The project of the Economic Value Added implementation into the management of the company XY s.r.o. in order to raise its economic performance

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Diploma thesis
2010

Univerzita Tomáše Bati ve Zlíně
Fakulta managementu a ekonomiky

Univerzita Tomáše Bati ve Zlíně
Fakulta managementu a ekonomiky
Ústav financí a účetnictví
akademický rok: 2009/2010

ZADÁNÍ DIPLOMOVÉ PRÁCE

(PROJEKTU, UMĚLECKÉHO DÍLA, UMĚLECKÉHO VÝKONU)

Jméno a příjmení:	**B.A. Iva HOVĚZÁKOVÁ**
Osobní číslo:	**M081122**
Studijní program:	**N 6202 Hospodářská politika a správa**
Studijní obor:	**Finance**
Téma práce:	**Projekt implementace konceptu ekonomické přidané hodnoty do řízení společnosti XY s.r.o. za účelem zvýšení její výkonnosti**

Zásady pro vypracování:

Úvod

I. Teoretická část

- **Na základě kritické literární rešerše popište koncept ekonomické přidané hodnoty (EVA) a zhodnoťte vhodnost implementace konceptu EVA do řízení podniku.**

II. Praktická část

- **Charakterizujte podnik a analyzujte vnitřní a vnější podmínky pro řízení výkonnosti podniku.**
- **Zhodnoťte výkonnost podniku na základě finanční analýzy a vývoje ekonomické přidané hodnoty, identifikujte generátory hodnoty.**
- **Vypracujte projekt implementace konceptu EVA do řízení společnosti za účelem zvýšení výkonnosti podniku XY s.r.o.**

Závěr

Rozsah diplomové práce:	**cca 70 stran**
Rozsah příloh:	
Forma zpracování diplomové práce:	**tištěná/elektronická**

Seznam odborné literatury:

[1] KAPLAN, R. S., NORTON, D. P. Balanced scorecard. 5. vyd., Praha: Management Press, 2000. 267 s. ISBN 978-80-7261-177-5.
[2] NEUMAIEROVÁ, I., NEUMAIER, I. Výkonnost a tržní hodnota firmy. 1. vyd. Praha: Grada Publishing, 2002. 216 s. ISBN 80-247-0125-1.
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Vedoucí diplomové práce:	**Ing. Adriana Knápková, Ph.D.** Ústav financí a účetnictví
Datum zadání diplomové práce:	**29. března 2010**
Termín odevzdání diplomové práce:	**3. května 2010**

Ve Zlíně dne 29. března 2010

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ABSTRACT

The aim of this thesis is to provide the basic literature review about the EVA concept, its implementation and emphasize EVA advantages, consequently, to measure the company performance according to the traditional performance measurements and modern performance measurements, and compare them. On the basis of the literature review, the carried out analyses and the comparison of EVA and the traditional metrics used by the company, the thesis aims to decide about the EVA implementation, elaborate the proposal of its implementation and describe its contribution to the company.

Keywords: Economic Value Added, Shareholder Value, implementation, capital employed, net operating profit after tax, net operating assets.

ABSTRAKT

Cílem této diplomové práce je poskytnout základní teoretické poznatky o konceptu ekonomické přidané hodnoty, její implementace, zdůraznit její výhody, následně zhodnotit výkonnost podniku pomocí klasických ukazatelů a moderních ukazatelů výkonnosti podniku, a porovnat je. Následně, na základě teoretických poznatků, provedených analýz a srovnání EVA a tradičních ukazatelů využívaných společností, je cílem rozhodnout o implementaci ekonomické případné hodnoty do řízení společnosti, navrhnout samotnou implementaci a zhodnotit její přínos pro společnost.

Klíčová slova: Ekonomická přidaná hodnota, Shareholder Value, implementace, investovaný kapitál, čistý operativní zisk po zdanění, čisté operativní aktiva.

ACKNOWLEDGEMENT

I would like to thank my personal tutor Ing. Adriana Knápková, Ph.D. for her support, worthful comments and her willingness to discuss any of my problems.

Further words of thanks belong to Ing. Esterková for her incredible willingness to provide me any materials and information I have needed, really great and effective communication and her help.

I declare that the version of the diploma thesis which has been handed in corresponds with the version which has been restored in IS/STAG.

CONTENTS

INTRODUCTION

The performance and competitiveness are the most important words among the companies nowadays. They are essential for the survival of the company, if the company is not competitive on the market, it will not create enough performance to satisfy its shareholders. If the company does not satisfy its shareholders, it can easily lose its value for them and go out the business. For years, the companies have been measuring their performance by using the traditional performance measures. In 1982 the new revelatory concept of the economic value added was introduced. It has offered a new way how the value and shareholder value creation can be perceived. EVA has greatly impacted the financial word and has been adopted by hundreds of the companies worldwide. It has provided the shareholders the better way how to measure the true economic performance of the company and bring the closer alignment of managerial and shareholder goals. Thanks to EVA managers have a better idea how to create a shareholder value and motivate its employees.

The main aim of this thesis is to explore and highlight all virtues of the economic value added and later on elaborate the proposal of the economic value added implementation into the management of the company and demonstrate its contribution to the company. Within the first part of the paper the traditional and modern performance measurement will be compared in order to demonstrate what is so revelatory on economic value added. The first part will be focused on the economic value added concept and its application in details.

Within the second part the company will be introduced, the various analysis of the company related with the EVA implementation carried out and EVA drivers identified. Consequently the proposal of the EVA implementation will be elaborate and its contribution to the company described.

I. THEORETICAL PART

1 PERFORMANCE MEASUREMENT

Investors measure overall performance of a firm as a whole to decide whether to invest in the firm or to continue with the firm or to exit from it. Metrics of performance play very important role not only in evaluating the current performance of the firm but also in achieving high performance and growth in the future. Value creation and maximization for the stakeholders depends on their various conflicting interests towards a common goal. [9]

The performance of a firm gets reflected on the capital markets. This evaluation reflects investor's and potential investor's perception about the current and future performance of the firm. [9] The major problem, which can destroy value, is that fact the mangers are very often paid to focus and pursue other goals than value creation, such as market share, customer satisfaction, employment satisfaction and jobs. [8]

Young and O'Byrne explain the importance of shareholder value creation as well as stakeholder value creation on the claim of Coca – Cola in its 1995 annual report: "Coca-Cola provides value to everyone who touches it." In other words this claim presents the philosophical approaches of Coke's managers. According their opinions the shareholder value can be delivered only by delivering value to everyone else, because if customers or employees are not satisfied, they can easily change the company. [8] On the other hand Neumaierova and Neumaier emphasize that the company should prefer shareholder value creation, because shareholders comprise the main group of stakeholders, they also bear the highest level of risk. In order to create stakeholders value in long term, the first of all the company has to satisfy the requirements of shareholders. [4]

Because of those different approaches it is very important for the company to identify and choose such a metric, which measures the firm value as much as is possible without being biased towards any of the stakeholders. The selection of the appropriate measurement is critical for the success of the firm. The most of the currently used performance measures are based on the current net income, total assets, and net sales or similar inputs or out puts of the business unit. Examples of such metrics are ROE, ROA or operating net profit, but those metrics measure various aspect of company's performance and have certain limitation. [9]

Value Based Management (VBM) offers another approach to performance measurement, and metrics. VBM is based on shareholder value creation, everyone in the organization must understand how to contribute to corporate value and whole processes must be oriented to this goal. VBM program should contain subsequent components:

- Strategic planning
- Capital allocation
- Operating budgets
- Performance measurement
- Management compensation
- Internal communication
- External communication [8]

According to Weissenrieder there are four main metrics used within Value Based Management framework – Economic Value Added, Cash Value Added (CVA), Shareholder Value Analysis (SVA) and Cash Flow Return on Investments (CFROI). [19]

2 TRADITIONAL PERFORMANCE MEASURES

2.1 Overview of traditional performance measures

2.1.1 Profitability ratios

Earnings before Interest and Taxes (EBIT) and other earnings (EAT, EBT, EBITD)

EBIT is computed as revenues minus expenses, excluding tax and interest. EBIT is all profits before taking into account interest payments and income taxes. EBIT is very often used for comparing performance of companies employing different capital structure and using different tax rates, it eliminates the effects of those two factors. EBIT is suitable for cross-company comparisons, because it represents operating income or operating profit.

Return on Equity (ROE)

ROE expresses the volume of net income returned as a percentage of shareholders equity. Return on equity reflects how much profit is generated with the money which shareholders have invested into the company. ROE can be used for comparing two or more companies in the same industry. ROE is expressed as a percentage and is computed by dividing net income after taxes by equity. Net income is for the full fiscal year and shareholder's equity does not include preferred shares.

$$\textit{Return on Equity} = \textit{Net Income/Shareholder's Equity} \qquad (1)$$

Return on Assets (ROA)

Return on assets measures the asset productivity. It is expressed as percentage and indicates how efficiently the company employs its assets to generate earnings. ROA is computed by dividing annual earnings (net income for the full fiscal year) by total assets.

$$\textit{Return on Assets} = \textit{Net Income/ Total Assets} \qquad (2)$$

Return on Investment (ROI)

ROI measures the efficiency of an investment. Frequently it is used to compare the efficiency of various investments. It calculated by following way:

$$ROI = EAT / Invested\ Capital \qquad (3)$$

2.1.2 Cash Flow ratios

Total Cash Flow

Cash flow refers to the movement of cash into or out of a business, a project, or a financial product. It is usually measured during a certain period of time. Cash flow can by used to analyze financial stability of the company, for short run planning of revenue and expenses, for evaluating and comparing investments and for evaluating the company performance. Cash inflows usually arise from one of three activities - financing, operations or investing, therefore total cash flow consist of operating, financing and investing cash flow. There are two methods used to calculate cash flow – direct and indirect methods. Direct method is easier to understand, but in case of indirect method you can see the link with operating profit. Direct method is calculated as following: [5]

Cash and Cash Equivalents at the beginning of year
+ Cash Earnings in time period
- Cash paid in time period } *Cash Flow*

= Cash and Cash Equivalents at the beginning of year

Free Cash Flow (FCF)

Free cash flow is a measure which presents the amount of cash that the business unit is able to create after expending the money required to maintain or expand its assets base. It is computed as operating cash flow minus capital expenditures.

