow**

Source: Young, O'Byrne, 2001.

2.1.6 Limitations of traditional performance measures

A company's wealth and the growth of its value over a particular time span are defined by the changes in expectations in relation to the increase of the company's cash flow and by changes in the company's risk, which leads to alterations in the discount rate. Traditional measures are based only on accounting figures and they only reflect the company's history and current situation. Therefore, traditional measures should be used only together with other ones, not by themselves. According to Bhattacharyya and Phani (2004), the measures that are based on accounting figures and earnings after taxes do not encompass the level of risk, inflation and the value of money over the time.

2.2 Modern performance measurement

Organizations create value for their stockholders when their managers invest in projects, strategies, technologies, or products that are expected to earn returns higher than the cost of capital. In other words, managers must invest into positive NPV projects. Accepting that managers are in need of not only the past accounting performance measures but also of tools for future expectations means using those methods as they take into account the influence of time, level of risk and the cost of capital.

2.2.1 Discounted Cash Flow

In contrast to the Free Cash Flow, the Discounted Cash Flow incorporates three crucial factors significant for value creation: the timing, the magnitude, and the degree of uncertainty of the future cash flows. The timing and degree of uncertainty terms are quite clear for a reader. By magnitude we imply that, all things being equal, the higher the cash

flow, the better. It means a firm prefers a greater cash flow rather than a smaller one. This measure is often used by investors aiming to calculate the Net Present Value or the Internal Rate of Return of their investments. This measure is presented by the formula and the graph:

$$DCF = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t} \quad (9)$$

Young and O'Byrne (2001) continued that the value of a company, like the value of a capital project, is a function of how abundant future free cash flows are expected to be. And those future free cash flows must be discounted from the opportunity cost of capital.

2.2.2 Market Value Added (MVA)

This value-based measure has been designed to help managers to see their performance in connection with their goal of creating value for their stockholders. In other words, this metric measures the value created or destroyed by managers:

$$MVA = \text{Market Value of a company} - \text{Invested capital} \quad (10)$$

The idea is to link performance measurement techniques with the Free Cash Flow model of valuation, that is, to allow the capital markets evaluate a firm and its corporate managers. If capital market expectations of future free cash flows, discounted from the cost of capital, surpass the invested capital, a company creates value (MVA is positive). The greater the MVA, the better. And in order to do it successfully, a firm must invest only into those projects, rates of return of which are higher than the company's cost of capital. Otherwise, the MVA will be unchanged or even negative, which means that a company will not create wealth or even will destroy it (Sichigea, Vasilescu, 2015).

2.2.3 Excess Return

According to Young and O'Byrne (2001), this measure charges an organization for the funds it has utilized either since it was established or at least from the start of a measuring period, whereas crediting organizations for the returns their stockholders should have obtained from distributions, such as reinvested in the market share buybacks and dividends. The measure can be computed as follows:

$$\text{Excess return}_N = \text{Actual wealth}_N - \text{Expected wealth}_N \quad (11)$$

Excess return represents the true measure of an organization's cumulative wealth creation.

2.2.4 Cash Value Added (CVA)

Bhattacharyya and Phani (2004) claim that the CVA represents the NPV model that classifies investments as strategic and non-strategic ones. A strategic investment creates new value while a non-strategic one maintains already created value with strategic investments. CVA can be computed as follows:

Sales
– Costs
= Operating Surplus
+/- Changes in Working Capital
– Non-strategic investments
= Operating Cash Flow
– Operating Cash Flow Demand
= Cash Value Added

Source: Bhattacharyya, Phani, 2004.

The Operating Cash Flow Demand is computed from every strategic investment made by a company that is discounted at an appropriate discount rate. The Operating Cash Flow represents the cash flow before strategic investments, which have to cover the Operating Cash Flow Demand. The measure provides the investors with the understanding of a firm's ability to make cash from one time period to another.

2.2.5 Economic Value Added (EVA)

This is a measure of a firm's financial performance based on the residual value computed by subtracting the firm's capital cost from its operating profit, adjusted for taxes on a cash basis. It is also viewed as an economic profit measure because it reflects the true economic profit of an organization. It is calculated as follows:

$$EVA = NOPAT - Invested\ capital \times WACC \quad (12)$$

Generally, EVA is used to assess how well a company creates value from the capital invested into it. If the EVA is positive, it implies that a company creates value for its stockholders. If not, it destroys their value (Young, O'Byrne, 2001).

2.2.6 Cash Flow Return on Investments (CFROI)

Damodaran (2002) claims that the CFROI is an internal rate of return on an existing investment based on the real cash flows. Firstly, the CFROI has to be compared with the

inflation-based cost of capital. If it is higher, the investment will bring value for the firm's stockholders. There are four necessary inputs:

1. The gross investment of the firm;
2. The gross cash flow gained on the assets in the current year;
3. The expected life of the assets;
4. The expected salvage wealth of the assets at the end of the assumed life.

This measure is an inflation adjusted and eliminates the impact of accrual accounting.

2.2.7 Advantages of modern performance measurement

The criticism of the traditional performance metrics arises especially from the distinctions between accounting methods and economic framework of an organization's performance. The modern performance measurement is closely connected to the stockholder's wealth, respect future trends, the value of money over the time, and the level of risk. The modern measurement eliminates the impact of accrual accounting and links together the value creation and a management compensation system, which stimulates managers to be responsible for their decisions.

2.2.8 Conclusion

Based on the existing and analyzed performance measurement, it was decided to focus on the Economic Value Added concept because that measure can be used to track economic profit of a company and assess how well a company creates value for its owners. Moreover, this measure can be incorporated into a management compensation system and successfully motivates managers to make the right decisions, which will increase the owner's value.

2.3 The concept of Economic Value Added (EVA)

Nowadays, EVA is one of the modern performance measures, which was revolutionary launched by Stern Stewart & Co. in 1982. Several authors proposed several explanations related to the Economic Value Added, such as that EVA is based on the notion of economic profit (also known as residual income), which states that value is created only when an organization covers all operating expenses and the cost of capital (Young, O'Byrne, 2001). Other scholars suggest that EVA aims to measure an organization's ability to make profits in excess of the cost of the capital employed to generate those profits (Desai, Ferri, 2006). In other words, the idea is that a firm is not able to create true profit until it has covered all its costs including the cost of capital and opportunity costs. Simpler put, when an organization earns more than its total costs are (both tangible and intangible ones), it creates economic profit (true profit). Only economic profits determine the true performance and generate actual wealth for an organization and its stockholders (Phillips, 2007).

The traditional accounting information system does not provide the opportunity to calculate the true EVA, that is why Economic Value Added is considered to be a modern management philosophy, the goal of which is focused on creating value for shareholders.

2.3.1 Measuring of Economic Value Added

According to Young and O'Byrne (2001), EVA is computed as the difference between after-tax operating profits and the cost of capital invested by both debt and equity holders:

$$EVA = NOPAT - (Cost\ of\ capital \times Capital) \quad (12)$$

where:

NOPAT – Net Operating Profit After Taxes

Cost of Capital – Weighted average of the after-tax cost of debt and cost of equity (WACC)

Capital – Capital invested by debt and equity holders (NOA)

NOPAT measures true company's operating profit. It is simply a fully taxed version of operating profits (EBIT). However, interest payments are not deducted prior to calculating NOPAT. The after-tax cost of debt incorporates the cost of debt financing and the value of

the resulting interest-tax shields. In order to compute NOPAT the financing costs must be excluded and specific revenues and expenses have to be adjusted.

Capital employed (NOA) is the amount of capital that can be computed in two equivalent ways. The first method uses the right side of the balance sheet and determines the invested capital as the sum of the owner's equity and any interest-bearing debt, such as long-term debt, short-term debt and other long-term liabilities. This approach is usually called the financing approach because it is a direct expression of the net funds that investors have provided to the company. Another method focuses on the left side of the balance sheet and determines the invested capital as the difference between total assets and short-term, non-interest bearing liabilities. The deduction of non-interest bearing debt can be explained through the fact that some creditors do not expect a market return for the capital they commit in financing the assets on the balance sheet. This method is also known as the operating approach.

Cost of capital (WACC) is a measure of composite return expected by all of the company's investors. The certain returns expected by debt and equity holders are estimated with the help of the Capital Asset Pricing Model (CAPM), where the weights of equity and debt have to be based on their market values.

The second way of calculating EVA is:

$$EVA = (RONA - \text{Cost of capital}) \times \text{Capital} \quad (13)$$

RONA is an indicator of the ability to make operating profits regarding the amount of invested capital. Despite the fact that RONA reflects the amount of invested capital used to make operating profits, it does not include the return required by investors providing their funds (i.e., the cost of capital). That is why evaluation and rewarding of a company's management based on RONA is strictly not recommended (Desai, Ferri, 2006).

Simply, the EVA criterion can be computed as follows:

Net sales
– Operating expenses
= Operating profit (or earnings before interest and tax, EBIT)
– Taxes
= Net Operating Profit After Tax (NOPAT)
– Capital charges (Invested capital × Cost of Capital)

= EVA

Source: Young, O'Byrne, 2001.

2.3.1.1 Required accounting adjustments

Because the inputs required to calculate EVA are obtained from the company's financial statements, there are several adjustments that have to be made. The main goal of the adjustments is to address accounting and economic profits. Several authors provide the most significant adjustments:

a) Research and Development adjustment

It is generally accepted that investments in new technologies, research and development, customer's loyalty, and brand names are still investments because they represent "going concern" activities of the organization and in the long run they might be paid off. That is why those investments have to be capitalized as long-term assets. R&D costs have to be added back to NOPAT and normally depreciated within five years (an appropriate general economic life of R&D investments) (Bhattacharyya, Phani, 2004; Weissenrieder, 1997).

b) Operating lease adjustment

Accountants consider an operating lease as a rental expense; therefore, the lease does not come up on a balance sheet. However, from the economic point of view, the lease is a form of debt which an organization utilizes for its operating activities. Having ignored it, the employed capital will be underestimated and so, the Present Value of future lease cash flows discounted by the organization's borrowing rate has to be added back to the invested capital. NOPAT is also underestimated because the lease cash flows have to be identified as an interest cost. Interest costs must be excluded from NOPAT because they are already included in the Cost of capital (WACC). If Interest costs are not excluded from NOPAT, they will be utilized twice in calculation of EVA. The adjustment is made by adding the capitalized value of an operating lease multiplied by its borrowing rate to NOPAT. After that, an operating lease must be normally depreciated over time (Damodaran, 2002; Desai, Ferri, 2006).

c) Goodwill

Bhattacharyya and Phani (2004) suggest that goodwill is the difference between the price paid by an acquiring organization for the acquired firm and the fair market value of the acquired firm's assets. There is positive and negative goodwill. If an organization has

positive goodwill, it has some advantage that might be useful for future profit generation. That is why goodwill should be capitalized as a long-term asset and added back to NOPAT. Then, it has to be normally depreciated within five years.

d) LIFO Reserves

The firm using the LIFO method for inventory costing has to manage the difference between the carrying value of inventories and their present costs. The difference is called LIFO reserves which are reported in notes to the financial statements. LIFO reserves have to be added to inventories and also to NOPAT in order to avoid underestimation of net assets and employed capital (Desai, Ferri, 2006).

e) Deferred Tax

According to Damodaran (2002), deferred tax appears from either temporary differences between accounting value of assets and liabilities and their tax value or timing differences between recognition of gains and losses in financial statements and their recognition in tax calculation. An influence of deferred tax can be avoided by adding it back to the invested capital. If the net deferred tax liability rises, we will add it to NOPAT. If it decreases, we will subtract it.

f) Restructuring reserves, warranties, and bad debts

Several authors claim that some managers use reserves to manipulate profits and as a consequence of such actions, there is an imbalance between the accounting profit and cash flow. It is also proposed that a growth in the reserves has to be added back to NOPAT and any decrease must be subtracted. Reserves have to be added back to the employed capital (Lokanadha, Raghunatha, 2006).

Usually, EVA proponents advice to make a maximum of five to fifteen key adjustments, chosen based on their materiality, ease of communication and incentive effects. Tailoring EVA to a particular industry or organization demands an in-depth understanding of the economics of the specific business. On the other hand, some organizations do not make any adjustments at all, having discovered that they have a little or even no effect on profits.

2.3.2 Calculation of NOA, NOPAT and the Cost of Capital (WACC)

a) Net Operating Profit after Tax (NOPAT)

NOPAT is an organization's true operating profit. In order to compute it the financing costs have to be excluded and particular revenues and expenses have to be adjusted. Adjustment of each asset has to be connected with NOPAT (Bhattacharyya, Phani, 2004). NOPAT adjustments are presented as follows:

Table 1: NOPAT adjustments.

Operating Profit before Tax
+ Deferred Tax;
+ Capitalized Intangible expenses;
+ Research and Development;
+ Leasing and operating leases;
+ LIFO and other reserves;
+ Total amortized Goodwill;
+ Increase in reserves;
+ Cumulative unusual losses;
+ Interests expenses;
+ Expenses related with non-operating assets;
+ Interest expenses related with operating leases;
– Leasing amortization (tax shield on leasing interest expenses);
– Cumulative gains after taxes;
– Decrease in reserves;
– Revenues from non-operating assets;
– Original tax;
+/- Adjusted tax;
= NOPAT (Net Operating Profit after Tax)

Source: Young, O'Byrne, 2001.

b) Net Operating Assets (NOA)

Bhattacharyya and Phani (2004) claim that the employed capital is not determined as the accounting capital when EVA is computed. Roughly, it is an economic accounting value of all capital invested in “going concern” firm's activities or essential net assets of the company with particular accounting adjustments. NOA adjustments are presented as follows:

Table 2: NOA adjustments.

Original balance sheet assets
+ Increase in Deferred Tax;
+ Capitalized Intangibles (marketing expenses, investments in technologies, brand names);
+ Research and Development;
+ Leasing and operating leases;
+ LIFO reserve;
+ Cumulative amortization of Goodwill;
+ Increase in reserves;
+/- Cumulative unusual losses/gains after taxes;
- Non-operating assets;
= NOA (Net Operating Assets)

Source: Young, O'Byrne, 2001.

c) *The Cost of capital (WACC)*

Weighted Average Cost of Capital (WACC) is a cumulative true financing cost of an organization involving an interest, a cost of borrowing, and a cost of stockholder's funds. If an organization covers the cumulative cost of capital, the company creates value for its stockholders. Simply, WACC is a minimum required return a firm must earn at least not to lose the owner's wealth. In other words, it is an opportunity cost of capital the return on which investors can earn from other investments of the same risk (Ross et al., 2016).

$$WACC = \frac{E}{V} \times R_E + \frac{D}{V} \times R_D \times (1 - T_C) \quad (14)$$

where:

R_E – cost of equity;

R_D – cost of debt;

E – market value of the company's equity;

D – market value of the company's debt;

$V (E+D)$ – total market value of the company's financing (equity and debt);

E/V – percentage of financing that is equity;

D/V – percentage of financing that is debt;

T_C – corporate tax rate.

The cost of equity is a rate of return expected by capital providers. There is CAPM that is the most frequent approach to calculate the cost of equity. However, this method allows to

calculate it only for publicly traded companies. This method uses asset Beta – a coefficient of volatility of an organization's share price and represents a market risk. The cost of equity can be calculated as follows:

$$R_E = R_f + \beta(F_M - R_f) \quad (15)$$

The cost of debt is the return the company's creditors require on new borrowings. In other words, it is the interest rate the company must pay on new borrowings. The cost of debt has a tax shield, that is why it has to be corporate tax deducted (Pindyck, Rubinfeld, 2012).

2.3.3 Possible ways to influence EVA

EVA can be increased by manipulations with the following measures:

- Increase RONA with the existing invested capital (NOA);
- Boost NOPAT maintaining the same employed capital (NOA);
- Utilize the capital effectively. It means to invest less funds (NOA) and receive the same RONA;
- Decrease the employed Cost of capital (WACC) maintaining the given requirements for NOA and NOPAT;
- Decrease WACC;
- Accept every new project the return on which is higher than WACC and strictly not to invest in those the return on which is lower than the company's cost of capital (Young, O'Byrne, 2001).

2.3.4 Economic Value Added as a tool for performance measure

According to Savarese (2000), Bhattacharyya and Phani (2004), the EVA concept has the following advantages:

- It is almost a real cash flow of a firm;
- It is a simple tool to compute and understand;
- Economic Value Added gauges financial results and an operating performance, which can be connected to ongoing business activities and decision making;
- It is able to be measured in business time periods;
- It is not difficult to report to the company's management;
- It is connected with stockholder's value creation;
- It provides better correlation to the market value of a company;

- Its implementation into a management compensation system will decrease the disparities coming from various stakeholders' interests towards a common objective and prevent management from the value destruction decision making.

2.3.5 Economic Value Added and Management compensation systems

Desai and Ferri (2006) suggest that the aim of the incentive compensation system is to provide convergence between management and shareholder's interests. Sometimes managers create profits in a short-term time span forgoing stockholder's value over the long run and as a result, the value is destroyed. The Economic Value Added concept and its practical use are also considered as a management control system for performance measurement and incentive compensation. EVA provides better convergence with stockholder's value than any other traditional measures because it takes into account the cost of the company's capital. But it cannot work by itself. It requires incorporation into the incentive compensation system within a long-term time span. Otherwise, the improvement of the current EVA will be performed at the expense of the future EVA and stockholder's wealth. The main idea of the incentive compensation system is to stimulate managers and other employees to work smarter and harder and to reward them for great jobs that boost owner's value (Phillips, 2007; Riceman et al., 2000).

Traditional Non-EVA Bonus Plan

The traditional Non-EVA Bonus Plan is a typical approach among the European companies. A target bonus is provided for achieving profit-based, asset-based, and revenue-based incentive measurements. The most popular gauge is an operating profit, however, there are also several combinations of based measures that different companies adjust for themselves. The idea is that a bonus is paid only when a barrier level of performance is reached. The figure 1 illustrates how a conventional Non-EVA Bonus Plan works.

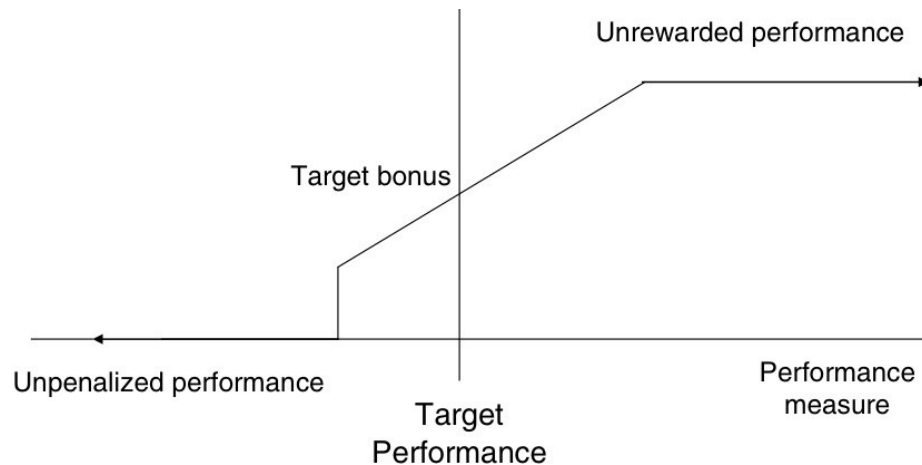


Figure 1: Conventional Non-EVA Bonus Plan.

Source: Young, O'Byrne, 2001.

According to Young and O'Byrne (2001), the plan has the following limitations:

- The performance measure is not connected to the stockholder's wealth creation;
- There is a performance area built by the barrier of the performance and the cap on the bonus repayment that stimulates management to affect performance and does not stimulate managers to work as good as possible;
- A bonus is typically a small percentage of a salary, therefore, management is stimulated not enough. Moreover, the new barrier is based on the performance from the previous year, that is why management has to think about its performance. If they reach an extremely great level of performance this year, they might not be able to reach a new greater level of performance the following year. As logic suggests, managers will mix figures and performance.

EVA Bonus Plan

Riceman et al. (2000) claim that the EVA incentive bonus plan incorporates the goal setting and schedules for EVA improvement. Objectives are generally set in advance for a five-year time span. The EVA incentive system is generally applied to middle and top management, however, recently, several organizations tried to expand the system down to the shop floors.

There are key points essential for this bonus plan:

- An increase of EVA is connected with a bonus increase;
- There are no top or bottom bonus limits;
- The target bonus is incredible;

- There is an established bonus bank;
- There are fixed percentage interests that do not change when the performance is below or even exceeds the expectations;
- Analysis of compensation levels of competitors for the purpose of creating the compensation level for themselves;
- Establishment of expected EVA improvements that have to be compatible with the company's cost of capital return on the market value of stockholder's capital;
- Maintaining the firm's compensation system at the level of the rivals.

Modern EVA Bonus Plan

The modern EVA bonus plan removes the limitations of the previous two bonus systems and represents a comprehensive system of management remuneration. There are three main steps of bonus plan calibration:

1. The expected EVA improvements have to be identified. It means that at least expected improvements have to reach the level of the company's cost of capital return on the market value of stockholder's capitals. It means that the expected investor's return on the market value must be computed. When management reaches this point, the target bonus is received. But when managers overcome even that barrier (outperform the expected improvement), the target bonus rises. However, if they perform less well than expected, they will not receive any bonus.
2. The target bonus is established with the help of the rivals' compensation analysis. It means that management in an organization is rewarded equally with the managers of other competing organizations.
3. Finally, the EVA interval must be calculated. It means that the EVA deficit that causes no returns to stockholders must be computed. The idea is simple: when stockholders gain nothing on their investments (no return), the management receives no bonuses. Firstly, the expected return on the organization's market value has to be defined:

$$\text{Expected return} = \text{Cost of Capital} \times \text{Market Value} \quad (16)$$

Then, the economic profit equivalent is calculated as follows:

$$\text{EVA interval} = \frac{\text{Expected return}}{\left(\frac{1+WACC}{WACC}\right)} \quad (17)$$

The incentive formula of the modern EVA Bonus Plan is computed as follows:

$$\text{Bonus} = \text{Target bonus} + y\%(\Delta\text{EVA} - \text{EVA improvement}) \quad (18)$$

where:

ΔEVA is a real EVA change between current and previous years ($\text{EVA}_1 - \text{EVA}_0$).

The Figure 2 illustrates how the modern EVA Bonus Plan works.

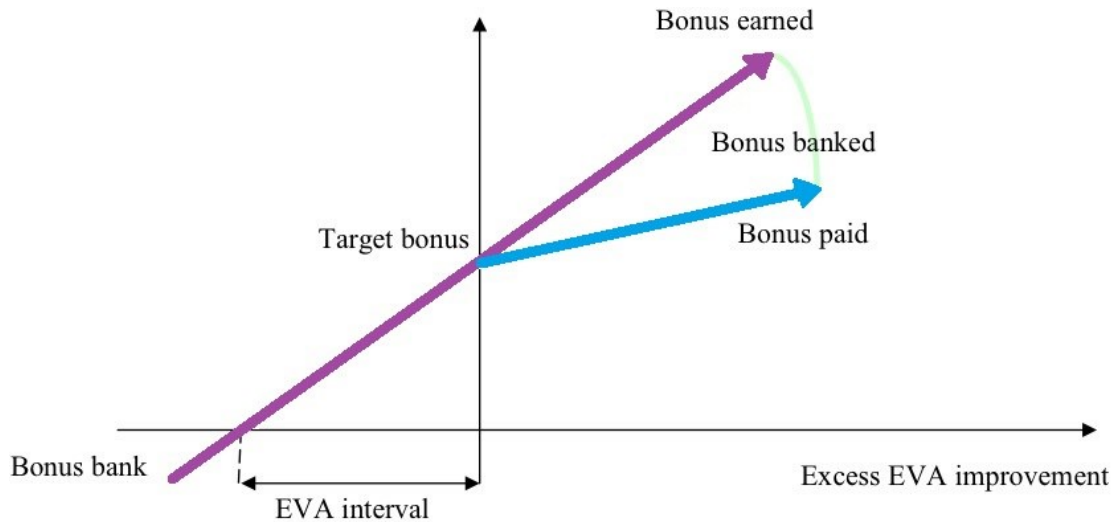


Figure 2: Modern EVA Bonus Plan.

Source: Young, O'Byrne, 2001.

The most valuable feature of the modern EVA Bonus Plan is that it is applicable to any company and even to those with the negative EVA. The target bonus is remuneration for achieving EVA improvement. Here, the EVA excess improvement is zero, so the bonus is credited to the bonus bank.

The bonus bank is an instrument that expands the managers' time horizon. Managers are pushed to take a longer view of the firm's performance. The bonus bank is a deferred compensation and a bonus is not paid back in full but in successive years. There are two variations of the bonus bank.

In the first scenario, $\frac{1}{3}$ of the accessed bonus is held by the bonus bank and $\frac{2}{3}$ are distributed in cash. If EVA diminishes in the subsequent year, the bonus bank is debited by $\frac{1}{3}$ of the remaining funds. In the second scenario (with all in the bank), a full bonus is withheld by the bonus bank and only $\frac{1}{3}$ of the funds might be withdrawn each year. If the bonus bank balance is not positive, there is no bonus paid. The bonus bank diminishes the incentives to do any manipulations with figures, information and decision makings that can improve the current performance. Superior performance should be sustained at a certain level. When not, the bonus is not paid in the subsequent years. The system connects

management remuneration with the future performance and imposes risk on the managers' compensation for a long-term time span (Stern, Shiely, 2000; Phillips, 2007; Riceman et al., 2000).

Incorporation of EVA into Traditional Non-EVA Bonus Plan

Savarese (2000) suggests that for some organizations implementation of the modern EVA bonus plan can be a complicated and long-term process, that is why a EVA-based compensation system can only be incorporated into the traditional Non-EVA bonus plan. There are several modifications that can better connect a management compensation system with stockholder's value.

Firstly, the key utilized accounting measures should be completely replaced by EVA. If there are two or three performance measures of equal weight, EVA should receive the dominant weight. EVA as a key measure indicator will not cause potential conflicts among other financial measures because of different underlying value drivers.

Second, profit-based, revenue-based, and asset-based stimulus measures should not be prioritized because most of them will be captured by EVA dynamically and responsively.

And finally, the economic profit has to be connected with incentive targets. It implies that traditional Non-EVA performance targets are the same as the basis of the economic profit budget. In other words, the value of profit-based, revenue-based, and asset-based incentive measures will be calculated based on the desired value of EVA.

Analysis of the EVA compensation scheme

In his 1997 work Wallence examined 40 companies where the managerial decision making was based on the EVA compensation scheme and 40 organizations with the traditional incentive program. The author concluded that after implementation of the EVA compensation system the EVA income rose and the EVA managerial schemes are more efficient when they are incorporated into the managers' compensation system. Riceman et al. claim that understanding of the EVA managerial and EVA bonus plans is necessary to generate EVA and improve the organization's performance. They continued that the consequences might vary for different parts of the company so the authors proposed that EVA cannot be suitable for all parts of the firm. Unfortunately, the authors also remarked that understanding of EVA bonus schemes usually is not sufficient, however, as far as

managers understand the EVA bonus plan, they outperform others with traditional compensation systems.

Finally, some national and corporate cultures might feel inconvenient with the EVA bonus plan. They might feel under pressure and can channel all the efforts to increase the performance. There was also some evidence that the EVA based compensation plan is not suitable for high cyclical industries because of changeable performance and great risk associated with it (Stern, Shiely, 2000; Young, O'Byrne, 2001; Riceman et al., 2000).

2.3.6 Advantages and limitation of Economic Value Added

First of all, the concept is flexible. It means that the EVA management system can be used either for an entire organization or for its individual divisions, such as plants, product lines, or any stores (Stern, Shiely, 2000).

EVA is an excellent managerial instrument because it is understandable and conceptual. Not only a financial specialist but also a general manager is able to understand EVA. The concept provides a complex performance gauge that has the direct connection to stockholder's value creation and eliminates the impact of accrual accounting. When it is utilized as an incentive instrument, it contributes to the company's value and gives both managers and employees the feeling of being important for the firm's performance (Bhattacharyya, Phani, 2004; Riceman et al., 2000).

Savarese (2000) suggests that the concept provides the company's management with the direct guidelines of how to increase EVA and the organization's performance. There are three alternatives: 1) to increase returns on existing capital; 2) to use capital efficiently; 3) to decrease the cost of capital.

Shil (2009) adds that the concept also reveals the agency problem. The system unites the interests of managers, stockholders and the firm's employees and maintains the optimal capital structure helping firms to be properly levered. A stimulating EVA bonus system can motivate managers to exceed the performance level.

As a weakness, the concept entirely ignores the significance of various business structures. It implies that the managers are all skillful and capable, have everything needed for the decision making. Moreover, EVA has no framework for the strategic questions (Riceman et al., 2000).

Several organizations argue that EVA is only a short-run performance measure. Consequently, it might not be a suitable gauge for long-time investment oriented firms (Shil, 2009).

Riceman et al. (2000) also add that EVA does not provide an instrument for assessment of the synergy coming from the partnership among various business divisions or units. Some authors criticize it for its complexity mainly based on the accounting and not on market values.

And Shil (2009) comments that EVA firms can suffer from the presence of new underappreciated assets in their balance sheets. It can cause the negative EVA even if an organization is profitable in the long run. Moreover, there are doubts about the correct EVA of long-time investments. There are claims that future returns cannot be objectively measured and are estimated only subjectively.

And finally, Economic Value Added is not an appropriate gauge for high cycle industry companies, for startups and organizations operating in emerging markets (Young, O'Byrne, 2001; Stewart, Bennett, III, 2013).

2.3.7 Implementation of Economic Value Added

According to Riceman et al. (2000), the overall EVA concept focuses on changing managerial decision making and managers' attitudes towards increasing the shareholder's value as their main goal. That is why the implementation of EVA should start with the very top of an organization, such as the CEO and executive board. The first part contributes to the overall EVA implementation success the most significantly because if the highest organization officers and executive board do not understand the concept and its contribution or do not feel enthusiastic about EVA and its compensation system, they will not follow the required EVA implementation steps and the whole idea will fail. Managers should understand that creating the stockholder's value is the finality of the whole process and a rising EVA is their first aim. The implementation should be understandable, simple, and accountable (Stern, Shiely, 2001).

According to Young and O'Byrne, there are the following steps of EVA implementation:

“Step 1: Establish buy-in at the board and top management level;

Step 2: Make the major strategic decisions on the EVA program (subject to board approval):

- *How will EVA measurement centers be defined?*
- *How will EVA be calculated?*
 - *What adjustments will be made?*
 - *Divisional versus corporate cost of capital;*
 - *Are changes needed to the company's accounting system?*
 - *How often will EVA be calculated?*
- *Management compensation;*
 - *Who will be covered initially, and will there be a gradual expansion of participation in EVA-based incentives?*
 - *Sensitivity of bonuses to EVA performance;*
 - *Will there be a deferred component, and, if so, for which managers?*
 - *The role of stock options in the compensation program;*
 - *Mix of divisional versus company-wide group or group EVA bonuses;*
 - *Relation to non-financial measures;*

Step 3: *Develop an implementation plan;*

Step 4: *Set up a training program:*

- *Who will need the training?*
- *How will the training sessions be executed?*
 - *Number of training sessions per employee;*
 - *How will the concept be explained;*
 - *Ongoing training after initial implementation."*

2.3.8 Six main factors supporting successful EVA implementation

1. Having viable business strategy and suitable organizational structure. Stern and Shiely (2001) claim that a firm should have a viable business strategy if it wishes to have a successful and effective EVA implemented system. EVA itself can help to rescue an organization strategy or an unprofitable product portfolio. Young and O'Byrne suggest that the organizational structure also plays a very significant role. The authors concluded that the matrix structure is the least desirable for implementation of EVA. For the matrix structure it is complicated to set accountability for the compensation purpose.

2. Comprehensiveness. The complete synergy of an EVA implemented system can be achieved when an organization has all the elements of EVA implemented, such as EVA based measurement and management systems, an EVA based bonus system.
3. Having an EVA based bonus plan. It is essential not only to have it but also to have it implemented into a company as deep as possible.
4. Providing a comprehensive training program. The training program has to be delivered to all levels of employees. EVA should be extended to the Shop Floor.
5. Having the CEO and executive board's support. Implementation of an EVA system and wealth creation should be understood and accepted as a mission of an organization.
6. CFO commitment. The CFO or controller should be incorporated into the implementation process as well. Both the CEO and CFO should support and believe in the mission. In practice, these officers have even greater problem focusing on stockholder's wealth creation than other managers (Stewart, Bennett, III, 2013).

3 BUSINESS MANAGEMENT

According to Kaplan and Norton (1996), in the 21st century, the companies investing in and managing their intellectual assets gain a competitive advantage. Their functional specialization has to be integrated into customer-based business processes and service delivery of standard products or services and mass production must be replaced by responsive, flexible, and high-quality delivery of innovative products or services that can be individualized to targeted consumer segments. Improvement of products or services, innovation, and processes must be created by reskilled employees, advanced information technologies, and aligned business procedures. Only financial measurement and management concepts are not enough for acquiring these new capabilities, so investments into modern concepts of Value-Based management and Strategic management come into the picture.

3.1 Value-based management (VBM)

Traditionally, it is accepted that Value-Based management embraces more than just the Economic Value Added concept. It outlines a specific approach to performance measurement and metrics. VBM is focused on stockholder's wealth creation and urges everyone in the organization to prioritize decisions based on an incremental contribution into the company's shareholder's wealth.

Young and O'Byrne (2001) provide a comprehensive VBM program that should consider each of the following elements:

- Strategic planning;
- Operating budgets;
- Performance measurement;
- Capital allocation;
- Management compensation;
- Internal communication;
- External communication with the capital markets.

There are four key measures used within the Value Based Management framework: Shareholder Value Analysis (SVA), Economic Value Added (EVA), Cash Flow Return on Investments (CFROI), Cash Value Added (CVA).

3.2 Strategic management

Nowadays, companies find themselves operating in an environment that is changing faster than ever before. Analyzing that environment on a regular basis is an important step for a modern corporate manager who participates in creation of a successful business strategy, whether it is for a small organization or a large multinational corporation.

3.2.1 PESTLE analysis

The PESTLE analysis is a framework used to investigate the company's external macro environment that might affect an organization. Techniques for environment scanning were first introduced as a process that investigates the information about events and connections with the firms's external environment, the knowledge of which helps the company's management in its task of charting the organization's future directions. Piskla (1998) comments that the PESTLE framework is an important strategic instrument for evaluation of market growth or decline, business position and potential, and direction for operations. There are six types of questions for elaboration of the analysis:

- What are the main political factors?
- What are the significant economic factors?
- What social factors are the most important?
- What technological development is on the cards?
- What actual and forthcoming legislation might affect the organization?
- What are the current environmental trends and course of action?

The outcome of the PESTLE analysis is an understanding of the overall picture surrounding the organization. The Figure 3 outlines the macro forces of an analyzed company.

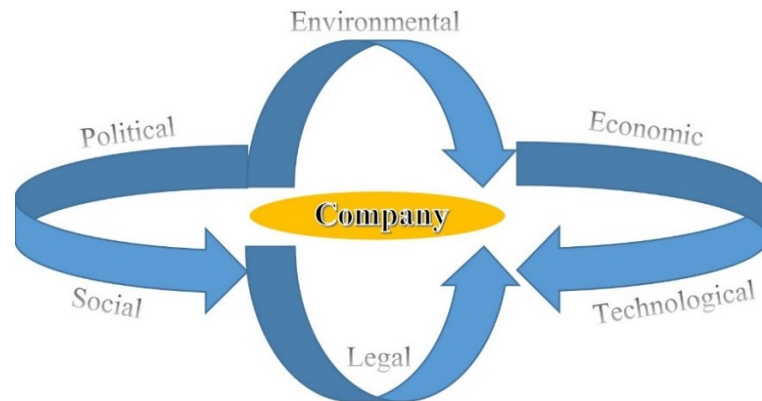


Figure 3: Macro forces.

Source: Author's own elaboration.

3.2.2 SWOT analysis

Analyzing a company using the strengths, weaknesses, opportunities, and threats analysis (SWOT) generates critical insights for decision making processes on major new initiatives. Daemrich (2016) claims that SWOT analysis is a systematic framework, which assists managers in creating their business strategies through evaluating the internal and external characteristics of their organization's performance. Internal factors include leadership talent, human resource capabilities, the company's culture as well as the effectiveness of its policies and procedures. In contrast, external factors incorporate competition, alteration of trends, government legislation, and social expectations. Understanding the approach correctly, a manager can derive an effective strategy for neutralizing the company's threats by minimizing the impact of its weaknesses and take an advantage of the firm's opportunities by using its strengths.

There are four steps for execution of SWOT analysis:

1. "A survey of the firm and its environment;
2. An investigation and evaluation of significant factors;
3. A categorization of major elements;
4. Mapping of findings onto a matrix."

SWOT analysis findings are generally presented in a 2×2 SWOT matrix. Strengths and weaknesses can be changed through managerial action, while opportunities and threats exist in the market independently from the company.

Ideally, an organization should execute a SWOT analysis on a regular basis in order to appraise its position against its rivals in a permanently evolving market environment.

3.2.3 Balanced Scorecard

“The Balanced Scorecard tracks all the important elements of a company’s strategy – from continuous improvement and partnerships to teamwork and global scale. And that allows companies to excel” (Kaplan, Norton, 2005, p.1).