Net Income
+ Amortization/Depreciation
- Changes in Working Capital
- Capital Expenditures

= Free Cash Flow

FCF plays very important role in running of the company, it presents source of money that can be used to develop new product, make acquisition or reduce debt. It is the engine that enhances shareholder value. In case of large investments the FCF could be also negative, but it is not so bad if the investments earn a higher return. [5]

2.1.3 Performance ratios

Earnings per share (EPS)

EPS presents the portion of a company's profit allocated to each outstanding share of common stock or in other words the conversion of currency amount of profit to per share basis.

EPS = (Net Profit after Taxes – Preference Dividends) / Average Outstanding Shares (4)

Price - Earnings Ratio (P/ E Ratio)

P/E is a valuation ratio of a company's current share price compared to its per-share earnings. A high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E within the same industry. [5]

P/E = Market Value per Share / Earning per Share (EPS) (5)

2.2 Critique of traditional performance measures

It is very important to realize, that none of the traditional performance measures present the true and complete picture of the company's performance by themselves. They have to be seen and evaluate as a relating complex, we have see each metric in connection with other metrics. Most of the metrics is based on accounting figures and earnings after taxes. Consequently, they are influenced by the firm level of divergence in the accounting figures and in the valuation methods used by the company to evaluate assets, liabilities and income of the firm. Those measurements do not consider the influence of inflation, the level of risk and the value of money over the time. The metrics include the assets that do not belong between operating assets. [8, 9]

The earnings ratios such as EAT, EBT, EBIT are easy to calculate, but they do not include the cost of capital. The disadvantage of ROA is that it reflexes only short run profit, therefore the investment which is profitable in long run can be rejected as non profitable.

ROE has its limits we should be well aware of as well. One of them is that the ROE can be artificially inflated. This can be caused by the division of a smaller book value or the latter by the borrowing of funds, instead of issuing stocks. As a result the ROE is increased and at the same time the profits are not improved. In case the company increases the proportion of liabilities, ROE increases, but it does not reflect the risk coming from the raising level of indebtedness. Return ratios evaluate the company performance for the previous periods, but they do not consider future income coming from future firm's activities. [8, 9, 20, 21]

Regarding to Price - Earnings Ratio the stock price is driven by so many factors that can not be influenced by the company that P/E ratio can not truly reflect performance of the company. [14]

In summary, traditional metrics reflect current and past trends, but not future trends. Impact of inflation is not properly reflected, as many figures are taken at historical numbers, several years old. There are differences in approach among financial analysts on how to treat certain items, how to interpret ratios. The ratios are only as good or bad as the underlying information used to calculate them.

3 MODERN PERFORMANCE MEASURES

The critique of the traditional performance measures is coming mainly from the differences among accounting methods and economic point of view at company performance. The market evaluates value creation according to the net present value of future cash flows creating by the investment or the company. This approach considers also the influence of the factors such as cost of capital, level of risk and time. From the market point of view following measurers are coming [8, 5].

3.1 Overview of modern performance measures

3.1.1 Discounted Cash flow

In comparison with the free cash flow, the discounted cash flow reflexes three major factors important for value creation: the magnitude, the timing and the degree of uncertainty of the future cash flows. The terms timing and degree of uncertainty are quite clear. The magnitude means the size of the cash flow, in other words the company prefers the greater cash flow rather then smaller one. Discounted cash flow is very often used by investors to evaluate their investments and compute Net Present Value or Internal Rate of Return of their investments.

$$DCF = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t} \qquad (6)$$

3.1.2 Market Value Added (MVA)

MVA is a measure which is conceptually linked with the free cash flow model of valuation, but in the certain way it also reflects the results of the decisions taken by managers in the past.

$$MVA = Market\ Value - Invested\ Capital \qquad (7)$$

MVA is the difference between market value, which includes the market value of equity and debt, and capital invested by investors. Market value reflects how the market evaluates the successfulness of managers in managing the investor's money and also its trust in the future growth and development of the company. The main limitation of this metric is to

recognize who is the real value creator, what is the result of the work of the company and its managers and what is the result of the factors influencing the market. Further MVA does not consider if the company pays the dividends to its shareholders or not. [9]

3.1.3 Excess Return

Excess Return is a difference between actual wealth and expected wealth at the end of the certain period of time.

$$Excess\ return_{N} = Actual\ Wealth_{N} - Expected\ Wealth_{N} \qquad (8)$$

Actual wealth presents the future value of the cash flows (dividends, buybacks) received by shareholders over the certain period plus the value of equity at the end of the measured period. Expected wealth is the future value of the investment at the end of measured period considering the cost of equity:

$$I_0 = (1 + C_e)^N \qquad (9)$$

The common limitation for Excess Return and MVA is the fact they can be calculated only for publicly traded companies and they can not be used to evaluate and motivate the managers, they provide us snapshot value, not the value over the time. [4]

3.1.4 Cash Value Added (CVA)

CVA is a Net Present Value model which classifies investment in strategic and non strategic investment. Strategic investments create new value and non – strategic investments maintain the value created by strategic investments.

Cash value added is calculated as following:

+ Sales
- Costs

= Operating Surplus

+/- Working Capital Movements
- Non –Strategic Investment

= Operating Cash Flow

- Operating Cash Flow Demand

= Cash Value Added

Operating Cash Flow Demand is calculated from each strategic investment made by a firm, discounted by proper capital cost. Operating Cash Flow presents cash flow before strategic investment, but after non- strategic investments, it has to cover Operating Cash Flow Demand. This measure helps give investors an idea of the ability of a company to generate cash from one period to another. [19]

3.1.5 Cash Flow Return on Investments (CFROI)

CFROI for a company is the internal rate of return on existing investments, based on the real cash flows. In order to judge the quality of the investment the CFROI has to be compared to an inflation-adjusted cost of capital, if the CFROI is superior to the cost of capital, the company creates value for its shareholders. In order to calculate CFROI we need four necessary inputs:

- the gross investment of the company
- the gross cash flow earned in the current year on the assets
- the expected life of the assets
- the expected salvage value of the assets at the end of the expected life

CFROI removes the influence of accrual accounting and is an inflation-adjusted. [1]

3.2 Advantages of modern performance measures

In summary, modern performance measures are closely linked to the shareholder value, they reflect future trends, the expectation of the investors and the market, the impact of inflation, the level of risk and the value of money over the time. Those measures create the connection between the value creation and incentive compensation system that makes managers responsible for their decision.

The modern metrics remove the influence of accrual accounting and provide the investors an idea of the ability of the company to create shareholder value from one period to another.

4 ECONOMIC VALUE ADDED (EVA)

Economic Value Added presents one of the modern performance measures; this revolutionary concept was launched by Stern Stewart & Co. in 1982. Concept EVA is based on the idea that company does not create true profit until it has covered all its costs including opportunity costs and cost of capital. In other words, if the company earns more than its total costs, including tangible and intangible costs, it takes the economic profit (true profit). [16] Phillips claims that "*only economic profits measure true performance and create real value for a company and its shareholders."*(Phillips, 2007)

4.1 Computation of EVA

EVA is calculated as the difference between the Net Operating Profit after Tax and the opportunity cost of invested capital.

$$EVA = NOPAT - WACC \times NOA \qquad (10)$$

Net Operating Profit after Tax measures a business's true operating profit. In order to calculate NOPAT the financing costs must be excluded and certain expenses and revenues must be adjusted. NOA is operating capital employed and WACC presents cost of capital employed. [6]

There is other ways of calculating EVA:

$$EVA = (RONA - NOA) \times WACC \qquad (11)$$

EVA can be improved by following means:

- Improve returns (RONA) with the existing capital (NOA)
- Employ capital productively – It means to employ less capital (NOA) and earn the given returns (RONA).
- Reduce the capital cost (WACC) with a given level of capital (NOA) and given level of net operating profit (NOPAT). [13]

According to Stern Steward & Co. more than 150 adjustments have to be employed in order to calculate economic profit (EVA), but many companies using EVA concept claim that 12 or less adjustments is sufficient. Some of them do not even make any adjustments, because they have discovered that the adjustments have a little or any impact on profits. The general aim of the accounting adjustments is to adjust the accounting profit to economic profit. [6]

4.1.1 The major accounting adjustments

Research and development (R&D), capitalized intangibles

Young and O'Byrne argue that investments in R&D, new technologies, brand names, customer loyalty are still investments, because they present going – concern actives of the company and in long term they might pay off. Therefore those investments should be capitalized as long term assets, R&D costs must be added back to NOPAT and smoothly depreciated over 5 years, which is an approximate typical economic life of R&D investments. [19, 9]

Deferred Tax

Deferred tax rises from temporary differences between book value of assets and liabilities and their tax value, or timing differences between the recognition of gains and losses in financial statements and their recognition in a tax computation. The impact o deferred tax is eliminated by adding back to capital. If the net deferred tax liability increases, it is added to NOPAT and if the liability decreases it is subtracted. [1]