The Balanced Scorecard is a relatively new concept for integrating measures derived from the strategy. The Balanced Scorecard provides the drivers of future financial performance, at the same time embracing traditional financial measures of past performance. The drivers, including learning and growth, internal-business-process and customer’s perspectives, are derived from an explicit and accurate translation of the company’s strategy into tangible goals and measures.

According to Kaplan and Norton (1996), the concept is not only a new measurement system but also a powerful organizing framework for its management processes that can be used to:

- clarify and obtain consensus about strategy;
- communicate a strategy throughout a company;
- align personal and departmental objectives to a strategy;
- link strategic goals to long-term objectives and annual budgets;
- diagnose and align strategic initiatives;
- execute periodic and systematic strategic reviews;
- gain feedback in order to improve a strategy.

A conventional Balanced Scorecard matrix is presented as follows:

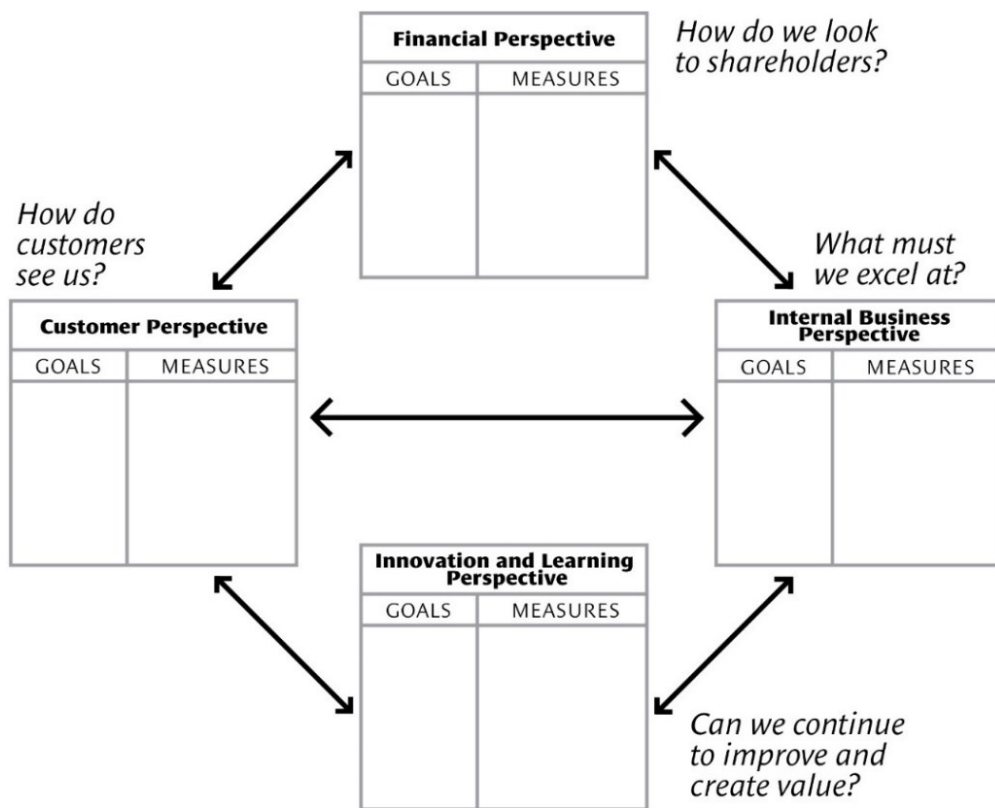


Figure 4: A Conventional Balanced Scorecard matrix.

Source: Kaplan, Norton, 2005.

The Balanced Scorecard provides an important managerial tool for obtaining and using feedback about the strategy. Implemented properly, the Balanced Scorecard becomes the foundation for managing information age organizations (Kaplan, Norton, 2001).

PRACTICAL PART

4 THE INDUSTRY AND THE COMPANY'S PROFILE

4.1 Corporate profile

ABC, a.s. is a strong and fast developing organization with the robust position in the European market. The organization is located in the Czech Republic and operates mainly in the Czech automotive industry. The company keeps three operation facilities, Plant Generator, Plant Karburator and Personal agency Bamper. The company focuses on production of plastic parts and headlights assembly. The production facilities of ABC, a.s. are well-equipped with modern technologies and robots. Within its short-term existence (six years) the firm managed to obtain six certificates and five valuable customers, in two of whom the company can take special pride.

ABC, a.s. has a flat corporate structure, which is appropriate for the EVA implementation. The company has the modern and creative board of directors, who like to try new management approaches, such as the EVA and Balanced Scorecard concepts.

The company has the new two year's strategy of implementing the modern concepts of performance management and measurement and this Master's thesis is going to be part of the overall management project.

4.2 Czech automotive industry

“With passenger car production at 128 vehicles per 1,000 persons, the Czech Republic has maintained its supreme position among world automotive leaders in terms of per-capita output. It is also among the fifteen largest passenger car producers by volume in the world” (CzechInvest, 2018).

Nowadays, the Czech automotive industry provides jobs for more than 150,000 people. It accounts for more than 20 per cent of both Czech exports and Czech manufacturing output. The Czech automotive Center of Excellence plays the main role not only from the European but also from the international prospects. Based on the country's long-term engineering tradition, professional workforce and modern infrastructure, it substantially contributes to automotive manufacturing and R&D activity. For many years the Czech Republic has the resources and capability to successfully accommodate three global car manufacturers, Škoda Auto (Volkswagen group), TPCA (Toyota | Peugeot | Citroen Automotive) and Hyundai Motor Manufacturing Czech and provides interesting business

potential for suppliers. The current goal of the country is to consolidate its position as one of the leading European centers for automotive-related design and R&D activity.

Today, the Czech automotive industry has the following advantages:

- Logistics advantages (the Czech Republic has a strategic location in Central Europe which provides direct access to the whole EU market of 500 million customers);
- Strong supplier base;
- Robust innovation potential for R&D activity;
- Extremely strong integration into the European automotive value chain;
- Highly developed telecommunications infrastructure;
- Skilled workforce and access to university graduates with technical education;
- Attractive business environment; the Czech government provides an investment support covering up to 25 per cent of eligible costs through a transparent system of investment incentives;
- Excellent support from CzechInvest.

Source: CzechInvest, 2018

Czech automotive industry performance and comparison between 2016 and 2017 years are summarized in the following tables 3 and 4:

Table 3: Production, sales, and exports of cars in Czech automotive industry.

The Czech Republic	Since January until November 2017, cars			Since January until November 2018, cars		
	Production	Sales	Export	Production	Sales	Export
Cars (cat. M1) + LCVs (cat. N1)						
ŠKODA AUTO, a.s.	795,903	89,637	709,532	706,011	82,224	627,333
TPCA Czech, s.r.o.	177,744	392	177,352	211,310	419	210,891
HMMC, s.r.o.	333,900	14,542	319,358	334,000	14,334	319,666
ZEBRA Group, s.r.o.	0	0	0	0	0	0
Total, cars	1,307,547	104,571	1,206,242	1,251,321	96,977	1,157,890

Source: AUTOMOTIVE INDUSTRY ASSOCIATION, 2018

Table 4: Production, sales, and exports of vehicles in Czech automotive industry.

The Czech Republic	Since January until November 2017, vehicles			Since January until November 2018, vehicles		
	Production	Sales	Export	Production	Sales	Export
Motor vehicles total	1,314,438	105,572	1,212,518	4.52%	4.9%	4.21%
<i>Of which</i>	<i>Of total</i>			<i>Change in categories</i>		
Cars + LCVs	1,307,547	104,571	1,206,242	56,226	7,594	48,352
share, %	99.48	99.05	99.48	4.49	7.83	4.18
CVs (cat. N2 + M3)	1,354	396	772	214	93	-19
share, %	0.1	0.38	0.06	18.77	30.69	-2.4
Buses (cat. M2 + M3)	4,200	437	4,335	200	-46	574
Motorcycles (cat. L)	1,337	168	1,169	155	89	66
share, %	0.1	0.16	0.1	13.11	112.66	5.98
Total	100%	100%	100%	56,795	7,730	48,973

Source: AUTOMOTIVE INDUSTRY ASSOCIATION, 2018

4.3 History and milestones of ABC, a.s.

The company was established in 2012 and already in several months started the assembly of first headlamps in the Generator division. In autumn of the same year the firm secured cooperation with one of the most valuable customers and established its Recruitment Agency. In 2013 the company decided to increase the production in the Generator division. In winter 2015 ABC started Plastic Injection Moulding and Metal Coating Production in the new Karburator division. And in summer 2016 the company's Recruitment Agency expanded its clients' portfolio by two very important customers.

The company completed its first certification in summer 2014. There was ISO 9001 Certification in the Generator division. In the summer the following year the firm managed to gain both ISO 9001 Certification in the Karburator division and new ISO 14001 Certification of the whole ABC, a.s company. The successful 2016 and 2017 years enriched the company with the last two certificates, ISO/TS 16949 Certification of Karburator Plant and ISO/TS 16949 Certification of Generator Plant. And in spring 2017 the company was proud to be granted Certification of Safe Enterprise.

4.4 Production process

Currently, production process of ABC, a.s. is allocated in two places of the Czech Republic - Plant Generator and Plant Karburator.

4.4.1 Plant Generator

Plant Generator occupies 12,000 square meters and is well-equipped with modern and up-to-date assembly technologies and new robots. There are pre-assembly lines for OEM (Original Equipment Manufacturer) and headlamps assembly for OES (Original Equipment Supplier). Pre-assembly lines for OEM contain both assembly of jigs and single purpose machines and production of working station for assembly lines, whereas headlamps assembly for OES includes both assembly of jigs and single purpose machines and production and assembly of testing fixtures. By March 2018 the company produced 7,700,000 pcs of pre-assembly sets both for OEM and OES and 290,000 pcs of headlamps assembly only for OES. Plant Generator has the following characteristics:

Table 5: Characteristics of Plant Generator.

Plant Generator	2015	2016	2017
Plant's sales, CZK	136,634,000	156,781,000	274,981,000
Percentage of the total company's sales	22	17	29

Source: Author's own elaboration.

The management of the company is satisfied with the performance of the plant and is going to expand its capacity by the concrete year.



Source: Internal company material

4.4.2 Plant Karburator

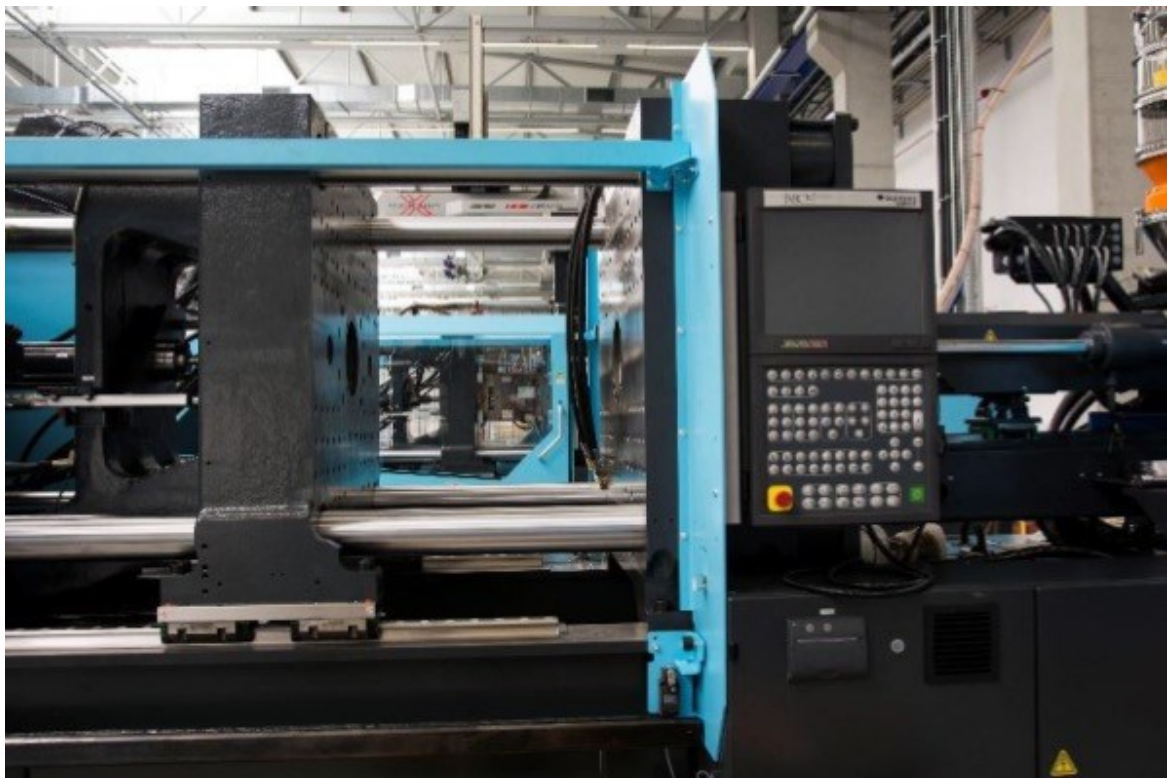
The second and newest plant of ABC, a.s. Plant Karburator is three times bigger than Plant Generator and is located twenty kilometers away from the first plant. The main processes of the plant are injection moulding and vacuum metalizing. The plant is equipped with

fourteen types of machines, thirteen of which are for moulding (26 machines) and the remaining last type is for metallization (4 machines). Overall number of machines is thirty and among them there are nine types of machines (amounting to 22 pieces) that work only with 70 per cent capacity on average. The plant has the following characteristics:

Table 6: Characteristics of Plant Karburator.

Plant Karburator	2015	2016	2017
Plant's sales, CZK	166,126,000	393,123,000	464,898,000
Percentage of the total company's sales	26	43	49

Source: Author's own elaboration.



Source: Internal company material

5 EXTERNAL AND INTERNAL FACTORS INFLUENCING THE COMPANY'S PERFORMANCE

This chapter is focused on elaboration of the external and internal factors influencing the company's performance. External and internal factors are assessed based on PESTLE and SWOT frameworks.

5.1 PESTLE analysis

Political environment

The political environment of the Czech Republic received increased attention not only of the citizens of the country but also of the world community within the last half of the year. The last parliament democratic elections finished with the tremendous collapse of the ruling party ČSSD and complete rearrangement of the parliament itself. The new Prime-minister Andrej Babis, whose political party received the highest number of votes, was appointed by the President of the Czech Republic and given a task to establish the new government. However, many citizens and even some deputies protest against the last parliament democratic elections and Mr. Babis himself. Some citizens and deputies argue that the person who is currently under the trial for inappropriate use of the European grant must not be the head of the parliament. And especially his political opponents remember his unproven connections with the Communist Secret Service of Czechoslovakia. That is why he could not receive sufficient support in the parliament and at the beginning of this year he resigned. Having taken the second chance to establish the new government from the President of the Czech Republic Milos Zeman, Mr. Babis is currently working without support in the parliament. In March 2018 the President of the Czech Republic Milos Zeman was re-elected for the next five year's presidential period.

Currently, the political environment is assessed as unstable.

Legal environment

The Czech government taxes its citizens on their national and foreign income at the same tax rate. A foreigner becomes a Czech tax resident if he or she spends in the Czech Republic a total number of days equal to or greater than 183 days per calendar year. Czech tax non-residents are taxed merely on their income from their Czech job providers. Personal Income Tax is paid by employees and self-employers. A company becomes a Czech tax resident when it registers its office in the country or creates a permanent

establishment, as well as is effectively managed and controlled in the country. The Value Added Tax (VAT) is imposed on vendors of goods and provision of services in the country, goods imported to the Czech Republic or acquired from other EU members in the Czech Republic. Several suppliers are VAT exempt without a right to reclaim input VAT: education, healthcare, insurance and financial services, long-term rent of immovable property. The tax rates are presented in the following table:

Table 7: VAT, Corporate and Personal Income Taxes.

Tax	Corporate tax	Personal income tax	VAT
Tax rate	19%	15%	21%

Source: Author's own elaboration.

Czech Accounting Standards are based on double-entry bookkeeping and hugely consistent with IFRS (International Financial Reporting Standards) with several minor differences, such as leasing or reserves creation approach.

Economic environment

The economic environment of the Czech Republic currently very good. In the first quarter of 2018 the GDP of the Czech Republic reached 5.2 per cent of growth. At the same time the country fights with unemployment trying to provide as many workplaces as possible. Currently, the country can boast one of the lowest rates of unemployment among the other countries of the European Union and in the world. Today, the unemployment rate in the Czech Republic is stable remaining at the level of 3.7 per cent. The current policy of the Czech National Bank strengthens the national currency and we can observe that since 2002 (the year of creating the united European currency, euro) the value of the Czech crown has increased by 27 per cent. At the same time the CNB focuses on decreasing the level of inflation, which in February 2018 decreased to the level of 1.8 per cent (even lower than the ideal level of inflation of 2 per cent). In 2018 the World Economic Forum gave the Czech Republic the 15th place among the advanced economies and assessed its economic development as slowly advancing. Among the Višegrad countries the Czech Republic is marked as the most advanced country whereas others, such as Hungary and Poland, were marked as advancing and slowly advancing emerging economy countries.

As a positive aspect, the country has quite a high level of business confidence. By 26 February 2018 it was 97.5 points. Such a high level of confidence is supported by constructors, retailers, service providers, manufacturers and the overall course of the Czech Republic towards the interconnection with the European Union.

Currently, the economic environment of the Czech Republic is assessed as advancing.

Social environment

As a negative aspect, the country is struggling from the lack of appropriate workforce. It seriously restricts companies and the overall economy in achieving even higher corporate and country economic growth. As a result, wages and salaries are growing and companies are forced to attract new employees by additional bonuses and better working conditions. Partly, the government tries to solve that problem by attracting foreign workforce. The state has provided several programs that include time benefits for issuing low skilled working permissions and short-term low skilled working visas for workers from Ukraine. For foreign graduates of Czech universities, the government automatically working permissions and the same living and working conditions as for the citizens with the possibility to get the permanent residency and later on, the citizenship of the Czech Republic.

In January 2018, the average gross wage increased to 31,646 CZK/Month in the Czech Republic. In March 2018, the real wage growth was estimated at the level of 5.3 per cent yearly. By 1st January 2018, the low skilled wages and the high skilled wages were estimated at gross 15,200 CZK/Month and 34,400 CZK/Month, respectively.

In 2018, the population of the Czech Republic is estimated to be 10,623,431 residents, ranking 87th in the world. The population density of the Czech Republic ranks 84th in the world and is estimated at 134 persons per square kilometer. The country has one of the lowest fertility rates in the world, well below the replacement level, and the population growth today is completely by immigration. In 2018 the population growth of the Czech Republic is estimated at a very small level of 0.07 per cent. Currently, there are 40.4 per cent of men and 43 per cent of women of median age in the country. The adult population in the Czech Republic is estimated to be 8,713,375 residents.

Technological environment

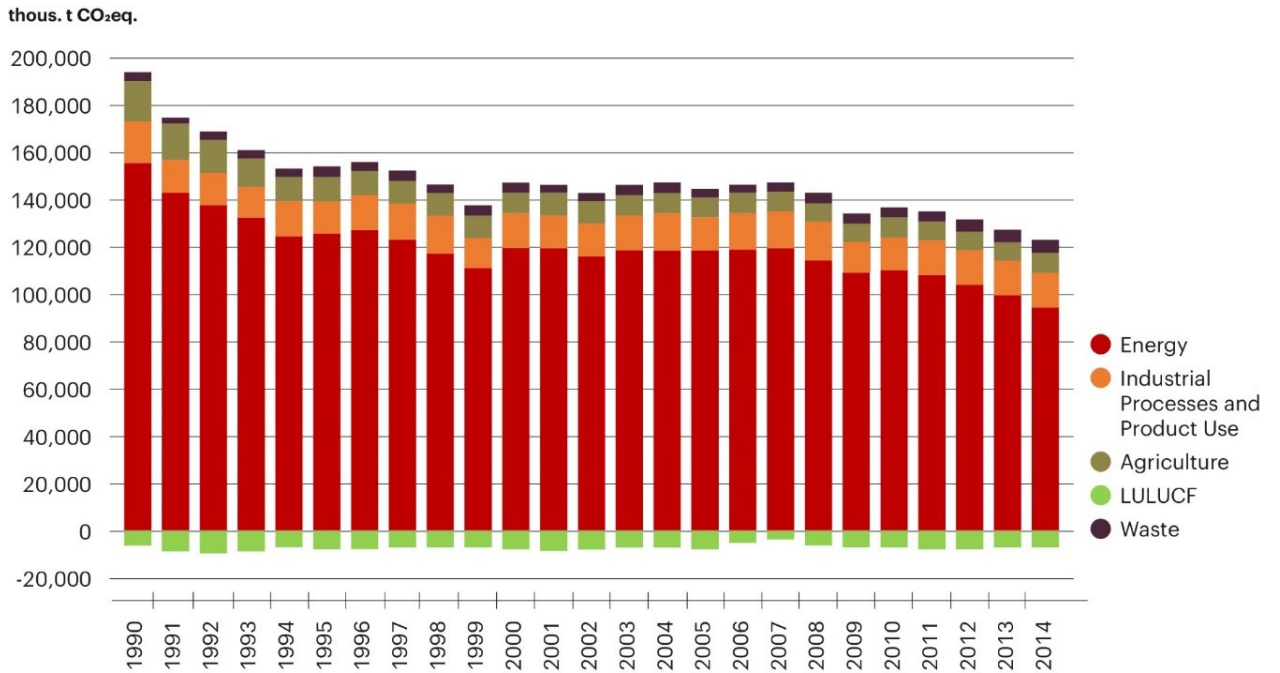
Nowadays, the main technological development in the Czech automotive industry is focused on electric motor cars, decrease of carbon emissions, driverless cars and new more attracting and memorable car designs. The leader of technical innovation and development in the Czech Automotive Industry is undoubtedly ŠKODA AUTO a.s. The company regularly presents its new innovative projects at different Motor Shows, such as in Geneva, Berlin, and Paris. Spectators are able to see their SUV designs, development of the electric

drive, and the company's online progress. The most well-known Czech-Based Technology Centres are MBtech Bohemia, Ricardo Prague, Swell Technology Centre and Varroc Lighting Systems.

Ecological environment

In December 2015, the Czech Republic (as a member of the European Union) accepted the conditions of the new international agreement, the main goal of which is to hold the increase in the global average temperature well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels. In connection to that, the Czech Republic has established the Climate Protection Policy representing the long run strategy of a low-emission development up to 2030 with an outlook up to 2050.

In 2014, the total aggregate greenhouse gas emissions declined by 36.7 per cent in comparison to the baseline year 1990. The most significant share is taken by carbon dioxide that accounted for more than 82 per cent of the overall aggregate greenhouse gas emissions in 2014. Between 1990 and 2014, carbon dioxide emissions declined by more than 35 per cent; methane emissions (11 per cent share of the overall aggregate greenhouse gas emissions in 2014) decreased by more than 27 per cent; nitrous oxide emissions (5 per cent share of the overall aggregate greenhouse gas emissions in 2014) went down by more than 43 per cent; fluorinated gases emissions increased 35 times accounting only for the 2 per cent share of the overall aggregate greenhouse gas emissions in 2014. The emission trends and drop in greenhouse gases since 1990 in the Czech Republic are presented by the following figure 5.



LULUCF – Land Use, Land Use Change and Forestry.

Figure 5: Emission trends and drop in greenhouse gases in the Czech Republic.

Source: Ministry of the Environment of the Czech Republic, 2017.

5.2 SWOT analysis

A SWOT analysis was performed with the help of the company’s materials including its web page and the presentations about each plant and the entire company. The results were discussed with the employees of the company and accepted by its managers. The SWOT matrix is created and presented in the following table 8.

Table 8: SWOT matrix.

SWOT	POSITIVE	NEGATIVE
	Strengths	Weaknesses
Internal factors	1 The highest value certificate;	1 Lack of workforce;
	2 Modern technologies;	2 Low wages;
	3 The profit generating company;	3 High dependence on few customers;
	4 The personal agency;	4 Dependence on few suppliers;
	5 Other certificates;	5 Inefficient performance measurement;
	6 Enough production facilities;	6 Not well-known company;
	7 Good location;	7 Limited range of products;
	8 Flexibility of the management.	8 Lack of experience;
		9 Internet information is only in Czech.
	Opportunities	Threats
External factors	1 An extremely high economic growth of the Czech Republic;	1 Lack of workforce in labor market of the Czech Republic;
	2 Development of global markets;	2 Possibility of significant suppliers and customers leaving;
	3 Open labor market;	3 External pressure to increase wages;
	4 Increasing number of university graduates.	4 Strengthening of the national currency;
		5 Increase in taxes;
		6 The Czech Republic's import duties increase;
		7 Industrial technological development;
		8 Other countries import limitations;
		9 Increase of Inflation.

* Numbers indicate the weight of influence (occur) of a particular factor.

Source: Author's own elaboration.

Strengths

The company obtained its most powerful strength when it received the certificate IATF 16949:2016, which is considered as the highest value certificate and qualitative standard for the Czech automotive industry. This gives a great competitive advantage for ABC, a.s. against its competitors.

The second strength of the firm is that it is fully equipped with modern technologies. The oldest equipment and machines were bought when the firm was established in 2012 and once again, this gives the firm a significant competitive advantage among the other competitors using older technologies and equipment.

The third important strength is that the company is a profit generating organization. And indeed, within the last four years, the financial statements of the company revealed strong yearly basis profit generation that confirms that ABC, a.s. successfully created wealth to its

shareholders. This gives them a good position when dealing with creditors or financial institutions, such as when they decide to expand their production facilities.

The next one is the Bamber personal agency. It provides ABC, a.s. with its services and earns the company an additional revenue providing its services to other companies. The personal agency provides the company with the access to a portfolio of possible workforce as well as prepares future workers for the company's needs. It also fosters the ability of ABC, a.s. to obtain workers from foreign countries that gives the significant advantage in the current situation on the Czech labor market.

The fifth strength of the company is its six additional certificates, which the firm has been granted since 2014. There are two ISO 9001 and two ISO/TS 16949 Certificates for both plants respectively and ISO 14001 Certification for the entire company. And the most recent certificate is called Certification of Safe Enterprise. The more certificates a company has, the stronger brand and stakeholders' trust it is able to obtain. Once again, this gives ABC, a.s. a great competitive advantage against its competitors.

The sixth strength is the fact that the company can benefit from having more than enough production facilities. The firm is completely equipped with modern tools and machines, however, there are still free capacities, which can be used for future product expansion. This gives them a possibility to increase productions that will bring them a higher amount of future profits.

The seventh strength of the company is its great location. The company's plants are located very close to each other and to the headquarters of the firm. Moreover, the company itself is located quite closely to one of the biggest and oldest cities in the Czech Republic. Such a close connection provides lots of benefits for the company and its employees who are able to live in the city and commute to the company to work.

The last strength outlines the flexibility of the company's managers that can be confirmed by their intention to implement new the performance measurement and management concepts. And that also confirms that the management is able to turn the company's weaknesses into the goals for the company.

Weaknesses

The strongest weakness is that the company is currently lacking workforce. This situation can cause a problem in the future as they will not be able to manufacture so many products,

they possibly would not keep the production running. This can be a barrier for the company's future expansion.

The second significant weakness is that the company pays low wages. This situation can even enhance the strongest weakness of the company. The employees can think that they are not fairly paid and eventually leave the company.

The third significant weakness is strong dependence on few customers. That is a risky situation because, probably, those customers know that ABC, a.s. depends hugely on them and can abuse the company in their own favor.

The fourth one is the dependence on few suppliers. That gives ABC's suppliers the same bargaining power as the one that was just explained in the relation to the company's customers.

The fifth weakness is a lack of using the modern performance measures and management tools. The new technics can explicitly improve performance of the managers and the company itself and as a consequence, create more value for the owners.

The sixth weakness is poor brand recognition. The company is relatively new and do not have enough reputation in the Czech automotive industry and outside of it. This represents a competitive disadvantage in the European automotive market where world-renowned brands are already present.

The seventh one is a limited range of products. That means that the company is heavily dependent on the trends for those specific products, for example, assembled headlights. If those trends go badly, the company will have a serious recession and even can go bankrupt.

The eighth weakness is a lack of experience. The experience depends on several things. The most important among them are efficient and effective performance of the company and years of operation. If they are not experienced enough, they can make bad decisions, which will affect the company harmfully or even destroy the wealth of shareholders.

And the last weakness is the absence of the company's internet information in other languages except Czech. That is a strong obstacle for brand recognition in the international market.

Opportunities

The greatest opportunity for ABC, a.s. would be the current extremely high economic growth of the Czech Republic. When the economy is growing, there is always high demand for the new products. Within the last two years there is an observable increase of production, sales and export of new cars in Czech automotive industry. Consequently, the demand for new car parts have grown as well. ABC, a.s. should use this opportunity, expand its business and operate at full capacity.

The second most significant opportunity is observable in strengthening of the company's position in the international market. Currently, it's position is weak. There are several solutions which the company can use in order to utilize this opportunity successfully. First of all, the company does not have its internet information available in English or in any other languages except Czech. That is an aspect that should be fixed because it prevents the company from expansion to the international market and broadening its customer portfolio. Secondly, the company should implement the technique Kaizen which refers to the activities that permanently improve all functions and involve the employees' performance from the top managers and CEO down to the assembly line workers. It is not possible today to operate in the international market producing low quality products which the company produces today. The implementation of the technique should increase the quality of the company's products and contribute into the wage growth of the company's employees. Thirdly, obtaining further certification will also contribute into the strengthening of the company in the international market because the additional certification will bring ABC, a.s. additional trust from the short- and long-term perspectives. Additional certification will create additional attractiveness for the company and it will be appreciated from both the company's customer and supplier's sides. Fourthly, the implementation of modern performance measurement and management has to be made. The company should use all the short- and long-term opportunities to create the shareholder's value and improve its currently used technics. Altogether, they will boost the company's performance and increase the owner's wealth. Fifthly, the company should create the strong brand recognition. The company's strong brand will undoubtedly benefit shareholders and create the best foundations for the company's growth. That is why it is recommended to improve the firm's brand marketing in the short and long run in order to be more secured and successful. It can be done by increasing the company's range of products and establishing a personal employee development school.

The third significant opportunity the company should see in hiring the low and high skilled employees from the less developed countries. Practically, the low skilled workers receive less money in their own developing countries than workers in the Czech Republic earn, therefore, they wish to improve their quality of life. The company can use this situation in order to insure itself out of its probable lack of low skilled workforce. The high skilled employees have higher chances to be successfully integrated into the Czech society, therefore, they are motivated better and consequently, they will try to improve themselves and better benefit the company. Moreover, if the company will pay additional attention to their internal development, it will stimulate their motivation better. Additional knowledge from the company's personal school will contribute into the development of the staff and consequently, increase the quality of the company's products and product range. Motivated and developed staff should be the key competitive advantage for the company and lead it to the future prosperity. And it is also recommended to create some extra benefits for the company's staff in order to stimulate their motivation additionally and attract new potential employees. The firm can increase its employees' bonuses, provide some technical support, such as mobile free operator or employee's children support. The company also can contribute into the vacations of their staff.

The fourth external opportunity is seen in attracting the currently studying university students into the company to work or practice. This activity can benefit both students and the company because it is much more difficult for the university graduates to find a job than for the already work experienced people. And the company will receive fresh high skilled employees and will be more known among university students and teachers.

Threats

A lack of workforce causes a serious concern not only for ABC, a.s. but also for the whole Czech automotive industry and even for all the industries in the country. Because of the lack of workforce the company cannot operate at full capacity and may lose current and potential customers. Moreover, the company uses the Polish workforce whom they are able to pay lower wages. However, the economic growth of Poland is currently great, therefore, sooner or later they will strike for their pay rise or change their place of work.

The second threat comes from the bargaining power of suppliers and customers. They can not only behave in their own interests but also can leave the company completely. In the worst scenario the company will declare bankruptcy. For example, Plant Generator is completely dependent on another XYZ, s.r.o. company which not only supplies all the

necessary materials for the plant's assembly lines but also buys all its finished products. If XYZ, s.r.o. decides to change its stakeholders, Plant Generator will immediately bankrupt. And ABC, a.s. will probably declare bankruptcy.

The third threat follows the first one and forces the companies to increase wages. The lack of workforce will oblige ABC, a.s. to follow the trend in order not to lose its own employees, which eventually will result in lower profits.

The fourth threat can come from the strengthening of the national currency. The stronger the local currency is, the more expensive the national products out of the Czech Republic become. Because the company focuses on entering the international market, the stronger the local currency is, the more expensive the company's products become.

The fifth and sixth threats can come from the state authorities. The new government that must be eventually created can increase taxes and/or raise the import duties. The increase in taxes will negatively affect the profit of ABC, a.s. and the raised import duties can create significant problems for the company as a whole.

The industrial technological development, as the seventh threat, can be a danger for ABC, a.s. because the company invested in the new technologies hugely and if completely new technologies appear on the horizon, the company will be forced to reinvest and lose a lot of money.

The eighth threat can arise from the other countries authorities. If the country such as Germany will increase its import duties in order to promote its own manufacturers and if ABC, a.s. has the customers in that country, the company will face serious problems which will result in lower profits or may even force the company stop to supply its products there.

And the last threat can come from the increase of inflation. Inflation forces prices and wages to grow. If ABC, a.s. has long-term contracts with XYZ, s.r.o and there is an increase of inflation, in the long-term ABC, a.s. will be forced to receive lower profits.

6 FINANCIAL ANALYSIS

Within the financial analysis chapter, the company will be analyzed from financial perspective. Based on horizontal, vertical and ratio analyses the company's financial statements will be analyzed and compared with the recommended norms. In conclusion of the chapter, Index IN05 will be introduced, by the help of which it is possible to conclude if the company was able to create shareholder's value or not.

6.1 Financial Statement analysis

The first part of this chapter is dedicated to the analyses of 2014-2017 balance sheets 2014-2017 income statements of ABC, a.s.

6.1.1 Balance sheet analysis

At the beginning of this subsection the vertical analysis of the company's financial statement is used. The analysis reports each line item of the company's financial statements as a representation of the percentage of total assets or total liabilities and equity.

Within 2014-2017 the company maintains approximately the same share of current and long-term assets on the whole amount of assets, 20/80 in general. In 2014 and 2015 the company had no long-term receivables, which can be explained by the ability of current customers to pay in short time. Within 2016 and 2017 their share grew slightly but still remained low enough. Current receivables, however, decreased. That is a good sign for a company which means that the company's customers started to pay off its current debts faster. On the other hand, it is observable that the percentage of the current financial assets is quite low and even has the tendency not to grow. The explanation is simple. Because the company is quite new it had to invest its current financial assets into the development of its business. The vertical analysis is summarized in the following table 9:

Table 9: 2014-2017 Vertical analysis of balance sheets for ABC, a.s. (in %).

Accounting years	2014	2015	2016	2017
Total Assets	100	100	100	100
Long-term Assets	74	80	80	78
Long-term receivables	0	0	0.09	2.1
Current Assets	22	20	19	22
Current receivables	20	14	12	10
Current financial assets	2	5	3	3
Accruals	4	0.09	0.15	0.14

Total Liabilities and Equity	100	100	100	100
Equity	20	19	30	43
Total Liabilities	78	80	70	57
Long-term liabilities	36	45	32	30
Current liabilities	42	34	37	27
Accounts payable	15	12	11	10
Accruals	1.5	1.2	0.0	0.0

Source: Author's own elaboration.

In the total liabilities and equity part it is clearly observable that the share of equity grew. Because the total value of the stock in a company is primarily equal to the value of the stockholder's equity, the higher the amount of equity the higher the total value of the stock in the organization becomes. Secondly, the total share of liabilities had the tendency to decrease. This is a good sign of a healthy company. Going into details, the decrease is observable in all significantly important liabilities. These figures also tell us that the company not only has a sign of a healthy firm but also is responsible for its debts of any kind and worries about its reputation.

The next table represents the horizontal analysis (trend analysis) according to the financial statements. The figures in the analysis show the percentage change of the company's accounting data. The data for two or more periods are usually used in the horizontal analysis. The trend analysis of the company's financial statements helps the managers to compare the actual changes with the expected ones. If the managers observe the increase of some important indicators lower than it was expected, this situation needs to be investigated.

For the analyzed company it is observable that its total assets strongly increased in 2015 and in 2016 and 2017 had the diminishing trend of growth. Probably the most significant influence had the change of the company's long-term assets which increased with the same trend within the same analyzed years. In 2017 the long-term receivables increased hugely and that means that the last year the company's customers increased their long-term debts to ABC, a.s. by 2,337 per cent. The current assets had also the diminishing trend of growth following by the diminishing growth trends of current receivables and current financial assets. Especially in 2017 current receivables had a negative rate of growth which means that the last year the company managed to decrease its current receivables by 11 per cent. That can be a reason why in 2017 the company's current financial assets increased by 16 per cent.

The liabilities of the analyzed company also had the diminishing trend of growth in 2016 and fell by 13 per cent in 2017. Going inside, it is observable to assess the decreasing trend of growth of current and long-term liabilities. Especially the last year current liabilities decreased by 24 per cent in comparison with 2016. It means that the company decreased its current debts such as accounts payable which in 2017 fell by 12 per cent in comparison with 2016 year. The change of reserves can be presented as the sinusoidal shaped trend. In 2014 the company had no any reserves and in 2015 it created them. In 2016 the company completely finished all its reserves and in 2017 it created almost the same amount of reserves as it was created in 2015. The horizontal analysis is summarized in the following table 10.