LIFO Reserves

The company using LIFO method (Last-in, first-out) for inventory costing have to deal with the difference between the carrying value of the inventory and its current cost. This difference is called LIFO reserves; they are reported in the notes to the financial statements. In order to eliminate the underestimation of net assets and invested capital, the LIFO reserves have to add to inventories and also to NOPAT. [20]

Goodwill

Goodwill is different between the price the acquiring company paid for the acquired company and the fair market value of the acquired company's assets. Goodwill can be positive or negative; in case the goodwill is positive the company has some kind of advantage which might bring the positive future profit. Therefore goodwill should be capitalized as a long term asset and add back to NOPAT and smoothly depreciated over 5 years (60 months) [21, 9]

Bad debts, warranties and restructuring reserves

Young and O'Byrne inform that some EVA proponents argue that managers use reserves to manipulate profit and this practice causes the disparity between accounting profit and cash flow. They agree and go on, that any increase in the reserves should be added back to NOPAT and any decease should be subtracted from NOPAT. Reserves should be added back to invested capital. [14]

Operating Leases – Leasing

From the accounting point of view an operating lease is a rental expense and it does not appear on balance sheet, but in economic reality a leasing is a form of debt, which the company uses for its operating activities. Therefore the invested capital is undervalued and the present value of future lease payments discounted by company's borrowing rate has to be added back to invested capital. Also NOPAT is undervalued, because lease payments should be identify as an interest cost. Interest costs have to be excluded form NOPAT, because they are already reflected in WACC. If we would not exclude them from NOPAT, they would be used in EVA calculation twice. An adjustment is made by adding to NOPAT the capitalized value of the leases multiplied by the borrowing rate. Further the leases have to be smoothly depreciated over the time. [1, 5]

4.1.2 Calculating Net Operating Assets (NOA)

Invested capital in EVA calculation is not defined as the book capital, but it is a rough economic book value of all money invested in going – concern activities. In other word, it is essential net assets of the firm with the certain accounting adjustments. [9]

Tab. 1. NOA adjustments [8]

Adjustments required for calculating NOA
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
+ The cumulative amortization of Goodwill
+ Increase in the reserves
+/- Cumulative unusual losses / gains after taxes
- Non – Operating Assets
= NOA (Net Operating Assets)

4.1.3 Calculating Net Operating Profit after Tax (NOPAT)

Net Operating Profit after Tax is a firm true operating profit. In order to calculate NOPAT the financing costs must be excluded and certain expenses and revenues must be adjusted. Each adjustment made at assets must be reflected on NOPAT as well. [9]

Tab. 2. NOPAT adjustments [8]

Adjustments required for calculating NOPAT
Operating profit before tax
+ Deferred Tax + Capitalized Intangibles expenses + Research and Development + Leasing and operating leases + LIFO and other reserves + Total Goodwill amortized to date (Goodwill depreciation) + Increase in the 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 the reserves - Revenues from non – operating assets - Original tax +/- Adjusted tax
= NOPAT (Net Operating Profit after tax)

4.1.4 Calculating Cost of Capital

Weighted Average Cost of capital presents a true total financing cost of the company including the cost of borrowing, interest, and a cost for shareholders funds. If the company covers the total cost of capital, it creates the shareholders wealth. In other words WACC presents a minimum return the company has to earn. From the other point of view the cost

of capital presents an opportunity cost reflecting the returns expected by investor from other investment of similar risk. [6, 8]

$$WACC = E/V \times R_e + D/V \times R_d \times (1 - T_c) \quad (12)$$

Where:
R_e *– cost of equity*
R_d *– cost of debt*
E – equity
D – debt
V – Market Value
T_c*- Tax rate*

The cost of debt presents return required by lender. It's based on the several factors such as prevailing interest rate and creditworthiness. Cost of debt is a tax – deductible business cost, therefore it must be tax deducted:

$$R_d \times (1 - T_c) \quad (13)$$

The cost of debt used in WACC is a weighted average of its different rates of various debt finance sources.

The cost of equity presents the rate of return expected by shareholders. Calculation of the cost of equity is the most complicated part of EVA calculation. The most often method of its computing is Capital Assets Pricing Model (CAPM), but this method can be used only for the company, whose shares are listed on the recognized stock market. CAMP uses Beta coefficient, which measures the volatility of a company's stock price and reflects market risk. Cost of equity using CAMP is calculated as follow: [6]

$$Cost\ of\ equity = Risk\ free\ rate + (Beta \times Equity\ risk\ premium) \quad (14)$$

$$Equity\ risk\ premium = Market\ risk\ premium - Risk\ free\ rate \quad (15)$$

The constant dividend growth model, build-up model and Arbitrage Pricing Model are another methods used to determine cost of equity. [5]

According to Young and O'Byrne the WACC for the most publicly traded companies in US computed by CAPM and at a market risk premium 5 % is between 8 and 11 percent. They also point out that WACC in other developed markets such as Germany or Canada

are similar to those in US, slight differences coming from different rates of government bonds. [8]

There is an existing link between EVA and WACC. EVA can be increased by following ways:

- Increasing the NOPAT generated by existing Capital
- Reducing the WACC
- Investing in new projects where the Return on Capital exceeds the WACC
- Divesting Capital where the Return on Capital is below the WACC

4.2 Application of EVA

4.2.1 EVA as a company performance measure

As is mentioned above EVA is one of the modern performance measures. Recent management trends have emphasized the importance of shareholder value creation as the main goal of any company activity, therefore the ability to create the shareholder value is perceived as the main business performance measure. But consequently two questions arise. Why is EVA better then the traditional performance measures and why should EVA be a superior performance measure as compared to other performance measure? [6]

First of all, the traditional financial measures such as earnings, profitability ratios, cash flow ratios and performance ratios are not adequate because they either do not promote shareholder value creation or are very complicate to implement in managing a company. Further they do not reflect the impact of inflation and have other limitations which have been mention above. [6]

Secondly, EVA advocates claim that EVA should be use as a superior company performance measure, because:

- it is nearer to the real cash flow of the company,
- it is easy to calculate and understand,

- EVA measures a operating performance and financial results can be liked to ongoing business activities and decision making,
- it is measurable in business time periods,
- it is easy to communicate to the managers,
- it is linked with shareholder value creation,
- it has a higher correlation to the market value of the business entity,
- its application to the management compensation system can reduce the disparities coming from different stakeholders interests toward a common goal and prevent the value destruction. [6, 9]

Considering all the facts mention above, EVA seems to be a very useful value – based management toll and performance measurement.

4.2.2 EVA as a management compensation tool

As was outlined above, EVA is not just a performance measurement tool, it also plays very important role in the incentive compensation system. [7] The main goal of the incentive compensation system is to ensure the alignment of management and shareholders interests. Very often the managers prefer to create a profit in short term than create shareholder value over the long term and value is destroyed. EVA ensures closer alignment with shareholder value than any other traditional measurement, because it recognizes the cost of capital. But EVA can not work by itself; it has to be incorporated into the incentive compensation system within a long term period. Otherwise, current EVA could be improved at expenses of future EVA and shareholder value. [16] The purpose of the incentive compensation system is to motivate managers and other employees to work harder and smarter and reward them for actions that increase shareholder value. Consequently managers are much more focused on increasing the shareholder value and are willing to sacrifice the goal or objective they have pursed before. [17] According to Savarese EVA provides a great way how to motivate the managers and also improve the company's financial performance. [6]

Traditional variable pay plan

Traditional variable pay plan is the most popular approach among the European firms. A target bonus is paid for achieving revenues – based, profit – based or asset – based incentive measures. The most common measure is the operating profit, but various companies can use various combinations of differently based measures. Typical characteristic of this approach is the bonus is paid after a threshold level of performance is attained. [8]

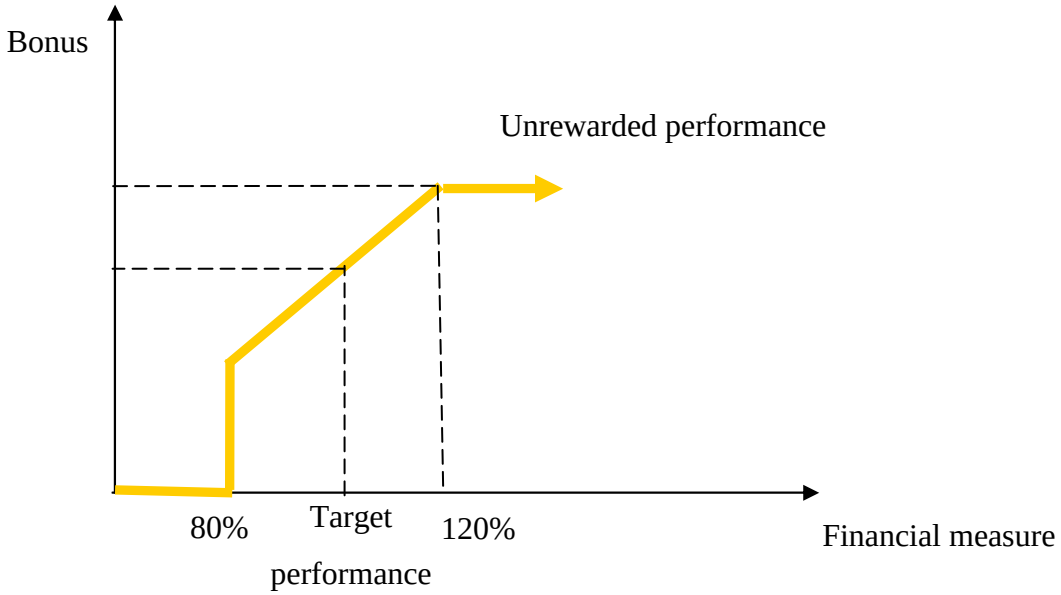


Figure 1. Traditional variable pay plan [8]