Table 10: Horizontal analysis of the 2014-2017 balance sheets of ABC, a.s. (in %).

Accounting years	2015/14	2016/15	2017/16
Total Assets	107	34	6
Long-term Assets	124	34	3
Long-term receivables	0	100	2,337
Current Assets	84	32	21
Current receivables	50	14	-11
Current financial assets	323	-28	16
Total Liabilities and Equity	107	34	6
Equity	94	114	49
Total Liabilities	111	17	-13
Long-term liabilities	161	-5	-1
Current liabilities	67	46	-24
Accounts payable	66	24	-12
Reserves	100	-100	100

Source: Author's own elaboration.

6.1.2 Income statement analysis

The detailed analysis of revenue sources of the company reveals that the firm earned revenue almost completely by selling products and services. In 2016 ABC, a.s. started to sale goods, however, their share in company's revenue is incredibly low. The breakdown of the firm's revenue is presented in the following table:

Table 11: 2014-2017 Vertical revenue analysis for ABC, a.s. (in %).

Accounting years	2014	2015	2016	2017
Sales of products and services	99	98	96	98
Sales of goods	0	0	0.01	0.5
Other revenues	0.9	1.4	3.8	1.7
Financial revenues	0.05	0.01	0.002	0.003

Other financial revenues	0.12	0.28	0.04	0.33
Total revenues	100	100	100	100

Source: Author's own elaboration.

The horizontal company's revenue analysis reveals the diminishing growth trend of the company's total revenue. The most significant impact on it was caused by the diminishing trend of growth of sales of products and services. The sales of goods began in 2016 and hugely increased in 2017 in comparison with 2016 accounting year. Other revenues substantially increased in 2015 and 2016 and fell by 55 per cent in 2017. The financial revenues were in the recession in 2015 and 2016 but showed a sign of growth by 79 per cent in 2017. Other financial revenues had the sinusoidal shaped trend increased hugely in 2014, fell in 2016, and grew by 654 per cent in 2017. The horizontal analysis of the company's revenue change is presented in the following table 12:

Table 12: Horizontal revenue analysis between the 2014-2017 accounting years (in %).

Accounting years	2015/14	2016/15	2017/16
Sales of products and services	150	50	3
Sales of goods	0	100	4,566
Other revenues	275	323	-55
Financial revenues	-73	-41	79
Other financial revenues	499	-75	654
Total revenues	151	54	2

Source: Author's own elaboration.

The vertical costs analysis provides the information about most significant costs for ABC, a.s. In 2014 the highest costs were allocated between consumption of material and energy and personal costs (18/70). Within the analyzed time span the picture has changed. The weight of consumption of material and energy slightly increased while the weight of personal costs went down. In 2017 the relation between them was 36/46. The breakdown of the company's costs is presented in the following table 13:

Table 13: 2014-2017 Vertical analysis of costs for ABC, a.s. (in %).

Accounting years	2014	2015	2016	2017
Cost of sold goods	0	0	0.01	0.5
Material and energy	18	18	25	36
Services	4.4	5.5	6.4	7.5
Change in level of inventory	0	0	-0.26	-1
Personal costs	70	68	59	46
Adjustments to value of assets	1.5	4.8	5.1	6.9
Other costs	0.7	0.6	0.6	1.3
Remaining value of sold assets	0.1	0	0	0

Financial costs	0.3	0.7	0.5	0.5
Other financial costs	1.3	0.4	0.2	0.5
Income taxes	3.3	1.8	2.8	0.5
Total costs	100	100	100	100

Source: Author's own elaboration.

The horizontal analysis of the company's costs revealed the diminishing growth trend of the company's total costs. The most significant impact on it was caused by the diminishing growth trends of material and energy costs, service costs, personal costs and financial costs. Other costs showed the sinusoidal shaped growth trend and adjustments to value of assets presented the diminishing growth trend as well. In 2017 the company decreased its personal costs by 19 per cent and financial costs by 8 per cent. Other financial costs showed the stably developing recession in 2015 and 2016 years and hugely increased by 214 per cent the last year. The income tax expense trend showed the stable growth in 2015 and 2016 years and significantly fell by 81 per cent in 2017. The summary of horizontal costs analysis is presented in the following table 14:

Table 14: Horizontal analysis of costs between the 2014-2017 accounting years (in %).

Accounting years	2015/14	2016/15	2017/16
Cost of sold goods	0	100	4,666
Material and energy	170	105	48
Services	235	71	21
Personal costs	155	29	-19
Adjustments to value of assets	766	56	39
Other costs	137	43	113
Financial costs	563	18	-8
Other financial costs	-18	-32	214
Income taxes	43	130	-81
Total costs	165	48	3

Source: Author's own elaboration.

In conclusion of the income statements analyses, there is a comparison of changes in the company's total revenues and expenses. In 2015 the total revenue grew by 151 per cent while the total expenses increased by 165 per cent. In 2016 the total revenue grew by 54 per cent while the total expenses increased by 48 per cent. In 2017 the total revenue grew by 2 per cent while the total expenses increased by 3 per cent. The company's revenues and expenses evolved proportionally and that is considered as good.

6.2 Financial ratio analysis

This part of the financial analysis of ABC, a.s. presents the ratio analysis, which provides more detailed and concrete examination of selected parts of the company's financial statements. Firstly, the overview of all the selected and calculated ratios is presented in the Table 15 and secondly, each ratio and its particular data for ABC, a.s. are explained in detail.

Table 15: Ratio analysis for ABC, a.s.

Financial ratio	2014	2015	2016	2017
Return on Assets (ROA), %	16	11	20	14
Return on Equity (ROE), %	65	48	53	32
Profit margin (ROS), %	12	7	11	9
Current Ratio, times	0.52	0.58	0.52	0.83
Quick Ratio, times	0.52	0.56	0.4	0.57
Cash Ratio, times	0.06	0.15	0.07	0.11
NWC to total assets, %	-20	-14	-18	-5
Total Debt Ratio, times	0.8	0.81	0.7	0.57
Debt-equity Ratio, times	3.8	4.2	2.3	1.3
Long-term debt ratio, times	0.64	0.7	0.51	0.41
Times Interest Earned (TIE), times	63.5	13.8	27.5	22.8
Cash coverage ratio, times	69	21	37.2	37.6
Assets Utilization Ratio, times	1.1	1.3	1.5	1.5
Inventory turnover, times	474	67	10	9
Days sales in inventory, days	1	5	36	42
Receivables turnover, times	5.6	9.4	12.2	12
Days' sales in receivables, days	65	39	30	31
Payables turnover, times	1.4	2.5	3.9	6.4
Days sales in payables, days	253	149	94	57

Source: Author's own estimation.

Firstly, the Return on Assets fluctuated between 11 and 16 per cent within the examined accounting years. The higher the ROA, the more successful a firm is in converting its investment into profit. In the 2017 accounting year for every euro in its assets ABC, a.s. generated 14 per cents of profit.

When it comes to ROE, the majority of professional investors look for at least 15 per cent. This ratio shows how effectively a company's management uses investors' money. Even having a decreased ROE, it is visible that ABC, a.s. was incredibly financially efficient. In the 2017 accounting year for every euro in its equity the company generated 32 per cents in profit. The fact that ROE exceeds ROA shows that ABC, a.s. used of financial leverage.

A High Profit Margin, or Returns on Sales (ROS), indicates less expense for higher profit. ABC's ROS fluctuated between 7 and 12 per cent within the examined accounting years. It is preferable to have as high ROS as possible. Within the examined years ABC's ROS unfortunately had a general tendency to decline. In the 2017 accounting year the company generated 9 per cents in profit for every euro in sales.

The next ones are Liquidity ratios. The Current ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities, such as debt, payables with its short-term assets, such as cash, inventory and current receivables. Within the first three accounting years the current ratio was almost unchangeable around 0.55 on average, however, in 2017 it increased to 0.83. That is a good sign. To a creditor, particularly a short-term creditor, such as a supplier, the higher Current ratio, the better. It is desirable to have the Current ratio around 2-2.5 per cent. And if it is lower than 1, net working capital is negative. Generally, this is unusual for a healthy company, at least for most types of business. Inventory is relatively illiquid in comparison to cash. That is why relatively large inventories are often a sign of a current trouble. The company can have overestimated sales and overbought or overproduced as a result. In this situation, the company may have a significant portion of its liquidity tied up in slow-moving inventory. Because using cash to buy inventory has no impact on the current ratio, it is recommended to compute the quick ratio as well.

In addition, a very short-term creditor might be interested in the cash ratio, the value of which fluctuates at an incredibly low level within the examined years. That is an extremely bad sign for a company and for a very short-term creditor.

Net working capital (NWC) is usually viewed as the amount of current liquidity a company has, therefore, the ratio of NWC to total assets might be interesting for a particular creditor. For ABC, a.s. this ratio is negative that tells us that currently the company is completely illiquid. However, within the examined years this ratio was increasing and probably, it will be positive already in the 2018 accounting year.

The Total Debt Ratio can be interpreted as the portion of a company's assets that are financed by debt. The higher this ratio, the more leveraged the company is and the greater its financial risks are (higher chance of insolvency, inability to pay its debts). In ABC's case it is notable that for the 2014, 2015 and 2016 accounting years the company used 80%, 81% and 70% of debt capital, respectively. Whether this is high or low or whether it even makes any difference depends on whether the capital structure matters. In the 2017

accounting year the company had \$0.57 in debt for every 1 euro in assets and \$0.43 in equity for every \$0.57 in debt. However, it could be indicated as a positive sign because the value of the Debt-equity Ratio was falling from 4.2 in 2015 accounting year to 1.3 in 2017 one. A high Debt-equity Ratio indicates that a company is heavily dependent on the debt. Particularly it can be proved by comparing with the industry benchmark that accounts for 100% on average.

Frequently, financial analysts are more concerned with a firm's long-term debt than its short-term one because the short-term debt will constantly be changing. And also a firm's accounts payable may reflect its trade practice more than its debt management policy. For ABC, a.s. the long-term debt ratio fell down from a relatively high amount of 70 to 41 per cent during the last three examined accounting periods. That is a good trend that indicates that from the 2015 accounting year ABC, a.s. became less dependent on its long-term debts.

Times Interest Earned (TIE) is another usual measure of long-term solvency and was generally accepted as a ratio that indicates how many times a firm can cover its interest charges on a pre-tax basis. A high ratio can mean that a firm has an undesirable lack of debt or is paying down too much debt from its earnings that could be utilized for other projects. It is also often called the interest coverage ratio. Within the examined years for ABC, a.s. this ratio had a good tendency to fall from a relatively high figure of 63.5 in 2014 to 22.8 in 2017. For example, within the last accounting year the interest bill was covered 22.8 times. This figure is considered acceptable.

A problem with the TIE ratio is that it is based on EBIT, which is not really a gauge of cash available to pay interest. The reason is that depreciation, a noncash expense, has been deducted. This ratio shows the amount of cash in hand that will be paid for the interest expense of the borrower. This is depicted in the form of the ratio between cash and interest and must be greater than 1:1 in order to fulfil entire interest expense. ABC's cash coverage ratios had a tendency to fall from 69 in 2014 to 37.6 times. All of these are very good results.

The next one is the Assets Utilization Ratio. This instrument tells us the amount of sales generated by a company for every dollar's worth of assets. In other words, for every dollar in assets, ABC, a.s. generated 1.47 euro in sales in the 2017 accounting year. The higher this figure is, the better. In general, this ratio had a tendency to grow since the first

examined year, from 1.1 to 1.5 in the 2017 accounting year for ABC, a.s. This amount is accepted as good.

Inventory turnover shows how many times a company's inventory is sold and replaced over a period. In this case, ABC, a.s. sold off or turned over the entire inventory 9 times in the 2017 accounting year. As long as the company is not running out of stock and thereby forgoing sales, the higher this ratio is, the more efficiently the company manages its inventory. This figure outlines the efficient use of inventories, however, the dynamics has a diminishing tendency, therefore, the level of inventories should be taken under attentive control.

If it is known that ABC turned its inventories over 9 times during the last accounting year, it is possible to figure out how long it took them to turn their inventories over on average. The Days sales figure in the inventory tells us that, roughly speaking, the inventory was kept 42 days on average before it was sold. Alternatively, assuming the company had used the most recent inventory and cost figures, it would have taken about 42 days to work off its current inventory.

The next ratio will help us to measure how fast ABC, a.s. collects on the sales. Loosely speaking, the company collected its outstanding credit accounts and reloaned the money 12 times during the last accounting year. This ratio makes more sense if it is converted into Days sales in receivables ratio. It is observable that ABC, a.s. collects on its credit sales in 31 days. For obvious reasons, this ratio is frequently called the average collection period (ACP).

Payables turnover is utilized to quantify the rate at which a firm pays off its suppliers. For ABC, a.s. this ratio was growing within the examined period from 2014 until 2017 accounting year. It indicates that from the 2014 accounting year until now the company paid off its suppliers at a faster rate. In 2017 it was 6.4. It means that the company was paying 6.4 times during the accounting period. Days sales in payables ratio can add that in the 2017 accounting year it took ABC, a.s. 57 days to pay off its suppliers.

6.2.1 The control Altman Z-score

According to Altman framework, a firm with the score above 2.99 is considered healthy. The score 1.81 and higher until 2.99 illustrates the neutral position. And the score below 1.81 reflects the organization's financial problems. The analysis revealed that in the 2014 and 2015 accounting years the company did not have significant financial problems and

the score was increasing. The analysis of the 2016 and 2017 accounting years showed that the company already reached a neutral position. Additionally, within the first three analyzed years the score grew and in 2017 was almost the same as it was in the 2016 accounting year. This can be considered as a good sign for the company's future financial performance. The analysis is presented in the following Table 16:

Table 16: Altman Z- score.

Accounting year	2014	2015	2016	2017
$0.717 \times \text{NWC} / \text{Total Assets}$	-0.145	-0.104	-0.129	-0.033
$0.847 \times \text{EAT} / \text{Total Assets}$	0.111	0.078	0.137	0.116
$3.107 \times \text{EBIT} / \text{Total Assets}$	0.510	0.357	0.624	0.448
$0.420 \times \text{Equity} / \text{Total Assets}$	0.110	0.101	0.184	0.316
$0.998 \times \text{Revenues} / \text{Total Assets}$	1.117	1.356	1.557	1.493
Z-score	1.704	1.788	2.374	2.340

Source: Author's own estimation.

6.2.2 The control index IN05

This measure analyzes a company from the perspective of creating or destroying the owner's value. There are two borders, 0.9 and 1.6. If a company scored lower than 0.9 within the analyzed year, it means that this company was destroying the shareholder's value. If a company scored higher than 1.6 within the analyzed year, it means that this company was creating value for its owners. The score of 0.9–1.6 is called a "grey zone" meaning that a company operates neutrally towards its owner's capital.

For ABC, a.s. all the examined accounting years with an exception of 2015 showed the Index IN05 higher than 1.6, which means that those years ABC, a.s. successfully created value for its stockholders. Only in 2015 the company scored 1.51, which is quite close to 1.6. It means that the company did not have financial problems and probably created some amount of the shareholder's wealth. The analysis is presented in the following Table 17:

Table 17: Index IN05.

Accounting year	2014	2015	2016	2017
$0.13 \times \text{Total Assets} / \text{Total Liabilities}$	0.166	0.163	0.187	0.228
$0.04 \times \text{EBIT} / \text{Interest Paid}$	2.539	0.554	1.099	0.913
$3.97 \times \text{EBIT} / \text{Total Assets}$	0.652	0.456	0.798	0.572
$0.21 \times \text{Revenues} / \text{Total Assets}$	0.235	0.285	0.328	0.314
$0.09 \times \text{Current Ratio}$	0.047	0.052	0.047	0.075
Index IN05	3.64	1.51	2.458	2.102

Source: Author's own estimation.

7 PERFORMANCE MANAGEMENT AND MEASUREMENT OF THE COMPANY

7.1 Management of ABC, a.s.

ABC, a.s. is a relatively new and fast developing company with a stable position on the European automotive market. The organization has a flat corporate structure, which is very appropriate for EVA implementation. The management of the company is very creative and wishes to implement new performance measurement and management approaches. It is also visible that the firm is used to changes and is flexible. The organizational structure of ABC, a.s. looks as follows:

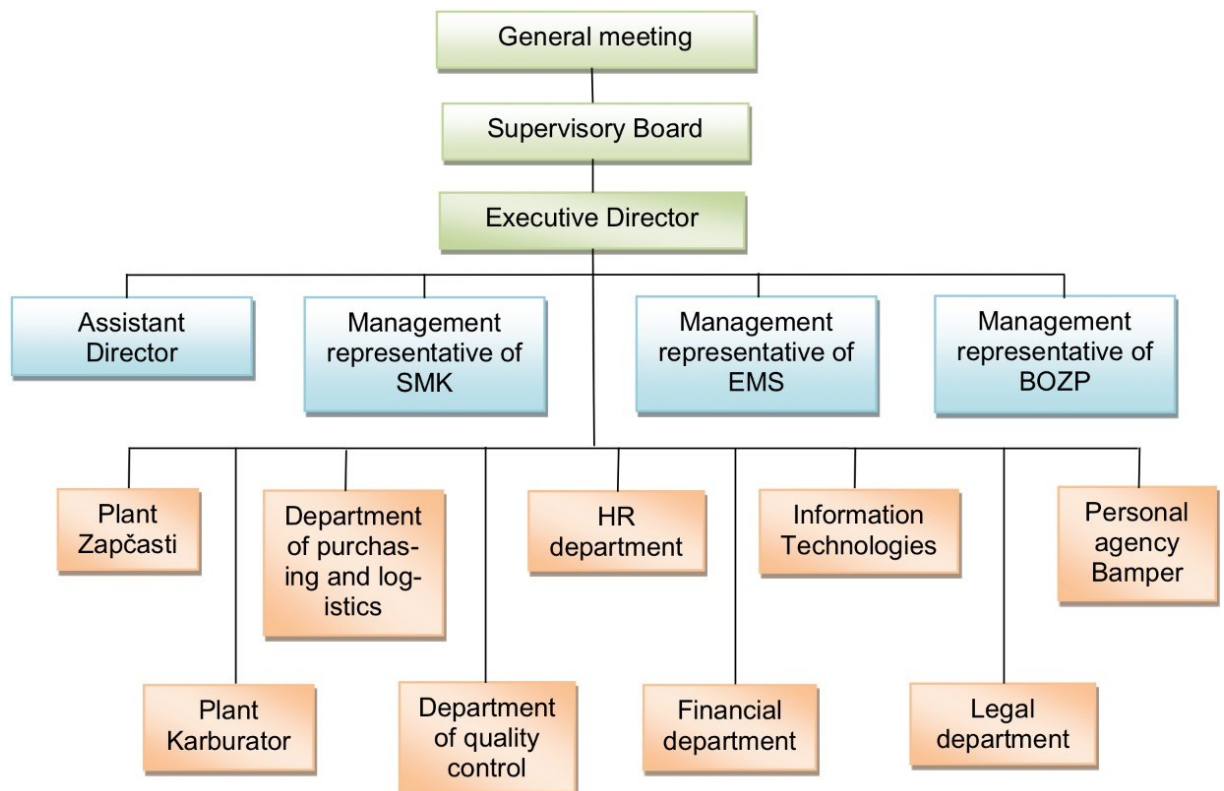


Figure 6: The organizational structure of ABC, a.s.