There are a few limitations coming from the features of the traditional variable pay plan:

- The performance measure is not linked to shareholder value creation
- There is a performance zone created by the threshold of the performance and the cap on the bonus payout, which motivates mangers to manipulate performance and does not motivate them to perform as much as possible.
- The bonus is usually a modest percentage of salary, so managers are not sufficiently motivated. Further, the new threshold is based on the performance from the last

year; therefore managers have to think about their performance. In case, they would achieve really high performance this year, they might not be able to achieve a new higher threshold next year. As a logic consequence the managers manipulate figures and performance. [8]

EVA Based Bonus Plan

The centerpiece of the EVA based incentive bonus plan is the goal setting and timetables for EVA improvement. Goals are usually set up in advanced for five years period. The EVA bonus system is usually applied on the top and middle range management, but some pioneering companies try to extend the system also to the shop floors. [7]

There are key elements necessary for EVA bonus plan:

- Bonus is linked to increase in EVA.
- There is no floor or ceiling on the bonus.
- The target bonus is generous.
- A bonus bank is established.
- Fixed percentage interests that are still the same even if the performance exceeds or is below the expectations.
- Analysis of competitive compensation levels in order to set the level of our compensations.
- Setting expected EVA improvements, they must be consistent with a cost of capital on the market value of the shareholder's investments.
- Keeping the compensation at the competitive level. [7]

The Modern EVA Bonus Plan

EVA bonus plan has gone through the several evolution steps, from the pure X plan, through the XY plan to its final modern version. The modern EVA bonus plan eliminates the weaknesses of the two previous plans and provides a complex system for management remuneration.

The core centre of the modern bonus plan is to determine three key parameters that are necessary for bonus computing. This procedure is called bonus plan calibration.

1. It is necessary to identify the expected EVA improvements; expected EVA improvements must achieve at least the level of the cost of capital return on the market value of shareholders' investments. In other words, the expected investor return on the company's market value has to be calculated. If the managers achieve this amount the target bonus is earned. If they outperform the expected improvement the target bonus is exceed, if they under perform they do not obtain any bonus.
2. Target bonus is based on the competitive compensation analysis which ensures that the firm's managers are rewarded at the same level at the managers of the other comparable companies. It also ensures that the management compensation costs are not as high as it could be without the analysis.
3. As the last step EVA interval has to be computed, in other words we calculate EVA shortfall that causes zero return to shareholders. There is a simple logic, if shareholders do not receive any return, managers earn a zero bonus. [8] First off all, the expected return on the company's market must be determined. The expected return is computed as following:

$$Expected\ return = WACC \times Market\ Value \qquad (16)$$

Secondly, the expected market value return is converted to an equivalent annual economic profit. The economic profit equivalent is computed as following:

$$EVA\ interval = Expected\ return / ((1+WACC)/WACC) \qquad (17)$$

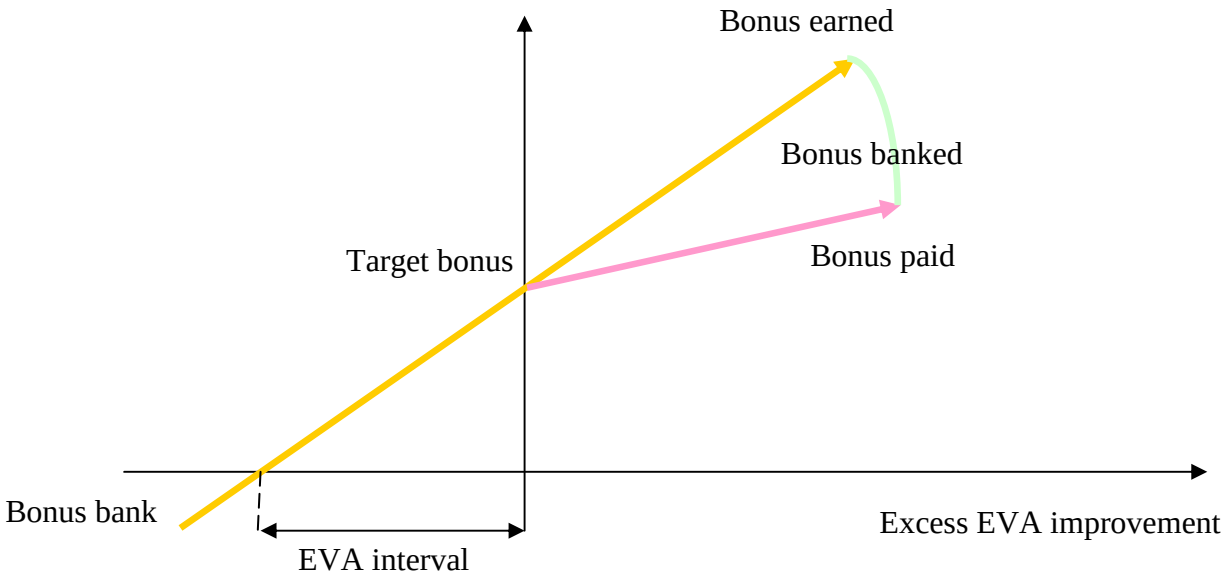


Figure 2. Modern EVA bonus plan [8]

The bonus formula of the modern EVA plan is calculated as following:

$$Bonus = Target\ bonus + y\ \%\ (\Delta\ EVA - EVA\ improvement) \qquad (18)$$

Δ EVA - real EVA change in comparison to previous year ($EVA_1 - EVA_0$)

The main advantage of EVA improvement, in comparison with the other two versions of EVA bonus plan, is its applicability to all companies. It can be apply also to the companies with the negative EVA. Target bonus is a bonus earned for reaching expected EVA improvement; it means that excess EVA improvement is zero. Consequently the bonus is credited to a bonus bank.

The bonus bank is a mechanism which extents the manager's time horizon, managers are forced to take a longer view on the company performance. Bonus bank presents a deferred compensation. With the bonus bank the bonus is not paid out in full, but it is paid out in subsequent years. There are two versions of the bonus bank.

In the first one, one third of the accessed bonus is kept by the bank and two thirds are distributed in cash. If EVA decreases in the following year, the bank is debited with one third of any remaining funds. The second version is called "all in bank", the entire bonus is withheld by the bonus bank and one third of the funds can be drawn down each year. When

the bonus bank is negative, no bonus is paid. The bonus bank reduces the incentives to manipulate information, figures and decisions taken in order to improve current performance, because the superior performance must be sustainable. If not the bonuses are not paid in the following years. This system puts much of the executives' compensation at risk for an extended period and makes the bonus dependent on further performance. [7, 17]

EVA incorporation into traditional variable pay plan

In many companies the implementation of EVA based compensation system may not be very easy and quick process. Therefore, in the very first step of EVA based compensation system implementation EVA might be just incorporated into existing variable pay plan. There are a few simple and sensible modifications that can improve the link between the management compensation and shareholder value. [6]

First of all, the main existing accounting measure can be completely replaced by EVA, or in the systems where two or three financial measures are equally weighted, EVA can be given the dominant weight. Using EVA as a primary measure avoids the potentials conflicts between other financial measures, because those measures can have different value drivers. It could cause that the operating profit will increase, but EVA will decrease because of the capital costs. [6]

Secondly, multiple revenues – based, profit – based and assets – based incentive measures should be reduced as much as possible. Most of them can be captured in EVA in a more dynamic and responsive way. [6]

Further, the investor economic profit should be link with incentive targets. It means that variable pay performance targets are the same as the baseline economic profit budget. In other words, the company will compute, what value of revenues – based, profit – based and asset – based incentive measures needs to achieve desired value of EVA. [6]

The evaluation of EVA based compensation scheme

According to Stern and Shiely if the EVA management system is to be effective it has to be linked to the firm incentive compensation scheme. [7] In 1997 Wallence carried out the

research examining the managerial decision making between 40 firms using EVA based compensation plan and 40 firms using a traditional compensation plan. He found out that after adoption of EVA based compensation plan, EVA income increased. He concluded that EVA managerial plans are more effective when they are incorporate into the compensation scheme. Riceman, Cahan and Lal, in their paper, emphasize the understanding to EVA managerial and bonus system is the essential to create economic value added and improve the company performance. They go on that the effect of EVA bonuses and understanding can differ for different parts of the firm, therefore they claim that EVA may not be appropriate for all parts of the company. Their research, using a sample of 52 EVA bonus scheme managers and 65 traditional bonus scheme managers, proves that EVA understanding is not always high. The research indicates that as long as the managers on the EVA bonus scheme understand the EVA concept they outperform managers on the traditional bonus plan. [17]

On the other hand EVA based compensation has also its limitation. According to Young and O'Byrne some corporate or national cultures might feel uncomfortable with such incentive scheme, they can feel under the pressure and they might resign all efforts to improve the performance. Secondly, it is very hard or almost impossible to implement EVA based compensation scheme in some high cyclical industries, this thought is also supported by Savarage. He claims that implement such plan in the cycle industry is very difficult because of the high volatile performance and too high risk related with this performance. [17] Further, EVA is not the best choice for the star up companies or the operations in emerging markets. [8]

4.3 Evaluation of EVA

4.3.1 Virtues of EVA

One of the advantages of EVA is its flexibility. EVA can be use as a measurement system for a company as a whole, but it can be easily applied to the individual divisions, factories, stores or product lines. [7]

EVA is a perfect mean that improves business literacy because of its easy understandability and conceptual clarity. Even for non financial specialists it is easy to understand the EVA concept and it offers the direct link with shareholder value. [9]