Source: Author's own elaboration.

The management incentive compensation system is more simplified and based on the particular target sales or EBIT of the particular accounting year. The next year the annual premium is paid if the targets are achieved. If the premium target is not achieved, the top manager's annual premium will be decreased proportionally.

The manager's annual premium is assigned individually for each particular division manager with an exception of the CEO. As of the 2017 accounting year, the management compensation system in ABC, a.s. looked as follows:

Table 18: ABC's management compensation system of the 2017 accounting year.

ABC, a.s.	Target Revenue, ($\times 10^3$) CZK	Annual premium, CZK
Plant Generator manager	279,910	100,000
Plant Karburator manager	463,573	100,000
CFO	201,277	100,000
Quality Control manager	–	100,000
Manager of the Security Section	–	100,000

Source: Author's own estimation.

The company's management consists of 18 managers, 5 top managers and the CEO. The CEO's annual premium is always stable and amounts to 120,000 CZK. The rest of the managers have their salaries (both their standard and variable part) assigned individually for every contract.

7.2 Measurement of ABC, a.s.

The measurement of the company is currently simple. The organization focuses on total sales and EBIT measures. The following table presents the main controlling figures used in 2018:

Table 19: Measurement of ABC, a.s.

ABC, a.s.	2017 historical figures, ($\times 10^3$) CZK	2018 planned measures, ($\times 10^3$) CZK	Expecting change, %
Revenue of Plant Generator	279,910	285,335	2
Revenue of Plant Karburator	463,573	514,134	11
Revenue of Personal Agency	201,277	148,095	-26
EBIT	96,239	106,900	11

Source: Author's own estimation.

It is observable that the company is going to increase the revenues of both Plant Generator and Plant Karburator by 2 and 11 per cent respectively and expects that the revenue of its personal agency will decrease by 26 per cent.

It is desirable for the company to use such performance indicators as earnings after tax, profit margin, return of equity, current and total debt ratios; however, currently the company is lagging behind its desires.

8 CALCULATION OF ECONOMIC VALUE ADDED

In this chapter ABC's EVA will be computed for the analyzed 2014 – 2017 accounting years. In order to do that it is important to consider the required NOA and NOPAT adjustments explained in theoretical part. Furthermore, the required company's WACC will be calculated and incorporated into the Economic Value Added formula.

8.1 Calculation of adjusted NOA

The following Table 20 represents calculation of NOA for ABC, a.s. starting with the company's Total Assets for the analyzed 2014–2017 years:

Table 20: Required NOA adjustments for ABC, a.s. ($\times 10^3$).

Accounting years	2014	2015	2016	2017
Total Assets	227,156	469,790	628,317	667,383
R&D	0	0	0	0
Deferred tax	946	6,500	7,562	4,552
LIFO	0	0	0	0
Goodwill	0	0	0	0
Changes in reserves	0	2,175	-2,175	2,104
Operating leases	0	0	0	0
Non-operating assets	0	0	0	0
NOA	228,102	478,465	633,704	674,039

Source: Author's own estimation.

8.2 Calculation of adjusted NOPAT

The following Table 21 represents calculation of NOPAT for ABC, a.s. starting with the company's EBIT for the analyzed 2014–2017 years:

Table 21: Required NOPAT adjustments for ABC, a.s. ($\times 10^3$).

Accounting year	2014	2015	2016	2017
EBIT	37,323	53,945	126,237	96,239
Leasing adjustments	0	0	0	0
Reserves	0	2,175	-2,175	2,104
EBIT after adjustments	37,323	56,120	124,062	98,343
Original tax	7,424	10,586	24,353	4,552
Tax adjustments	0	413	-413	400
NOPAT	29,899	45,121	100,122	93,391

Source: Author's own estimation.

8.3 Calculation of WACC

According to the theoretical explanation, firstly, the cost of equity should be calculated. The common method of computing the cost of equity, such as CAPM, is not appropriate here because ABC, a.s. is not a publically traded company, therefore the cost of equity will be computed by utilizing CAPM with the alternative asset Beta:

$$\text{Levered Beta} = \text{Unlevered Beta} \times \left(1 + (1 - \text{tax}) \times \frac{\text{Total Liabilities}}{\text{Total Equity}}\right) \quad (19)$$

$$\text{Cost of Equity} = \text{Risk free rate} + (\text{Levered Beta} \times \text{Equity risk premium}) \quad (20)$$

The risk free rate reflects the interest rate of government bonds and treasury bills for each analyzed year. For the following calculations the data of the risk free rate is taken from the ministry of finance of the Czech Republic for each analyzed year. Unlevered asset Beta and equity risk premium are taken from Damodaran's source (<http://pages.stern.nyu.edu/~adamodar/>). The following Table 22 will summarize the calculation.

Table 22: Calculation of Cost of Equity.

Accounting year	2014	2015	2016	2017
Risk free rate, %	1.58	0.58	0.43	0.6
Unlevered beta, times	1.56	1.47	1.23	1.33
Levered beta, times	6.4	6.4	3.5	2.8
Equity risk premium, %	6.8	7.36	6.69	5.89
Cost of equity, %	45.1	48.0	23.9	16.9
Cost of equity of Auto parts in Europe, %	15.02	14.75	12.7	11.93

Source: Author's own estimation.

For the comparison purpose there is the cost of equity of auto parts in Europe taken also from Damodaran's data source. The comparison revealed that within the analyzed years the company's cost of equity was getting closer to the industry estimated measures. That is a good sign for the company.

The company's cost of debt is calculated as a ratio of the interest paid and the sum of short- and long-term loans for each analyzed accounting year. The Table 23 summarized the calculation of the company's WACC.

Table 23: Calculation of WACC

Accounting year	2014	2015	2016	2017
Cost of equity, %	45.1	48.0	23.9	16.9
Cost of debt, %	0.53	1.88	1.89	1.69
WACC, %	9.68	10.5	8.34	8.02
WACC of Auto Parts in Europe, %	12.58	12.57	10.65	10.2

Source: Author's own estimation.

The comparison between the industry's cost of capital and the company's one revealed that within the analyzed years these measures were also getting closer to each other. That is also considered as a good sign for ABC, a.s.

8.4 Calculation of EVA

EVA is computed according to the economic framework explained in the theoretical part of this work. The following Table 24 represents EVA for the 2014–2017 accounting years.

Table 24: Calculation of EVA for the analyzed years.

Accounting year	2014	2015	2016	2017
Adjusted NOA ($\times 10^3$), CZK	228,102	478,465	633,704	674,039
Adjusted NOPAT ($\times 10^3$), CZK	29,899	45,121	100,122	93,391
WACC, %	9.68	10.5	8.34	8.02
EVA, CZK	7,820,677	-5,128,535	47,278,541	39,316,011

Source: Author's own estimation.

It is observable that in 2015 EVA dramatically fell and had great growth in 2016 and 2017 years. Once again, it is concluded that the company did not create value for its owners in 2015 or it did it badly. The fluctuations of EVA follow the results of IN05 Index control. That is a good sign for the analyst and it proves that the company is analyzed objectively.

8.5 Calculation of EVA according to the accounting model

The accounting model used by the Ministry of Industry and Trade of the Czech Republic is calculated for the purpose of comparing both possible ways of calculating EVA:

$$EVA = (ROE - \text{Cost of Equity}) \times \text{Shareholder's equity} \quad (21)$$

The calculations of EVA for the 2014–2017 accounting years are presented in the following Table 25:

Table 25: Calculation of EVA for the analyzed years.

Accounting year	2014	2015	2016	2017
ROE, %	65	48	53	32
Cost of equity, %	45.1	48.0	23.9	16.9
Equity (×10 ³)	46,337	89,696	191,580	286,368
EVA, CZK	9,010,230	313,936	56,192,330	43,290,251

Source: Author’s own estimation.

This method is based on accounting data, so it reflects most of the limitations associated with traditional performance measures. If the economic model EVA adjustments affect NOA and NOPAT insignificantly, this model can be used successfully. For ABC, a.s. the comparison between the economic and accounting models of EVA is reflected in the following graph:

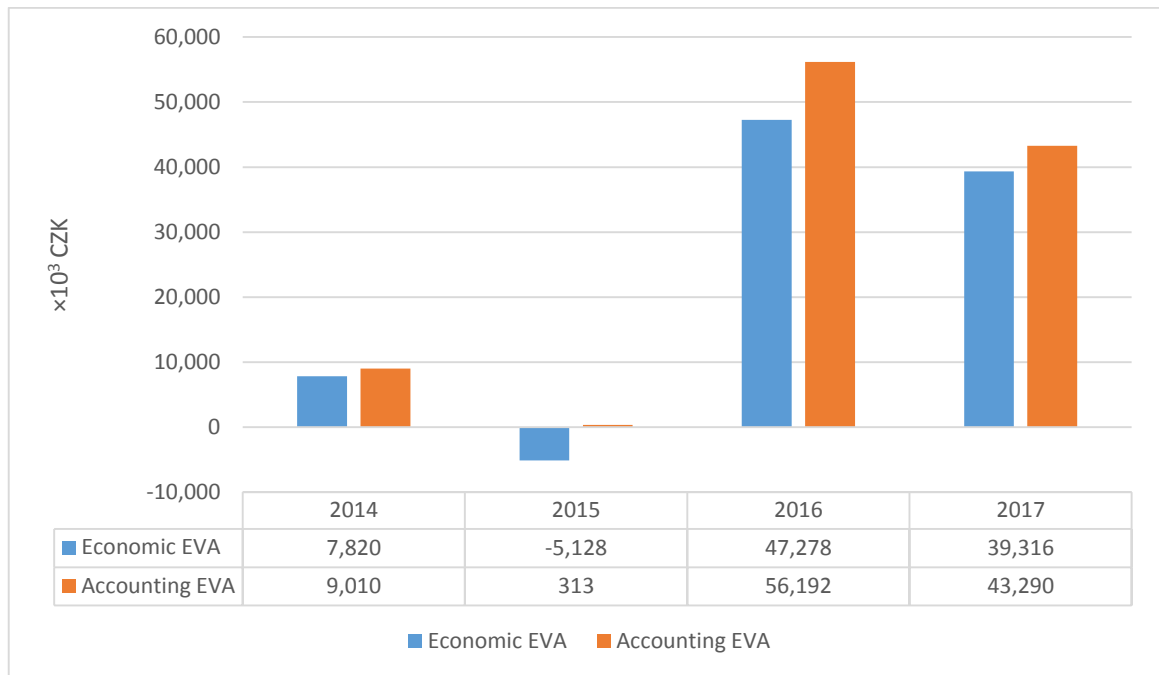


Figure 7: The comparison of economic and accounting models of EVA.

Source: Author’s own estimation.

The graph reflects that the economic model EVA adjustments have the significant effect on EVA. For example, in 2015 the economic EVA is negative and the accounting EVA is positive. On the one hand, the trends of both metrics are relatively correlated and that is good. But on the other hand, the economic model of EVA eliminates the limitations of traditional performance measures, therefore the economic EVA is going to be used in the following proposal of the EVA based compensation system.

9 PYRAMIDAL BREAKDOWN OF EVA ANALYSIS

Pyramidal breakdown of EVA analysis helps to estimate the most significant components of EVA which have the highest influence on its value and allows to track those components which have the negative impact on EVA and undertake some actions in order to eliminate them and influence EVA positively. The pyramidal breakdown analysis of EVA also allows to focus on the most significant value drivers which directly positively influence EVA. The analysis also allows to investigate the change of EVA and determine the factors which caused the most significant influence. The pyramidal breakdown analysis of EVA is presented as follows:

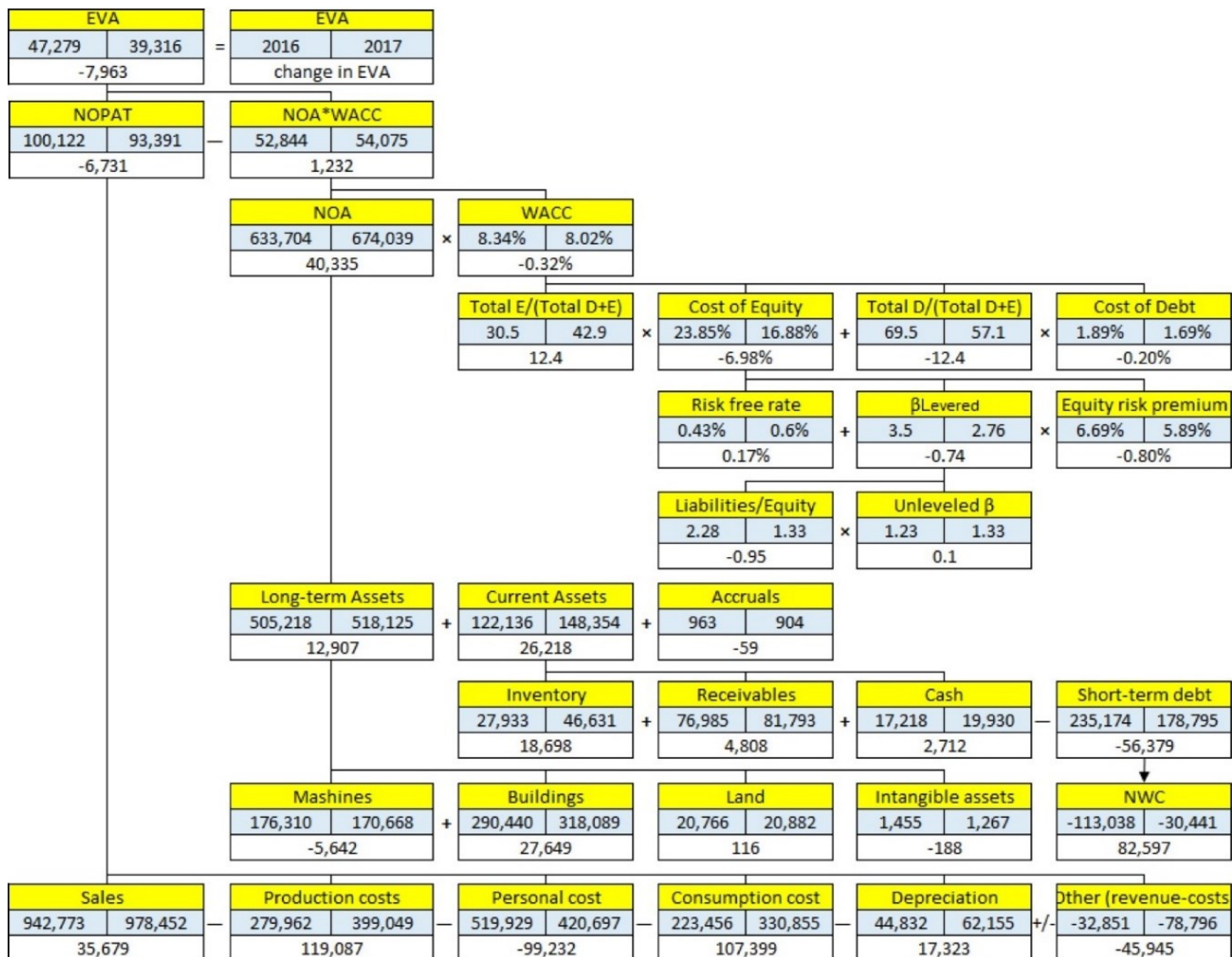


Figure 8: Pyramidal breakdown of EVA analysis for ABC, a.s.
 Source: Author's own estimation.

In the 2017 accounting year there was a decrease of EVA by 7,963,000 CZK. Based on the pyramidal breakdown analysis of EVA it is possible to investigate the reasons for such a significant decrease.

ABC's decrease of EVA in 2017 was caused by the decrease of NOPAT by 6,731,000 CZK and the increase of $\text{NOA} \times \text{WACC}$. Both of those changes influence EVA negatively. The change of NOPAT was caused by significant increase of production and consumption costs even though the personal costs decreased. The biggest reason for the decrease of NOPAT is that sales have not increased in the proportion to the increases of production and consumption costs.

The increase of $\text{NOA} \times \text{WACC}$ was caused by the increase of NOA by 40,335,000 CZK. The increase of NOA was caused by the increase of current assets specifically inventory by 18,698,000 CZK. And the second reason of NOA increase is that there was an increase of Long-term assets specifically buildings.

On the other hand, examination of WACC provides the positive influence on EVA because the change of WACC is negative. Because the multiplication of WACC and NOA is subtracted from NOPAT the negative change of WACC influences EVA positively.

To sum up, there was an increase of inventory and the company's revenue has not increased by the same proportion as the increase of production and consumption costs. It means that the company produced more than it was able to sell. If they had sold everything they would have ended up with higher amount of revenue and no any inventory. If they have sold everything the company would have had positive EVA.

The pyramidal breakdown analysis of EVA revealed the reason for the negative EVA change in the company. It probably was because of the unsold amount of inventory at the end of the year. If EVA had been calculated instead of focusing on traditional accounting figures, the company could have had the positive change of EVA at the beginning of 2018. After the implementation of EVA the company should run the analysis every year and investigate all the changes of EVA and undertake the appropriate actions. In case of an unexpected change of EVA the analysis should be executed immediately.

10 IMPLEMENTATION OF ECONOMIC VALUE ADDED CONCEPT

This part of the work is focused on implementation of EVA into ABC, a.s. The successful implementation process and its duration depend on several key factors, such as the firm's organizational structure, its size and corporate culture primarily inside the management. The following EVA implementation is based on the recommended steps according to Young and O'Byrne's framework.

10.1 Step 1: Establish buy-in at the board and top management level

Firstly, the implementation project team should be created. ABC's project team will include four people, namely the project manager, CFO, economic department manager and an external experienced specialist who has already participated in implementation of EVA at least once. The first and foremost task of the team will be the creation of buy-in at the executive board and the level of management. The implementation must start from the top because, first of all, the CEO and top managers have to understand the concept of EVA and its contribution towards the improvement of the company's financial performance. The key role will be played by the CEO of the company whose task is to drive the understanding of the EVA concept down into the company.

10.2 Step 2: Make the major strategic decisions on the EVA program

Secondly, the appointed team has to integrate EVA into the all processes of their company. EVA has to become a part of operating budgeting, capital allocation and strategic business planning. The strategic business planning should include EVA measurement, EVA calculation and the management compensation plan.

How will EVA measurement centers be defined?

The Economic Value Added measure should be gauged at two levels for the purpose of reflecting all relationships between the influencing factors, at the cost (profit) centers and at the business level as the organizational performance measurement. If a firm also gauges EVA at the existing cost centers, it can simply determine the center that affects the overall EVA negatively and start resolving the issue, for instance, increasing the personal costs or changing the invested capital. It is much simpler to define and read EVA drivers at the cost center level than at the organizational level. The key objective of all EVA measurement centers is to produce and increase the Economic Value Added measure. The financial manager will be in charge of identifying the EVA measurement centers. Based on the

organizational structure, there are seven cost centers, three of which are the main ones – Plant Generator, Plant Karburator and Personal Agency Bamper.

How will EVA be calculated?

In order to compute this measure, it is advised to use the economic and not the accounting model of EVA. The economic model eliminates the influence of accrual accounting and reflects the economic reality better.

- *What adjustments will be made?*

In order to have the simple and understandable calculation of EVA the organization should execute only the most significant adjustments.

There are the following adjustments recommended for Net Operating Assets (NOA):

- Capitalization of current and long-term assets differences in valuation, expenses of the long-time effects, for instance, educational costs, marketing expenses and R&D, financial leasing;
- The deduction of surplus cash and cash equivalents, short- and long-term investments with a portfolio character, long-term assets in progress and other non-operating assets from the scope of NOA.

There are the following adjustments recommended for Net Operating Profit after Tax (NOPAT):

- Subtracting financial expenses, such as leasing interest and interest paid from NOPAT;

(The leasing interest is calculated as multiplication of the value of leasing at the beginning of every analyzed year by the leasing interest rate for the particular year).

- Deduction of revenues and expenses that will not repeat;
- Equity change effects have to be reflected;
- NOPAT has to be tax adjusted.

However, as a first step, it is advised to carry out the particular EVA adjustments that were applied by the author for the 2014–2017 analyzed years. Based on the company's future situation it should decide, which adjustments have to be done every particular year. It is also recommended to use a basic group of adjustments and apply them according to the particular needs and following changes in ABC, a.s.

- *How the cost of capital will be computed?*

Weighted average cost of ABC's capital should be computed by the formula provided in the theoretical part of this work. The formula requires calculation of the cost of firm's equity and the cost of its debt. Based on the current situation, the cost of equity should be computed based on CAPM with an alternative asset Beta. If the company is publically traded one day, the cost of its capital has to be calculated traditionally based on original CAPM. The cost of the firm's debt should be computed as a weighted average of cost of leasing and cost of the firm's loans. The managers know the costs of their loans and in case of having a leasing, the organization should calculate its cost as well, for instance, with the help of the estimation method based on market data.

- *How often will EVA be computed?*

Ideally, the measure should be computed every three months. As a minimum, it can be computed twice a year. If the firm computes the measure every quarter, it is able to track and control the change of its trend easily and to react to it. The drivers of EVA are recommended to compute every month as a part of operating planning. After the implementation ABC, a.s. will calculate EVA four times per year. Later on this scheme can be revised according to the changing needs of the company's managers.

The management compensation scheme

Economic Value Added cannot work by itself. The measure should be integrated into the management compensation system. The primary goal of EVA-based management incentive plan is to push managers to think as stockholders (owners). The EVA bonus has to stimulate them to improve EVA rather than pursuing short-term objectives.

- *Who will be covered initially and will there be a gradual expansion of participation in EVA-based incentives?*

Following the experiences of other organizations, firstly, it is recommended to use the EVA-based compensation system only among the managers. There are five top managers in ABC, a.s. The rest of management should be involved within a year or two.

- *What share of compensation or target is covered by the EVA-based management compensation scheme?*

Taking the current management reward system into account, the updated incentive compensation plan will consist of the following components:

1. The annual bonus that a top manager will earn when the company achieves the target sales or EBIT, is established for each year. If the target is not achieved, the manager will have to decrease the annual bonus proportionally. The annual bonus amounts to 100,000 CZK for every top manager and 120,000 CZK for CEO.

2. The EVA bonus, which depends on the improvement of Economic Value Added.

- ***Correlation of bonuses with the EVA performance and contributions to the bonus bank***

The EVA bonus system will be applied in two stages. At first, it will be rather difficult for the company to gauge the anticipated EVA improvement. If the company sets the bar too high and the manager is unable to deliver the expected performance, that will not contribute to the support of the new concept. To avoid that, in the first stage the EVA bonus will be calculated according to the following formula:

$$\text{EVA bonus} = (x\% \times \text{EVA}) + (y\% \times \Delta \text{EVA}) \quad (22)$$

In the second stage that will start after five years, when the company fully embraces the economic value added, gets used to its calculation and management system and can estimate the anticipated EVA dynamics precisely, it is suggested that the company will abandon the above-mentioned way of EVA bonus calculation and move to the modern EVA bonus system outlined in the theoretical part of this paper. The modern EVA bonus system is a better motivator for managers to improve EVA than its older version.

In both stages the EVA bonus will be placed in the bonus bank and if the current balance of the bank is positive, $\frac{1}{4}$ of it will be paid out to the managers. It means that the year-end EVA bonus of the managers will be calculated as follows:

$$\text{EVA bonus} = \frac{\frac{1}{4} \text{ of the bonus bank balance}}{\text{number of managers}} \quad (23)$$

Accordingly, the basic managerial reward will be calculated as the sum of the following bonuses:

$$\text{Basic managerial reward} = \text{Annual bonus} + \text{EVA bonus} \quad (24)$$

If the EVA is negative, it will be deducted from the current bonus bank balance. If the balance remains positive after the said deduction, even though the EVA figure is negative, the managers will still be given the EVA bonus to stimulate their future performance.

- *Demonstration of managerial compensation system*

Based on the ABC, a.s. current situation in the first stage it two different incentive compensation systems were created for the company's top managers and CEO. Because approximately 50 per cent of the company's top management will probably not be willing to change anything in their simple and stable compensation system, there were elaborated two different EVA-based management compensation systems for ABC, a.s. The board of directors should make the final decision about which system to accept. The advantages and disadvantages of each system are described as follows:

The EVA based management compensation system No. 1

Calculation:

In order to implement the EVA-based management compensation system No. 1, first of all, ABC, a.s. should decrease its annual target bonus to 50,000 CZK to each of its top manager and its annual CEO bonus to 100,000 CZK. Secondly, the company should accept the appropriate coefficients for "x" and "y". Experimentally, "x" was chosen to be 0.15 per cent and "y" should be 0.02 per cent. Later on ABC, a.s. will chose the percentage of "x" and "y" according to its needs and experience. The calculation of the management compensation system No. 1 is presented in the following table 26:

Table 26: Management compensation system No. 1.

Accounting year	2014	2015	2016	2017
Annual top manager's target bonus, CZK	100,000	50,000	50,000	50,000
Annual CEO's bonus, CZK	120,000	100,000	100,000	100,000
Annual EVA, CZK	7,820,677	-5,128,535	47,278,541	39,316,011
$x\% \times \text{EVA}$, CZK	0	0	70,918	58,974
ΔEVA , CZK	0	-12,949,212	52,407,076	-7,962,530
$y\% \times \Delta \text{EVA}$, CZK	0	0	10,481	0
EVA bonus earned, CZK	0	0	81,399	58,974
Top manager's reward, CZK	100,000	50,000	131,399	108,974
CEO reward, CZK	120,000	100,000	181,399	158,974
Total reward according to EVA based system No. 1	220,000	150,000	312,798	267,948
Total reward according to the old compensation system	220,000	220,000	220,000	220,000

Source: Author's own estimation.

In 2014 EVA was computed for the first time for ABC, a.s., therefore it is not possible to compare this measure with the 2013 accounting year's result. That is why the top managers would have received only the annual target bonuses and the CEO would have had only the stable annual bonus that year. In 2015 EVA declined significantly and even became negative. In this case, again the top managers and CEO would have received only the annual target bonuses and the annual CEO bonus respectively. If the annual EVA and the EVA change had been negative the top managers and CEO would have no EVA bonuses. If there had been only a negative change of EVA, the top managers and CEO would not have had any bonuses from that part of the formula that is responsible for the bonuses from the change of EVA.

In 2016 EVA increased magnificently and both EVA and the EVA change were positive and high enough. Therefore, that year was chosen to present the whole process of the top manager's and CEO rewards calculation.

In 2016 the company achieved 47,278,541 CZK of Economic Value Added. The change of EVA is calculated by subtracting this amount of EVA from the amount of EVA of -5,128,535 CZK which was achieved in 2015. Therefore, the change of EVA equals to 52,407,076 CZK. Taken into the account the coefficients of "x" and "y", which are 0.15 and 0.02 per cent respectively and the annual target bonus for the top manager at 50,000 CZK, the top manager's reward is calculated as follows:

$$\text{Top manager's reward} = 50,000 + (0.0015 \times 47,278,541) +$$

$$+(0.0002 \times 52,407,076) = 131,399 \text{ CZK};$$

Taken into account the coefficients of “x” and “y”, which are 0.15 and 0.02 per cent respectively and the annual bonus for CEO as 100,000 CZK, the CEO’s reward is calculated as follows:

$$\begin{aligned} \text{Top manager's reward} &= 100,000 + (0.0015 \times 47,278,541) + \\ &+(0.0002 \times 52,407,076) = 181,399 \text{ CZK}; \end{aligned}$$

Proceeding from the EVA-based management compensation system No. 1 at the beginning of 2017 each top manager and CEO of ABC, a.s. would have received 131,399 CZK and 181,399 CZK respectively.

The comparison of the EVA-based management compensation system No. 1 to the currently used incentive scheme reveals that the EVA-based management compensation system No. 1 motivates managers better by improvement of EVA, which additionally contributes towards their annual rewards and consequently more value is created for the company’s shareholders.

Advantages:

- the system is closer to the current one, therefore it is simpler to understand, calculate, and to follow;
- the system is very sensitive to the change of EVA, therefore the high growth of EVA will result in the high growth of the top managers’ and CEO’s bonuses.

Disadvantages:

- the decline of EVA will immediately result in the decrease of the top managers’ and CEO’s bonuses;
- the high pressure to employees in order to keep the stable growth of EVA and the high figure of the top managers’ and CEO’s EVA bonuses and consequently their annual rewards.

The EVA-based management compensation system No. 2

Calculation:

First of all, the EVA-based management compensation system No. 2 does not require to decrease the annual target bonus to each company’s top manager and the annual CEO’s bonus. Secondly, ABC, a.s. again should accept the appropriate coefficients for “x” and

“y”. Experimentally, “x” was chosen to be 0.45 per cent and “y” should be 0.6 per cent. Later on ABC, a.s. will chose the percentage of “x” and “y” according to its needs and experience. The calculation of the management compensation system No. 2 is presented in the following table 27:

Table 27: Management compensation system No. 2.

Accounting year	2014	2015	2016	2017
EVA	7,820,677	-5,128,535	47,278,541	39,316,011
$x\% \times \text{EVA}$	35,193	-23,078	212,753	176,922
ΔEVA	0	-12,949,212	52,407,076	-7,962,530
$y\% \times \Delta \text{EVA}$	0	-77,695	314,442	-47,775
EVA bonus earned	35,193	-100,774	527,196	129,147
Bonus bank balance	35,193	-74,379	471,412	482,706
Annual EVA bonus	8,798	-18,595	117,853	120,676
EVA bonus paid to each manager	1466	-3,099	19,642	20,113
Remaining bonus bank balance	26,395	-55,784	353,559	362,029
Annual top manager's target bonus	100,000	100,000	100,000	100,000
Annual CEO's bonus	120,000	120,000	120,000	120,000
Top manager's reward	101,466	96,901	119,642	120,113
CEO reward	121,466	116,901	139,642	140,113

Source: Author's own estimation.

In 2014 EVA was computed for ABC, a.s. for the first time, therefore it is not possible to compare this measure with the 2013 accounting year's result. For 2014 the EVA bonus to the top managers and CEO is computed without $y\% \times \Delta \text{EVA}$ formula component and the EVA bonus earned consists of only $x\% \times \text{EVA}$ component of the formula. The total EVA bonus earned would have been fully deposited to the bonus bank and then $\frac{1}{4}$ of it would have been divided equally between all the top managers and CEO and distributed to them. The final total reward for each top manager consists of the annual target bonus plus or minus the EVA bonus and the final total reward for CEO consists of the annual CEO bonus plus or minus the EVA bonus. The rewards would have been paid at the beginning of 2015.

The first part of the calculation of the management compensation system No. 2 is completely the same until the presentation of the EVA bonus bank, therefore the first part of it will be described shortly.

In 2015 the company creates the negative amount of EVA, so the EVA bonus earned is -100,774 CZK. This amount is fully deposited to the bonus bank, the balance of which is 26,395 CZK from the previous accounting year. After the deposition the bonus bank balance falls to -74,379 CZK and $\frac{1}{4}$ of this amount (-18,595 CZK) is distributed to the top

managers and CEO equally, therefore, each top manager and CEO had 3,099 CZK deducted from their annual rewards. The final top manager's reward to each top manager of the company for 2015 is calculated as $100,000 - 3,099 = 96,901$ CZK and the final CEO reward is computed as $120,000 - 3,099 = 116,901$ CZK. The rewards would have been paid at the beginning of 2016.

In 2016 the company creates the positive amount of EVA, therefore, the EVA bonus earned is 527,196 CZK. This amount is fully deposited to the bonus bank, the balance of which was -55,784 CZK from the previous accounting year. After the deposition the bonus bank balance grows to 471,412 CZK and $\frac{1}{4}$ of this amount (117,853 CZK) is distributed to the top managers and CEO equally, therefore each top manager and CEO receive the EVA bonus of 19,642 CZK additionally to their annual bonuses. The final top manager's reward to each top manager of the company for 2016 is calculated as $100,000 + 19,642 = 119,642$ CZK and the final CEO reward is computed as $120,000 + 19,642 = 139,642$ CZK. The rewards would have been paid at the beginning of 2017.

Whatever EVA-based management compensation system is chosen by the company's board of directors, it was discussed with the member of the company's executive board to keep the old top management compensation system of ABC, a.s. for the first two years after the implementation of EVA in order to decrease the top manager's fear about losing their financial annual reward while the company is not used to utilize EVA. Therefore, in 2018 and 2019 the top managers and CEO will earn at least the full amount of their annual bonuses despite the fact that the EVA bonus can be negative. The first two years after the implementation of EVA based management compensation system the management will be insured from the negative amount of EVA bonus by keeping the old compensation system in force.

Advantages:

- the system protects the top managers' and CEO's bonuses from the decline of the annual EVA better because of the existence of the bonus bank;
- the medium pressure to employees in order to keep the stable growth of EVA and maintain the high figure and growth of the top managers and CEO's EVA bonuses and consequently their annual rewards;
- the system is not very sensitive to the changes of EVA, therefore the one-time fall of EVA will not result in the collapse of the top managers' and CEO's bonuses immediately.

Disadvantages:

- the system is more complicated than the previous one. Therefore, it is more difficult to understand, calculate and follow it;
- the system does not provide the spectacular EVA bonuses immediately to the top managers and CEO if they achieved a very high amount of EVA one-time.

Modern EVA-based management compensation system

After approximately five years of running one of the previously proposed EVA-based management compensation system it is recommended to switch it to the Modern EVA based management compensation system. ABC, a.s. should calculate EVA bonuses according to the following formula:

$$Bonus = Target\ bonus + y\% \times (\Delta EVA - EVA\ improvement) \quad (25)$$

The target bonus reflects the amount of monetary reward that the company's managers should earn when they achieve the targeted EVA improvement. First of all, the competitive compensation analysis should be executed in order to provide the company's managers with fair reward, which is at the same level as the manager's reward of other comparable organizations. The targeted EVA improvement has to be at least at the level of the expected shareholder's return on the firm's market value. Because the organization is not publically traded it is recommended to define the expected EVA improvement on the basis of the company's experience. The change of EVA represents the real change of Economic Value Added against the EVA of the previous year. The rest of Modern EVA based management compensation system is calculated the same way as the previously explained EVA- based management compensation system No. 2.

10.3 Step 3: Establish the training program

The training on EVA concepts is the key part of the EVA implementation. Such training is an effective presentation of the EVA approach that contributes to its proper understanding. The training program is the fundamental tool for adopting the EVA mindset and philosophy. If this part of the implementation is neglected, the whole implementation process can come to nothing.

The training program will consist of the following elements:

- *EVA Specialist Training (three days);*

- *Training for Managers (two days);*
- *Training in Capital Budgeting (two days);*
- *General EVA Training (one day).*

EVA Specialist Training (three days)

A three day EVA Specialist Training will be intended for the key financial staff of the company. In ABC, a.s. the key financial staff includes controller, head of accounting department, wages clerks. The goal of this course will be to establish profound understanding of the EVA concept by the financial staff and to integrate the EVA measure into the financial processes of the organization. The course will comprise all aspects of the measure from an overview of the EVA management system to the detailed aspects of the EVA calculation such as pyramidal breakdown of EVA analysis and identification of EVA drivers. This course will bring together employees of the company and the EVA specialists who will deal with EVA-related questions and issues. A week before the training starts, the financial staff will be given a manual covering the EVA concept where all aspects of the EVA measure will be explained in detail. This manual is intended to be a guideline for the EVA Expert Training and it will be available to all employees electronically. The distribution of the manual a week before the course will provide the staff with an opportunity to go through the manual in advance thus making the learning more effective. The training will be conducted on the company's premises.

Training for Managers (two days)

The two day Training for Managers will be intended for all top managers and the rest of managers. The course will foster understanding of the EVA concept and promote a value creation mindset in the organization. The topics covered will include the EVA measure, its calculation, pyramidal breakdown of EVA analysis and EVA drivers, but they will not be detailed to such an extent as in the EVA Specialist Training. The emphasis of the manager training course will be put on the EVA management system and the compensation system. The managers will also be given the EVA manual a week before the course; it will come along with the handouts containing the outline of the course. The training will be conducted by a project team's member and the EVA specialists assigned to the company. The former will be part of the entire training whereas EVA specialists will deliver only a certain portion of the course. The EVA specialists will train managers for their role as

contact persons for the questions and problems arising from the EVA implementation in the company. The course will be interactive and based on relevant situations and cases. This course, too, will be conducted on the company's premises. All the training materials will be put on the company's Internet, so that all managers can have access them freely.

Training in Capital Budgeting (two days)

The two day Training in Capital Budgeting will be intended for the financial department employees. The course will provide a more consistent EVA understanding relating it to the corporate finance. The course will be centered around capital budgeting and WACC calculation, especially cost of equity calculation. This stage of the training will be discussion to ensure as much valuable input as possible. The project team will show the employees how to use EVA as a decision-making instrument for capital budgeting. The course will be delivered on the company's premises.