EVA presents a complex performance measure that is linked with shareholder value creation; it removes the influence of accrual accounting. EVA, when used as an incentive measure, improves value of the firm and makes managers and employees fell as a contributor of company performance. The managers on the EVA based incentive bonus plan outperform those on the traditional bonus plan. [17]

EVA provides to the firm's managers the clear instructions how to improve EVA and the company performance. There are three main options, they can improve returns with existing capital, employ capital productively or reduce the capital costs. [6]

EVA bonus system increase agency problems, EVA may be appropriate to unite the interests of owner, managers and other employees. The optimal capital structure might be provided by EVA by making the firm properly levered. Motivating bonus system may motivate managers to exceed the performance level. [18]

4.3.2 Limitations of EVA

The opponents of EVA argue that EVA has also its limitation. EVA, by itself, completely ignores the importance of different organizational structures; it presumes that the managers are all capable and have all important information necessary for their decision making. Further, EVA does not provide any framework for the strategic issues. [17]

Some companies criticize EVA to be a short – term performance measure, so it indicates that EVA might not be the appropriate measure for long – term investment oriented companies. [18]

EVA does not deal with the problem how to evaluate the synergy coming from the cooperation among different business units or divisions. The other opponents criticize its complexness and being mostly based on the book, rather than market, values. [17]

Companies using EVA might suffer from underappreciated new assets in their balance sheet and it might cause the negative EVA even if the firm would be profitable in long term. Further, there is a doubt about true EVA of long – term investments, some companies claim it can not be measured objectively because future returns can not be measured, they can only be subjectively estimated. [18]

EVA is not suitable measure for the companies in high cycle industries and for set up business and companies operating in emerging markets. [8]

4.4 Implementation of EVA

Whole EVA concept and Value Based Management is about changing managerial behavior and attitudes towards the value creation. Therefore its implementation must begin at the very top of the company, it means with the CEO and executive board. This part is the most critical for EVA implementation success. If CEO, executive board or mangers do not understand EVA and its contribution or do not feel enthusiastic about it, how can they communicate EVA message in proper way to their inferiors and ensure the overall success? The company must make all its employees realize that creating wealth is the end of the whole process and increasing EVA is the mean. [17]

Implementing EVA concept requires keeping it simple, understandable and accountable. [2] This claim is also supported by Wallence and his research findings. Wallence concludes the EVA measure must be fully understood by all persons involved and its implementation must be kept simple. [17] Ehrbar suggests that EVA must replace everything else, otherwise it will not be simple and understandable, but it will only make the managing process more complex. [2]

Young and O'Byrne suggest the following steps when implementing EVA: [8]

Step 1: Establish buy – in at the board and top management levels.

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

The following question should be answered:

- How will EVA measurement centers be identified? The most common way is to identify EVA centers on the basis of the existing profit centers. The most appropriate mean is to calculate EVA at the level of the business units with significant income statement and balance sheet accountability.
- How far down in the organizational hierarchy will EVA be calculated and applied? Based on the EVA proponents' experiences EVA should not be calculated too deep in the organization, because those attempts have not been very successful.
- Who will be responsible for its identification?
- How will be EVA calculated?

- What adjustments will be made?
- What costs should be used, divisional or corporate costs of capital?
- Does the accounting system needs any changes related with the adjustments?
- How often will be EVA calculated?
- How it will be reported and to whom will be reported?

o How the management compensation scheme will look like?

- Who will be cover initially, and will be there a gradual expansion of participation in EVA based incentives? The prevailing trend is that at the beginning of the implementation of EVA based incentive compensation system only the senior managers are on the bonus plan and gradually it is expanded on the inferior management. [7]
- What proportion of target or compensation is covered by the EVA based incentive compensation plan?
- Sensitivity of bonuses to EVA performance
- Will there be deferred components, and if so, for which managers?
- The role of stock options in the compensation program?
- Mix of divisional versus company wide or EVA group bonuses?

Step 3: Develop an implementation plan.

o Who will develop it? Many companies appoint for this task a full - time EVA coordinator and his committee. Their main task is to work out the technical details of EVA implementation (IT support) and ensure the legal side of the compensation scheme.

Step 4: Set up the training program.

o Who will need the training?

o Who will be responsible for the training execution?

o Where will be training executed?

- How will the training needs to be executed?
  - Number of training sessions per employee?
  - How will the concept be explained?
  - Ongoing training after initial implementation?

Six key factors promising successful EVA implementation by Stern and Shiely [7]

1. Viable business strategy and appropriate organizational structure – If the EVA implementation should be effective and successful, the company must have a viable business strategy, EVA by itself, can not rescue the company strategy or unprofitable product portfolio. [7] Young and O'Byrne claim that also the organizational structure plays very important role, they conclude that matrix structures benefit less from EVA implementation then other structures. In such structure is very difficult to establish accountability for compensation purpose. [8]
2. Comprehensiveness – In order to achieve the full synergy of Eva implementation, the company should implement all elements of EVA such as the measurement system, the management system and the EVA based incentive system. [7]
3. The EVA based incentive plan is essential – Stern and Shiely recommend its implementation as far down in the organization as possible, but on the other hand Savarase claims that this effort is not always very successful. [6]
4. The comprehensive training program – The training program should be delivered to all levels of employees, it should reach down to the shop floor as well.
5. CEO and executive board's support – The EVA implementation and value creation has to be perceived and considered as the mission of the company.
6. CFO commitment – Chief financial officer or controller has to be involved in the same way as the CEO. They have to believe in the mission and support it, the common problem is that these specialist have an even greater problem focusing on shareholder value creation than other managers. [7]

According to Savarese the full implementation of economic profit in a large organization will take three to five years to complete. He suggests three stages of the EVA implementation [6] :

"*Stage 1:*

- *Shareholder awareness education*
- *Design a company specific economic profit measure*
- *Incorporate economic profit into financial reporting as quickly as is possible*
- *Modify transfer pricing and financial evolution techniques to include a capital charge*
- *Modify planning, budgeting and incentive targets to incorporate economic profit*

Stage 2:

- *Expand the scope of education programs*
- *Add or modify EVA adjustments as necessary*
- *Undertake pilot value driver programs in various areas of the company*
- *Incorporate scenario / option analysis in capital budgeting*
- *Expand participation in variable pay linked to economic profit or value drivers*
- *Evaluate cost allocation, capital budgeting and other financial evaluation techniques*

Stage 3:

- *Incorporate value principles into long – term strategy development*
- *Expand participation of variable pay, and increase executive pay wealth sensitivity*
- *Evaluate organizational redesign to decentralize accountability and responsibility*
- *Expand areas where EVA is measured*
- *Maintain continuing education programs"* [6]

4.5 Decision about EVA suitability for the company

The Company XY s.r.o. is a strong company with the long tradition and pretty stable position on the market. The company does not belong to the high cycle industries; it does not operate in emerging markets. The company has a flat organization structure, which is very suitable for the EVA implementation. During the last year the company has successfully implemented the new information system SAP. The company has new executive director, who is very creative and likes to try new approaches; he has also a strong support of the managers. We could say the company gets used to changes and it is flexible. The incentive compensation system of the company is based on the improvement of the financial measurements, so the employees are used to meet the given goals. Therefore, if the company implements the EVA based compensation system, the employees should not feel under the pressure and resign all efforts to improve the performance. Considering all mentioned information we conclude that EVA implementation is suitable for the company.

II. PRAKTICAL PART

5 COMPANY PROFIL

5.1 History

The Company XY s.r.o. was established in 1950 and has gained a position of significant producers of fasteners since the time. In 1991 the company was privatized and has begun to concentrate on foreign markets. In the certain years its foreign export presented almost 80% of total export. In 1997 the company was sold to new owners. During the following years an overall restructuring of the company was made. The number of employees was reduced. The arrangement of manufacturing program by limitation of some commodities was made with regard to business situation. Regarding to more intensive focus on the customers in railway area the company made a progress and gradational variation of manufacturing equipment to machines with higher technical performance. At the beginning of April 2008 the company was bought by TRINECKÉ ZELEZARNY a.s. and joined the Group TRINECKE ZELEZARNY, a. s. / MORAVIA STEEL a.s. (Group TZ/MS). In 2008 the company extended the production of forgings of ball races by hot from steel. For this purpose the company has acquired the new special machinery from Japanese company Sakamura.

Vision

The long-term prosperous and stable company with leading market position railway screws and forgings axially symmetrical parts in Europe.

Strategy

The main strategy goal is to increases the proportion of products with higher added value, using specialized high-performance forging lines.

The basic pillars of the strategy are four key areas:

„PARTNERSHIP – TECHNOLOGY – PEOPLE – MANAGEMENT“

5.2 Production

The company produces fasteners, such as screws, nuts, special fastening materials and forgings of a similar type. The company uses highly specialized machinery, which ensures an efficient production by hot forging and product final treatment. Special automatic

forging machinery is used for hot forging process. The production lines enable to produce forgings made of steel wire and steel bars, using the induction middle frequency heating. Due to portfolio expansion, the company has improved its production technology by purchasing of new machinery for forging and annealing bearing ring forgings. The main production portfolio consists of railway fasteners, which are exported into many countries worldwide. Due to sales expansion and new market opportunities, the company has established a subsidiary to finalize forgings of screw spikes in Turkey also.

The company obtained the certificate ISO 9001 of company Lloyd´s Register Quality Assurance and belongs to the best group of German railways DB AG suppliers. The line of products is approved by other European railways, such as Spanish RENIFE, Swiss SSB or British NETTWORK RAIL.

The company exports to following destinations: Slovakia, Austria, Germany, Italy, France, Portugal, Spain, Greece, Switzerland, Slovenia, Croatia, Mauritania, Kazakhstan, Pakistan, Chile or Malaysia.

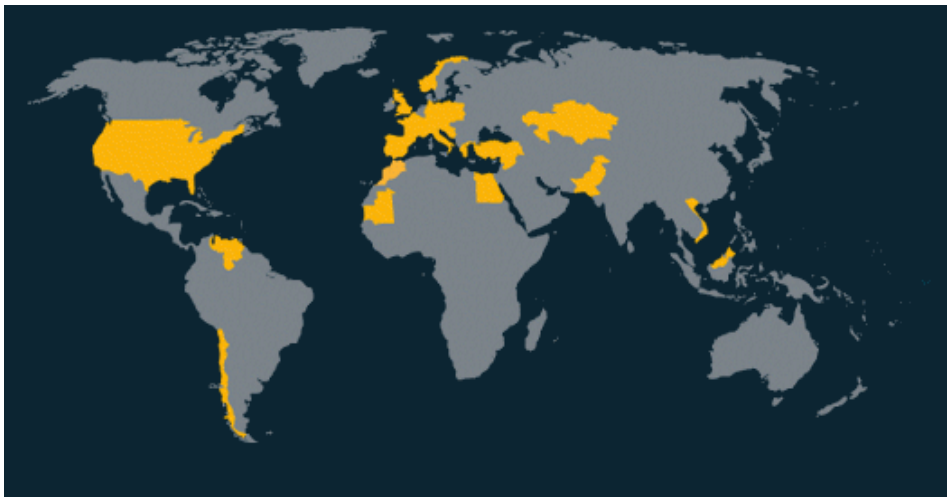


Figure 3. The export destinations of the company [www.sroubk.cz]

5.3 Metallurgy and metal processing industry analysis

Metallurgy and metal processing industry is considered as a key industry, because the metal processing produces the basic input for the other industries such as automotive industry, engineering industry, naval, cosmic and other processing industries. The metal processing industry is highly funds and energy demanding. The strategic marketing implementation requires an allocation of high volume of funds. The industry requires huge and extensive

long term technology and equipment investments with long life period (at least 20 to 30 years). The industry is depending on foreign material import. The companies belonging to ferrous metallurgy produce the basic metallurgical products. Czech ferrous metallurgy production is concentrated in to three dominant companies – ArcelorMittal Ostrava a.s., Trinecke Zelezarny a.s. and EVRAZ VITKOVICE STEEL a.s..

During the recent years the industry development has been quite unequal. The noticeably higher growth in 2004 was followed by the slump in 2005; the main reason was high level of inventory and the effort to keep the prices. In 2006 the rate of industry growth increased by 9, 7%. Consequently, in 2007 the rate of industry growth decreased by 12 %. In 2008 the industry growth development was influenced by several factors. The most important of them were the high prices of raw materials, demand decrease and high volatility of Czech crown exchange rate. Some specialists claim that the development could be also influent by the impact of the financial crisis that negatively influenced the value of short and long financial investments. In the following table (Tab. 3) you can see the development of the individual performance characteristics of the industry.

Tab. 3. The industry performance characteristic overview [own elaboration]

Ferrous Metallurgy Production	**2006**	**2007**	**2008**
Sale Revenues (thousands CZK)	137 780 633	130 947 936	137 732 155
Book Value Added (thousands CZK)	31 442 618	35 455 265	27 719 102
Number of Employees (persons)	23 029	21 700	21 803
Total cost (thousands CZK)	150 402 271	129 181 930	153 264 415
Personal cost (thousands CZK)	10 423 428	9 767 730	10 546 108

Industry prospects

Engineering including automotive and building industry will remain the main customer of the metallurgy and metal processing industry. In product portfolio there will be the movement from the existing products to the products with higher utilization as the necessary step to keep products vitality. As the consequence of privatization by the global investors the strategy of those investors will form the product and technology portfolio of the metallurgy and metal processing industry. The most extensive issue of the industry is the way how the EU will solve the emission trading scheme (ETS) after 2012. In 2012 the

first commitment period of the Kyoto Protocol will expire and the Czech Republic will be depended on the amount of greenhouse gas allowances negotiated by EU. If an amount for the Czech Republic decreases, it can negatively influences the price of energy in metallurgy and metal processing industry.

6 MICRO AND MACRO ANALYSIS OF THE COMPANY

6.1 Macroeconomic analysis

6.1.1 PESTEL analysis

Political and legal environment

The Czech Republic offers quite level of political stability. It provides higher rate of stability then other states after the transition from command economy to open market economy. In 2007 the Czech Republic graduated from the European Bank for Reconstruction and Development, this graduation has proved its economic and political stability and made it very attractive for foreign investments. CzechInvest research shows the investors choose the Czech Republic for more challenging investments; on the other hand the investments into automotive industry have decreased in 2009. [10] The biggest weakness of the Czech legal system is very long legal proceedings and its enforceability. The Czech Republic provides effective labor legal framework, it means that Czech employer are not tied by so many restrictions as the employer in other EU countries. Considering green gas emission trading, no conditions or prerequisites for allowance trading have been set out by Czech legal regulation, so there is no need to have special qualification, practice or education. [15]

Social – cultural environment

Demographic trend and expected immigration incensement shows the Czech Republic will suffer from an ageing population. Very high percentage of Czech population finished the secondary education (97%), but only 14% of population earned the university degree. In comparison with 24 % which presents the European average, it is very law number. Further for the Czech Republic is typical low labor mobility, mainly, because of non – flexible housing market and unwillingness of Czech population to move because of the job. [15]

Technological environment

Considering the technological environment, the Czech Republic has good internet and telephone connection accessibility; on the other hand there are a big percentage of households that do not have internet access and personal computer at all. The government supports the research and development by EU subsidies, the governmental public research

and development expenses present 0,61 % of HDP, total research and development expenses are 1,54 % of HDP, but still Czech Republic do not have enough new own technologies and has to import them. The Czech Republic provides very good research and development (R&D) background. It has research institutions and researchers of high quality and also provides the capacity for innovations, but there is a missing connection between R&D and private capital. [15]

Environmental environment

The Czech Republic has been implemented Directive 2003/87/EC establishing a scheme for green gas emission allowance trading with the European Community. Around 400 Czech companies are integrated in the EU ETS system. In 2008 Czech companies saved 5.4 million permits, with each allowance equal to a ton of CO2. The drop was caused by higher use of emission-free sources such as nuclear energy, a growth in power production from biomass and an overall fall in electricity production which decreased by 8.4 percent. [11]

Economic environment

Geographic position predetermines the Czech Republic a transit country, the density of communication network is very good, but the problem is its quality. Total debt ratio of the Czech Republic in 2008 was 29, 8% of HDP, this number and the slump of public finance is quite alarming. Total indebtedness of the Czech Republic has increased by 100% during the last 10 years. According to Global Competitive Index of macroeconomic stability the Czech Republic is placed on 43rd position out of 113 countries. The economy is resistant to the problem of imported inflation because of the strategy of ČNB and its inflation goals (Czech national bank). If the commodity and energy prices do not increase by leaps ČNB should keep the current level of inflation. [15]

6.2 Microeconomic analysis

6.2.1 Porter's five forces analysis (PFFA)

Bargaining power of buyers

The main customers of the company are railways mainly because of its specialized production. 30 % of the company production is purchased by the Czech buyers and 70% of the production is exported aboard. The most important customer of the company is German trading company Vossloh which takes 40% of total production, further important customers are companies Sercomst (Spain) and Wape. The company has an excellent reputation among the buyers who are satisfied with provided quality and service. The company is in very specific situation on the market and we can conclude that the barging power of buyers is quite high.

Bargaining power of suppliers

Production and overhead material is purchased from domestic and foreign suppliers. The main supplier of the production material (rolled and drawn material) is TRINECKE ZELEZARNY a.s. The company is owned by its supplier; so basically, it is depending on the price stated by TRINECKE ZELEZARNY. Overhead material is purchased form several small suppliers which have been chosen by tender. Considering the information above, the barging power of suppliers is very high.

Threat of substitutes

The company produces fasteners, such as screws, nuts, special fastening materials and forgings of a similar type. The production is oriented on the railway companies; it means railway track fasteners. Nowadays, there is no direct substitute of this kind of fasteners. The new substitute would require a completely new technology and it would be really expensive for railway companies to replace all existing fasteners. So, we can conclude the threat of substitutes is very low.

Rivalry among existing firms

Considering the Czech market the Company XY s.r.o. has a dominant, almost monopolistic position. In the Global view, the competition and rivalry is very strong. The strongest

existing competitor of the company is German company ZERBST GmbH. Further it is French company owning the patent of Pardrol system technology. Pardrol system technology produces competitive flexible type of railway track fasteners. The big threat presents Chine and other countries with the cheaper labor. Chine has very cheap labor and inputs, so they can offer much more competitive prices to the customers. The only advantage of the Company XY s.r.o. is the weight of its products. The railway track fasteners are and need to be quite heavy, what makes their transport for Chine quite expensive and destroys its competitive advantage. Therefore for the time being Chine is oriented on other market segments. In summary, rivalry among existing firms is high.

Threat of new entrants

As was already mentioned above the ferrous metallurgy production requires a high initial financial capital. The strategic marketing implementation requires an allocation of high volume of funds. The ferrous metallurgy production requires huge and extensive long term technology and equipment investments with long life period (at least 20 to 30 years). The company is depending on the production material supply. Considering the fact that most of companies producing this material such as ArcelorMittal Ostrava a.s., Trinecke Zelezarny a.s. and EVRAZ VITKOVICE STEEL a.s. already own the ferrous metallurgy processing company or have very strong cooperation with it. We can assume that the new entrant would have very big difficulties to find a supplier of production material at the competitive level. Based on the given facts we can conclude the threat of new entrants is quite low.