General EVA Training (one day)

The one day General EVA Training will be intended for all the company's employees. The training will last three hours and will be conducted by the department's middle managers on the company's premises. The managers will explain the EVA concept and its meaning for the company in plain language so that every employee understands it. For example, they will show what important role certain centers and their staff play for the EVA concept and the company's strategy. The training will be aimed to promote the value creation mindset in the organization. The training will be conducted by a manager of a particular department as this person has the closest connection to the staff. This training will be delivered over a month in order to ensure the smooth running of the newly introduced EVA process.

One of the few areas shared by all the company's employees is the cloakroom. That is why when all training courses will be finished, the board with regularly updated EVA results of each department will be placed in the cloakroom. The EVA results will be presented as traffic lights: if EVA decreases, the red light will be on, if EVA increases, the green light will be on and if EVA stays the same, the amber light will be on.

In addition to the said traffic light, the board will also show the percentage of EVA changes. Combining traffic lights representation and percentage of the achieved EVA

changes will help the employees to see whether or not their department creates EVA and to compare their change in EVA against other departments. In this inventive way the value creation mindset will be supported and promoted.

The total duration of the training program will be 110 hours. When EVA is implemented, the training will continue to meet the needs of the organization. For example, each new employee will receive the EVA training as part of introduction to his or her duties.

The total plan of the scheduled training activities can be created as follows:

Table 28: The plan of the EVA training program.

Schedule	Involved people	Performed by	Days	Hours
EVA Specialist Training	Key financial staff	Project team	3	24
Training for Managers	Top and department managers	Project team and company's EVA specialists	2	16
Training in Capital Budgeting	Financial department staff	Project team	2	16
General EVA Training	All employees	Department managers	9	54
Total			16	110

Source: Author's own estimation.

10.4 Step 3: Develop an implementation plan

Who will devise an implementation plan and who will be in charge of the implementation process?

The implementation plan will be prepared by the project team, which will be appointed by the company's executive. The team leader will be accountable for carrying the plan out. Once again, the project team will include a project manager, CFO, economics department manager and an EVA consultant. The EVA consultant will not be on the team all the time; that person will provide training and advice that the team will require. He or she will not be employed full time in the company. The implementation plan can be created as follows:

Table 29: EVA implementation plan.

No.	Activity	June				July				August				September			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Introduction of EVA to the board of directors	■															
2	Executive board approval of the EVA project	■															
3	Establishment of the project team		■														
4	Training of the project team		■	■													
5	The major strategic decision on the EVA project planning				■	■	■										
6	EVA materials creation					■	■										
7	EVA materials distribution						■										
8	Training program execution – mindset creation							■	■	■	■	■	■	■	■		
9	Completion of the implementation															■	■
10	Control															■	■

Source: Author's own estimation.

It is proposed that the EVA concept can be launched in the company in June 2018. The EVA implementation is scheduled to begin 1.6.2018. The project team will receive training by an EVA expert during the second and third week in June. Over the next three weeks the project team will be engaged in the project planning, including all vital strategic decisions, namely the EVA calculation, determination of the EVA measurement centers, establishment of a compensation system, training program development and elaboration of EVA materials. During the sixth weeks those EVA materials will be given to the employees and put on the Internet. The trainings will start from the seventh week and continue to the fourteenth week of the project. Over the fifteen and sixteenth week the implementation will be finalized.

11 EVA AS A PART OF BALANCED SCORECARD

ABC a.s. is going to implement the Balanced Scorecard at the same time as Economic Value Added, therefore EVA should be explained from the point of the Balanced Scorecard as well. After the implementation EVA will have the biggest impact on the financial perspective of the Balanced Scorecard. EVA will become one of the key measures of the financial perspective area of the Balanced Scorecard and the increase of it will be one of the main strategic goals of the company.

Unlike the traditional performance measures EVA can be influenced by every perspective of the company's Balanced Scorecard and thus increase the performance of the company, therefore it is also important to explain the concept not only to the top managers of the company but to every direct employee and office clerks. Focusing on improvement of EVA every perspective of the Balanced Scorecard will do better: employees will learn better, the internal company's processes will be executed better, sales will go up and the overall financial performance of the company will be improved. Embracing the whole Balanced Scorecard's perspectives of the company EVA executes its main task and creates the value for the company's shareholders.

12 EVALUATION OF RISK AND COSTS ASSOCIATED WITH THE IMPLEMENTATION OF ECONOMIC VALUE ADDED

12.1 Evaluation of costs for ABC, a.s.

The following sub-chapter evaluates the people responsible for the individual activities and implementation and opportunity costs for ABC, a.s. The company's costs were discussed with the member of the firm's executive board and presented in the following table 30.

Table 30: Calculation of implementation and opportunity costs

No	Activity	The person in charge	Implementation costs, CZK	Opportunity costs, CZK
1	Introduction of EVA to the board of directors	The project manager	–	–
2	Executive board approval of the EVA project	Board of directors	–	–
3	Creation of the project team	An external EVA experienced person	–	–
4	Training of the project team	A leader of the project team	25,600	–
5	The main strategic decisions on the EVA project planning	The project team	8,000	–
6	Preparation of EVA materials	The project team	1,500	–
7	Distribution of EVA materials	The project team	–	–
8	Execution of training program – mindset creation	The project team	88,000	281,700
9	Finalization of EVA implementation	The project team	–	–
10	Control	Controller	–	–
Total expenses			123,100	281,700

Source: Author's own estimation.

The actions provided by the board of company's directors, top managers and department managers are valued as a part of their daily responsibilities, that is why the costs or any opportunity costs associated with them are irrelevant.

The project team is scheduled to have approximately 32 hours of initial training and additionally ten hours of training for the project planning provided by an external EVA experienced person. The salary rate of the external EVA consultant is approximately 800 CZK/hour. The overall assessed time for training program is 110 hours, therefore, the total costs for consulting services are assessed at 123,100 CZK. The major EVA material will be available electronically with an exception of handouts, the costs of which are assessed at 1,500 CZK. ABC, a.s. will organize trainings for 450 direct employees and for 15

members of financial department clerks the salary rates of whom are 200 CZK per hour and 260 CZK per hour respectively. Each worker and office clerk will get approximately three hours of training, the total costs of which are estimated at 88,000 CZK. Taken into account three hours of the opportunity cost of training for each trained employee, their total opportunity cost is estimated at the amount of 281,700 CZK. Consequently, the overall expenses of the EVA implementation will approximately be in the amount of 404,800 CZK.

12.2 Assessment of the EVA implementation risk for ABC, a.s.

The risk of failure of the whole idea of EVA implementation at the beginning is high. ABC, a.s. has no experience of work with Economic Value Added and at least fifty per cent of the firm's management heard about the concept only few words. Moreover, the company does not calculate its cost of capital and did not have an experience of calculation of required NOPAT and NOA accounting adjustments, therefore there is a risk that the company will calculate them incorrectly. There is also a risk that the project team will not understand the EVA consultant correctly and will define EVA drivers improperly. There is a risk that the appointed project team will not set buy-in at the level of management and the CEO and some top managers will not fully understand the concept of EVA and its contribution towards the improvement of the company's financial performance. There is also a risk that the chosen EVA-based management compensation scheme will not work in favor of management within the first couple of years after its implementation. However, this risk can be eliminated by running the old management compensation system at the same time. Moreover, there is a risk that the firm's employees will not understand the Economic Value Added concept and can think that EVA is only used as a new instrument for their additional pressure in favor of management and might lose the motivation to improve their performance or even decrease it and leave the company. There is also a risk that the employees will require extra trainings and extra costs in association with those activities. There is also a risk that the implementation of EVA will not deliver the visible positive financial changes and will bring only costs for its implementation and decrease of investments.

13 CONTRIBUTION OF THE EVA IMPLEMENTATION

The previous chapter discussed the risks of failure of Economic Value Added and its probable unjustified performance. In this chapter there will be information about the advantages of the concept and its contribution for the company's performance.

Implementation of Economic Value Added as a measure of the company's financial performance should decrease the imperfections of the existing firm's system of simple performance measurement based on its targeted total revenue or EBIT. Economic Value Added will connect the company's performance with the stockholder's value creation. Moreover, the concept will provide the owners with a better instrument of measuring the real company's economic value and give them better timely control over the whole important organizational cost and profit centers. Following the pyramidal breakdown of EVA analysis, the managers will understand its value drivers and specifically focusing on some of them they will be able to positively influence NOA, NOPAT and cost of capital, which will eventually lead to the improvement of EVA. If EVA is implemented successfully, it will embrace all four perspectives of the company's Balanced Scorecard and it means that the contribution of every employee will positively reflect the company's financial performance, which eventually should benefit every stakeholder of the firm.

The integration of the Economic Value Added concept into the company's management compensation system will additionally stimulate the company's top managers and CEO. Based on their current compensation system the top managers have a fixed annual reward only based on their target sales. Upon achieving them they can relax and be sure that the reward is theirs. This situation creates the opportunity cost of the company's top management which can be successfully eliminated after the implementation of EVA. The top managers will know that they will be able to receive more and at the same time to receive less therefore, they will be motivated better and their increased motivation will be positively reflected in the owners' capital.

Successful implementation of EVA and working with it will create additional attractiveness and trustworthiness for the company. In time it will attract more potential customers, employees and even new potential investors. The concept will also contribute to the company's competitive advantage and provide better control over its capital structure.

CONCLUSION

The main goal of the thesis is to introduce the Economic Value Added concept as a modern measure of the company's financial performance. The concept is elaborated, its advantages are discussed and the implementation of the measure is also presented.

The paper is divided into theoretical and practical parts. The main goal of the theoretical part is to compare traditional and modern performance measures used today, describe the advantages of the latest metrics and elaborate EVA as a modern measure of the corporate financial performance. The theoretical part ends with the description of implementation of EVA into the operating company and a short outline of the theory of Balanced Scorecard.

The practical part is introduced as the combined analytical and project subsections. Within the analytical subsection the company is introduced, its strategic and financial analyses are executed and its Economic Value Added is calculated. The analytical subsection continues with the comparison of EVA with the traditional performance measures and concludes with the introduction of the pyramidal breakdown of EVA analysis for the company, which is executed for the last accounting year.

The project subsection outlines the implementation of Economic Value Added into the company. Every step of implementation is elaborated and discussed. The two different EVA-based management compensation systems are proposed and the training program is created. The thesis concludes with the calculation of the implementation costs, evaluation of its risks, presentation EVA as a part of the company's future Balanced Scorecard and the concept's contribution into the successful financial progress of the company discussed.

I believe that this thesis will be useful for the company and the firm will manage to implement EVA successfully.

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LIST OF ABBREVIATIONS

ACP	Average Collection Period
BOZP	Workplace health and safety protection
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CFROI	Cash Flow Return on Investment
CVA	Cash Value Added
DCF	Discounted Cash Flow
EBIT	Earnings before Interest and Tax
EBITDA	Earnings before Interest, Tax, Depreciation and Amortization
EMS	Environmental Management System
EPS	Earnings per Share Ratio
EU	The European Union
EVA	Economic Value Added
FCF	Free Cash Flow
GDP	Gross Domestic Product
HR	Human Resource
IFRS	International Financial Reporting Standards
LIFO	Last In First Out
MVA	Market Value Added
NOA	Net Operating Assets
NOPAT	Net Operating Profit after Tax
NPV	Net Present Value
NWC	Net Working Capital
OEM	Original Equipment Manufacturer
OES	Original Equipment Supplier
P/E	Price/Earnings Ratio
PESTLE	Political, Economic, Social, Technological, Legal, Ecological
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
RONA	Return on Net Assets

R&D	Research and Development
SMK	System of Certification Quality Management
SVA	Shareholder Value Analysis
SWOT	Strengths, Weaknesses, Opportunities, Threats
TIE	Times Interest Earned
VAT	Value Added Tax
VBM	Value Based Management
WACC	Weighted Average Cost of Capital
WCR	Working Capital Requirement

LIST OF FIGURES

<i>Figure 1: Conventional Non-EVA Bonus Plan.</i>	31
<i>Figure 2: Modern EVA Bonus Plan.</i>	33
<i>Figure 3: Macro forces.</i>	41
<i>Figure 4: A Conventional Balanced Scorecard matrix.</i>	43
<i>Figure 5: Emission trends and drop in greenhouse gases in the Czech Republic.</i>	54
<i>Figure 6: The organizational structure of ABC, a.s.</i>	71
<i>Figure 7: The comparison of economic and accounting models of EVA.</i>	77
<i>Figure 8: Pyramidal breakdown of EVA analysis for ABC, a.s.</i>	78

LIST OF TABLES

<i>Table 1: NOPAT adjustments.</i>	27
<i>Table 2: NOA adjustments.</i>	28
<i>Table 3: Production, sales, and exports of cars in Czech automotive industry.</i>	46
<i>Table 4: Production, sales, and exports of vehicles in Czech automotive industry.</i>	47
<i>Table 5: Characteristics of Plant Generator.</i>	48
<i>Table 6: Characteristics of Plant Karburator.</i>	49
<i>Table 7: VAT, Corporate and Personal Income Taxes.</i>	51
<i>Table 8: SWOT matrix.</i>	55
<i>Table 9: 2014-2017 Vertical analysis of balance sheets for ABC, a.s. (in %).</i>	61
<i>Table 10: Horizontal analysis of the 2014-2017 balance sheets of ABC, a.s. (in %).</i>	63
<i>Table 11: 2014-2017 Vertical revenue analysis for ABC, a.s. (in %).</i>	63
<i>Table 12: Horizontal revenue analysis between the 2014-2017 accounting years (in %).</i>	64
<i>Table 13: 2014-2017 Vertical analysis of costs for ABC, a.s. (in %).</i>	64
<i>Table 14: Horizontal analysis of costs between the 2014-2017 accounting years (in %).</i>	65
<i>Table 15: Ratio analysis for ABC, a.s.</i>	66
<i>Table 16: Altman Z- score.</i>	70
<i>Table 17: Index IN05.</i>	70
<i>Table 18: ABC's management compensation system of the 2017 accounting year.</i>	72
<i>Table 19: Measurement of ABC, a.s.</i>	72
<i>Table 20: Required NOA adjustments for ABC, a.s. ($\times 10^3$).</i>	74
<i>Table 21: Required NOPAT adjustments for ABC, a.s. ($\times 10^3$).</i>	74
<i>Table 22: Calculation of Cost of Equity.</i>	75
<i>Table 23: Calculation of WACC</i>	76
<i>Table 24: Calculation of EVA for the analyzed years.</i>	76
<i>Table 25: Calculation of EVA for the analyzed years.</i>	77
<i>Table 26: Management compensation system No. 1.</i>	85
<i>Table 27: Management compensation system No. 2.</i>	87
<i>Table 28: The plan of the EVA training program.</i>	92
<i>Table 29: EVA implementation plan.</i>	93
<i>Table 30: Calculation of implementation and opportunity costs</i>	95

APPENDICES

APPENDIX P I. Translated Financial Statements

Balance Sheets Part I for ABC, a.s. (in thousands)

Accounting years	2014	2015	2016	2017
Total Assets	227,156	469,790	628,317	667,383
Long-term assets	168,088	376,569	505,218	518,125
Long-term intangible assets	767	1,028	1,455	1,267
Software	318	1,028	1,455	1,267
Unfinished intangible assets	449	0	0	0
Long-term tangible assets	167,321	375,541	503,763	516,858
Land	12,732	18,884	20,766	20,882
Buildings	9,525	163,695	290,440	318,089
Machines	35,641	157,625	176,310	170,668
Advances for purchasing of long-term tangible Assets	13,268	16,109	16,247	7,219
Unfinished tangible assets	96,155	19,228	0	0
Current assets	50,382	92,802	122,136	148,354
Inventories	106	2,115	27,933	46,631
Material	106	1,320	22,596	39,416
Unfinished products	0	0	202	474
Products	0	0	5,054	6,741
Goods	0	0	81	0
Advances paid for Inventory	0	795	0	0
Receivables	44,615	66,767	76,985	81,793
Long-term receivables	0	0	575	14,013
Short-term receivables	44,615	66,767	76,410	67,780
Short-term financial assets	5,661	23,920	17,218	19,930
Cash	50	6	67	152
Bank account	5,611	23,914	17,151	19,778
Accruals	8,686	419	963	904
Accrued expenses	188	364	963	904
Accrued earnings	8,498	55	0	0

Source: Author's own elaboration.

Balance Sheets Part II for ABC, a.s. (in thousands)

Total Liabilities and Equity	227,156	469,790	628,317	667,383
Equity	46,337	89,696	191,580	286,368
Share capital	2,000	2,000	2,000	2,580
Share premium	0	0	0	1,421
Funds from profit	200	200	200	2,998
Retained Earnings	14,238	44,137	87,496	187,682
Profit for the current period	29,899	43,359	101,884	91,687
Total Liabilities	177,362	374,466	436,737	381,015
Long-term liabilities	81,025	211,661	201,563	200,116
Deferred tax liability	946	7,446	15,008	19,560
Loans	80,079	204,215	183,386	179,560
Long-term advances received	0	0	3,169	0
Other long-term liabilities	0	0	0	996
Short-term liabilities	96,337	160,630	235,174	178,795
Short-term loans	30,373	2,940	59,247	69,964
Short-term advances received	1,716	15,233	0	2,394
Accounts payable	34,852	57,954	71,891	63,465
Short-term liabilities - owners	5,259	5,533	5,261	3,871
Wages payable	11,062	21,804	21,881	16,826
Social and Health insurance payable	6,341	12,718	13,263	9,732
Tax liabilities	6,215	7,475	15,548	5,311
Accounting estimates - Passive	192	6,797	18,018	5,288
Other liabilities	327	30,176	30,065	1,944
Reserves	0	2,175	0	2,104
Accruals	3,457	5,628	0	0

Source: Author's own elaboration

Income Statements for ABC, a.s. (in thousands)

Accounting Year	2014	2015	2016	2017
Revenue from sale of Products and services	251,539	627,617	942,668	973,553
Revenue from sale of goods	0	0	105	4,899
Cost of goods sold	0	0	102	4,861
Costs of production	50,242	142,040	279,962	399,049
Consumption of material and energy	40,403	109,033	223,456	330,855
Services	9,839	33,007	56,506	68,194
Change in level of inventory	0	0	-2,266	-5,114
Personal costs	158,177	403,505	519,929	420,697
Depreciation	3,321	28,751	44,832	62,155
Activation	0	0	0	-31
Other revenues	2,339	8,764	37,055	16,574
Other costs	1,568	3,712	5,322	11,354
Remaining value of sold assets	227	0	0	0
Operating profit	40,343	58,373	131,947	102,055
Financial revenues	120	32	19	34
Financial interest	588	3,897	4,593	4,215
Other financial revenues	294	1,760	439	3,308
Other financial costs	2,846	2,323	1,575	4,943
Financial profit	-3,020	-4,428	-5,710	-5,816
EBT	37,323	53,945	126,237	96,239
Income taxes	7,424	10,586	24,353	4,552
EAT	29,899	43,359	101,884	91,687

Source: Author's own elaboration