6.3 Internal analysis

6.3.1 Analysis of existing performance measure system

In September / October the company XY s.r.o. draws its annual financial plan for following year. The financial plan is created within the information system SAP. At the beginning of the each month the operating plan for the given month is drawn. At the end of each month the company XY s.r.o. compares the reality with the operating plan for the company's own purpose. Further, at the end of each month it compares the reality with the annual financial plan, this evaluation reports to the mother company. The company uses the following main performance measures:

- ROCE (%) = [(EBT + Interest Expenses – Interest Income) / (Stockholder's Equity + Total bank credits)] * 100
- Current ratio = Current Assets / Current Liabilities
- Total Debt ratio (%) = Liabilities / Total Assets
- Return on sales before taxes (%) = (EBT / Sales)
- Average price of realization (CZK/t) = Revenues from own production / Amount of sold products (production)
- Processing costs (CZK/t) = (depreciation + personal costs + operating costs – costs of inputs – material waste) / volume of production

Usually the company meets its expected goals, so there is no need to implement necessary immediate steps during the year. In long term view, the company aims to improve the process in whole company in order to improve its overall performance.

In summary, the company measures its performance according to the traditional performance measures. It means those metrics are based on the accounting figures and therefore evaluate the company performance for the previous and current period, but they do not count in the future income and long term impacts of the investments, which have been already done. They do not reflect the inflation impact, the level of risk and the value of money over the time. The metrics provide the information about the company performance, but there is a missing link with shareholder value, the shareholders are not able to evaluate what value is created for them. The imperfections of the current measurement system could be reduced by implementing some of the modern metrics such as cash value added, economic value added or any other modern metrics which would cover the imperfection mentioned above.

6.3.2 Analysis of existing compensation scheme

The main aim of the analysis is to provide the basic frame of the existing compensation scheme in the Company XY s.r.o.

Nowadays the company has 301 employees who are classified into 12 pay scale levels. There are two kinds of the compensation bonus schemes within the company. The mangers

and specialists are rewarded based on their managerial contracts. The rest of the employees are rewarded by total wage.

The total wage of employees consists of:

- Scale wage - is fixed to the pay scale level
- Bonus wage – is various for various group of the pay scale levels

Bonus wage is determined as follow:

1. Group (pay scale level 1 – 4) – The bonus is determined as a percentage of the scale wage.
2. Group (pay scale level 5 – 9, overhead employees) – The bonus is determined as an amount in CZK.
3. Group (pay scale level 5 – 9, productivity bonus) – The productive bonus is determined as an amount in CZK. The rate increases or decreases according to the performance of the individual employee. This bonus is applied on the employees which work is based on the efficiency standards.
4. Group (pay scale level 10 – 12) – is a managerial and specialist pay scale levels which are rewarded based on their individual managerial contracts.

The bonus is earned if:

- the employee meets the all targets determined by its superior for the given month
- the employee meets all its responsibilities coming from legal, environmental policy and disciplinary regulations.

Rewards

The company provides three different kinds of rewards:

Extra bonus – The extra bonus is provided as a reward for the achievement of the good working results and meeting the goals of the annual financial plan. The extra bonus can be determined as an amount in CZK on the individual employee or as a percentage of the scale wage. It depends on the decision of the executive board of the company.

Target bonus – The target bonus is provided for the achieving very important tasks determined by the CEO in advance. The target bonus has a form of written contract that specifies the terms of the reward such as the deadline of the task and the amount of pay bonus.

Anniversary bonus – The anniversary bonus 2500 CZK is paid to the each person who achieves the age of 50 years. It is the reward for the long lasting good work and good results. The second anniversary bonus 10000 CZK is paid to the each person who is being retired.

Managerial rewards

Managerial rewards are determined by the executive board individually for each year. The current basic reward presents 50% of the annual managerial salary. The basic reward consists of three components:

- Part A presents 50% of the basic reward; it is earned when the company reaches earnings before tax 113.7 million CZK. The reward increases by 2%, every time when the profit increases by 1%.
- Part B presents 30% of the basic reward. It is earned when the manager accomplishes its personnel tasks established by the executive board. If not the rewards can be reduced, it depends on the executive board decision.
- Part C increases by 1%, but no more than 20%, if the total profit of the company and other companies in the group increases by 1%.

In summary, the Company XY s.r.o. uses the traditional incentive reward system. It means the bonus is tied to the expected financial or other performance goals, but it is not oriented on the shareholder value creation. The company can meet its financial goals, but it does not mean it creates shareholder value. The bonuses of the lowest pay scale levels are determined as a percentage of the scale wage, so this percentage can motive them to achieve the given goals, but not to outperform it. Considering the fact we are talking about the lowest pay scale levels with the lowest wages, the second question arises: How big is this percentage, is it big enough to motivate them to achieve at least the given goals? The first two groups are not motivated to outperform as much as could be possible.

Regarding to the managerial rewards (bonuses), the bonus system is more stimulating. The bonus is tied to the increase in profit, but the bonus rises by 2% only if the profit increases by 1%. If the profit increases less then 1%, the bonus does not increase at all. Such a system could motivate managers to defer the investments or some operations and the income coming from them for the next year, if they see they would not be able to increase the profit by whole 1% in current year.

6.4 SWOT analysis

The following figure (figure 4) presents the basic SWOT analysis of the company in order to supplement our basic picture about the company and its external and internal situation.

As we can notice, the company owns new special machinery Sakamura, this machinery is the only one in the Czech Republic, so we can consider it as strength. On the other hand this machinery is so new that even its producer does have enough experiences how to solve the problems relating with it. Because of the problems with its adjustment the company can not produce all the types of products which have been originally intended and Sakamura product line is limited and considered as the company weakness.

The company owns the unique BSR machinery, which is the only one over the world. It was developed by the technical modification of the company's engineers.

The further item which needs to be explained is marketing. The company does not do almost any marketing except sponsorship. It means all contracts of the company are based on its long time lasting tradition and great reputation among customers. The company feels the strong need to develop this area, but it is very hard for it to find the right person. The marketing in this business area is very specific and the marketing person needs to have the marketing education or experiences as well as technical education or knowledge.

The big threat for the company presents Chine, because their labor and material is cheaper than the labor and material in the Czech Republic. On the other hand the railway fasteners have to be and are very heavy, the weight of the fasteners makes the transport very expensive. Since now the transport expenses are higher than the potential profit, so Chinese producers are focus on other lighter type of the products.

Strengths	***Weaknesses***
• Certificates ISO 9001, ISO 14001 • Information system SAP • High product and service quality • Long time lasting tradition and good reputation among customers (1950) • New special machinery (Sakamura) • Strong financial position • Shared know how and new synergies • Quick reaction on the customer's needs • Know how of employees • Unique machinery (BSR machinery) • Strong connection with material supplier	• Marketing • Technical condition of machinery • Capacity of tool room • Ageing specialists • High share of manual operations on some machinery • Limited line of Sakamura products
Opportunities	***Threats***
• Size and expected growth of railway fasteners market • Better usage of the long time lasting relationship with the company Vossloh. • Expected growth of mining market • New education programs announced by EU • Better usage of the synergies coming from the connection with Group TZ/MS	• Demand decrease because of the impacts of financial crisis • High dependence on the company Vossloh (40 % of production) • Potential substitutes – new technology of fasteners, Pandrol system • Entrance of China and its products • Delay of railway tenders • Poor payment morality, pressure on prices • Polish competitors FEZ and Srubena Žiwiec (in special fastening materials)

Figure 4. SWOT analysis of the company [own elaboration]

7 FINANCIAL ANALYSIS

In this chapter the financial analysis is carried out, all extra tables used for the financial analysis of the company and industry are attached in the appendix P I.

7.1 Balance sheet analysis

During the period 2005 - 2007 the value of fixed assets is increasing, but the proportion of fixed assets on total assets is decreasing, this decreasing trend continues till the end of 2009. In 2008 and 2009, the fixed assets decrease by 31% and 3%. Intangible assets have decreasing trend as well. Tangible assets are increasing, because the company is purchasing new equipment and machinery. In 2008 the company sold the capital interests in its subsidiary companies, as a consequence of the sale the long term investments decreased by 100% and cash increased by 29067%. The share of current assets has increasing trend in the time, in 2008 and 2009 creates more then 50% of total assets, but in fact in 2009 inventory decreases by 29% and long term receivables by 19%. The company has manufacturing character; therefore inventory creates more then 20% of total assets (see Tab.4 and Tab.37).

Stockholders' Equity is increasing every year, considering no change in invested capital it means the company creates profit. From 2005 to 2008 other equity accounts are decreasing, in 2008 they decrease by 950%, in 2009 they increase by 12%. From 2005 to 2007 the profit of the company is divided and paid out to its owners (copartners). In 2008 the retained earnings increase by 183%, what means that company keeps the profit in order to insure and improve the financial stability of the company. From 2005 to 2007 the liabilities present more then 50% of total liabilities, since 2008 they have been decreasing. In 2009 the company dissolved the reserves, as a consequence reserves decrease by 100%. In 2007 the short term credits increase by 363%, it indicates that company take a credit in order to purchase new machinery Sakamura. In the remaining years the total credits are decreasing (see Tab.4 and Tab.37).

Tab. 4. The assets and liabilities structure of the company [own elaboration]

(thousands CZK)	2005		2006		2007		2008		2009	
TOTAL ASSETS	***523866***	***100%***	***615479***	***100%***	***718562***	***100%***	***713574***	***100%***	***649894***	***100%***
Fixed assets	385420	*73,57%*	391548	*63,62%*	447699	*62,30%*	307129	*43,04%*	298943	*46,00%*
Intangible assets	3839	1%	2138	0%	1449	0%	831	0%	286	0%
Tangible assets	152083	29%	155310	25%	212145	30%	306298	58%	298657	46%
Long term investments	229498	44%	234100	38%	234105	33%	0	0%	0	0%
Current assets	135435	*25,85%*	220289	*35,79%*	266960	*37,15%*	404674	*56,71%*	349188	*53,73%*
Inventory	83284	16%	156173	25%	161073	22%	207576	29%	146444	23%
Long term receivables	0	0%	0	0%	0	0%	83	0%	83	0%
Current receivable	50966	10%	63560	10%	105611	15%	116 515	16%	93 878	14%
Cash and cash equivalents, short term Investments	1185	0%	556	0%	276	0%	80 500	11%	108 783	17%
Accruals and deferrals	3011	*0,57%*	3642	*0,59%*	3903	*0,54%*	1 771	*0,25%*	1 763	*0,27%*
TOTAL LIABILITIES	***523866***	***100%***	***615479***	***100%***	***718562***	***100%***	***713574***	***100%***	***649894***	***100%***
Stockholders' Equity	248147	*47,37%*	272720	*44,31%*	324994	*45,23%*	430265	*60,30%*	458695	*70,58%*
Invested Capital	140000	27%	140000	23%	140000	19%	140000	20%	140000	22%
Other Equity Accounts	-4509	-1%	-3	0%	2	0%	-17	0%	-19	0%
Restricted Retained Earnings	10190	2%	13858	2%	14201	2%	14299	2%	14000	2%
Retained Earnings	27884	5%	44291	7%	60018	8%	169947	24%	235984	36%
Net Income or Loss (+/-)	74582	14%	74574	12%	110773	15%	106036	15%	68730	11%
Liabilities	275391	*52,57%*	342440	*55,64%*	392101	*54,57%*	280408	*39,30%*	190729	*29,35%*
Reserves	35150	7%	36000	6%	28000	4%	36000	5%	0	0%
Long term liabilities	11606	2%	13040	2%	13765	2%	20562	3%	23981	4%
Current liabilities	52162	10%	179029	29%	195003	27%	112961	16%	91328	14%
Total bank credits	176473	34%	114371	19%	155333	22%	110885	16%	75420	12%
Short term credits	176473	34%	12371	2%	57226	8%	34772	5%	34586	5%
Long term credits	0	0%	102000	17%	98107	14%	76113	11%	40834	6%
Accruals and deferrals	328	*0,06%*	319	*0,05%*	1467	*0,20%*	2901	*0,41%*	470	*0,07%*

7.2 Income statement analysis

7.2.1 Revenues and costs

The biggest proportion of revenues, more then 84%, is created by the product and service revenues, which indicate the manufacturing character of the company (see Tab.38). In 2006 the company retired from goods trading activities. In 2008 21.56 % of total revenues are created by revenues from the sale of capital interests, this unique growth was caused by the sale of the company's interests in its subsidiary companies. As the consequences of the sale, from 2008 the company does not earn any revenues from controlling interests. Before the sale the proportion of revenues from controlling interests was more than 3.56%. In recent years (2007 - 2009) more then 2% of total revenues are created by material revenues. However, we can notice that those revenues have decreasing trend; the slump of revenues could be caused by the decreasing customer interest because of impacts of the financial crisis, increasing price of steel and other production inputs.

Tab. 5. Revenues of the company [own elaboration]

		2005	2006	2007	2008	2009
I.	Merchandise revenues	1 982	0	0	0	0
II.	Internal activities	592 566	708 970	830 637	923 159	710 779
II.1.	*Product and service revenues*	*574 846*	*676 494*	*772 507*	*853 247*	*711 867*
II.2.	*Changes in inventory of own production*	*2 019*	*12 217*	*4 724*	*6 339*	*-23 689*
II.3.	*Capitalization of own production*	*15 701*	*20 259*	*53 406*	*63 573*	*22 601*
III.	Material and tangible asset revenues	35 777	9 585	29 476	42 543	15 599
III.1.	*Tangible asset revenues*	*29 735*	*1 128*	*3 520*	*13 705*	*249*
III.2.	*Material revenues*	*6 042*	*8 457*	*25 956*	*28 838*	*15 350*
IV.	Other operating revenues	2 398	1 942	676	1 782	2 837
VI.	Revenues from the sale of capital interests	12	0	0	272 725	0
VII.	Long term financial investment revenues	40 000	30 000	32 000	0	0
VII.1	*Revenues from controlling interests*	*40 000*	*30 000*	*32 000*	*0*	*0*
X.	Interest received	59	34	120	2 129	1 363
XI.	Other financial revenues	5 183	4 447	6 222	22 512	9 919
	Total Revenues	**677 977**	**754 978**	**899 131**	**1 264 850**	**740 497**

Tab. 6. Costs of the company [own elaboration]

		2005	2006	2007	2008	2009
A.	Costs of merchandise (goods)	1 631	0	0	0	0
B.	Costs of own production	439 383	528 526	607 472	691 515	511 622
B.1.	*Costs of material and energy*	*377 560*	*444 701*	*515 315*	*611 795*	*430 455*
B.2.	*Costs of service*	*61 823*	*83 825*	*92 157*	*79 720*	*81 167*
C.	Personnel costs	88 220	93 702	100 045	110 446	105 032
C.1.	*Wages and salaries*	*64 665*	*68 605*	*73 369*	*80 538*	*76 650*
C.2.	*Board member compensations*	*0*	*0*	*0*	*166*	*324*
C.3.	*Social security expenses*	*22 301*	*23 908*	*25 506*	*28 243*	*25 329*
C.4.	*Fringe benefits*	*1 254*	*1 189*	*1 170*	*1 499*	*2 729*
D.	Taxes and charges	1 247	569	596	1 075	690
E.	Depreciations of tang. and intang. assets	18 810	17 711	20 567	29 161	39 187
G.	Changes in reserves	10 868	1 384	-8 886	10 798	-36 378
H.	Other operating expenses	3 976	3 617	3 313	3 772	3 139
J.	Sold capital interests	1287	0	0	234 007	0
M.	Changes in financial reserves	0	0	0	79	-2
N.	Interest paid	8 704	6 412	8 162	7 912	4 399
O.	Other financial expenses	5 769	6 831	13 054	23 270	15 083
Q.	Tax (operating profit)	11 413	14 782	22 111	18 061	15 788
	Total Expenses	**591 308**	**673 534**	**766 434**	**1 130 096**	**658 560**

Regarding to the costs (see Tab.39), the biggest proportion of the total expenses is created by the costs of own production, more than 74%, except year 2008. They were growing proportionally with product and service revenues. Second important expense item is represented by personnel costs. They create more 13% of total expenses, except 2008,

when they increased by 3.28% comparing to 2007. In 2008, expenses on sold capital interests increased by 20.71%. The sale of capital interests and sale of the company itself caused extra expenses, which influenced a number of total expenses and consequently also the cost structure of the company in 2008. That is why it looks that company reduced a number of employees (drop of personnel costs). In reality it did not and the personnel expenses were almost same as in 2007 and 2009. In 2009 depreciations of tangible assets increased, which indicates that company purchased new equipment and machinery. In 2009 the company dissolves all reserves of the company because of the corporate strategy of its mother company. This reversal of accrued liabilities influences positively the profit of the company in 2009.

7.2.2 Income

According to the graph (see Figure 5), in 2007 all earnings are sharply increasing in the same angle. In 2008 all earning are gradually decreasing, apart from EBITDA. The development of EBITDA curve indicates that company has purchased new tangible assets. In 2009 all earnings are sharply decreasing, the development of EBIT curve indicates that company has decreased the number of interest paid.

The graph (see Figure 6) indicates that EAT creates a very high proportion of EBIT, it is around 80% for each year. Also the tax development is very stable, only in 2008 we can observe an insignificant drop. The proportion of interest paid is gradually decreasing. The table (see Tab.40) shows the growing trend of depreciations between 2007 and 2009, considering the decreasing trend of interest paid, we have to conclude that those investments are financed from non – interest bearing liabilities.

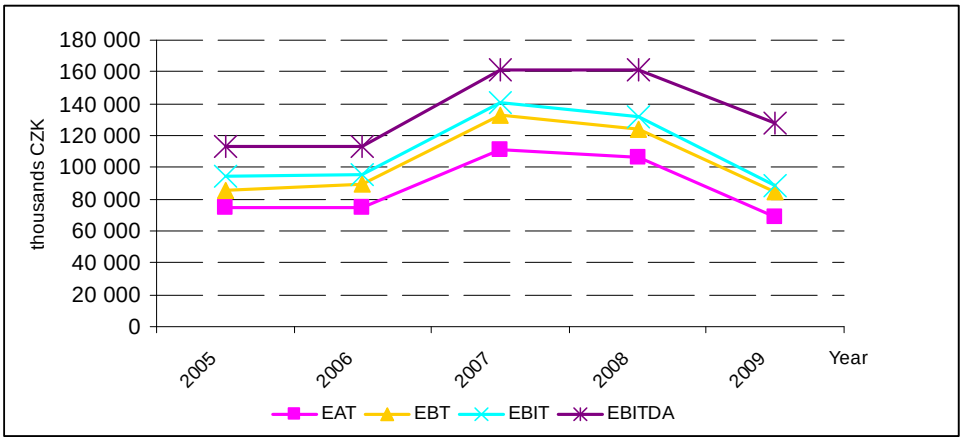


Figure 5. Trend in profits of the company [own elaboration]

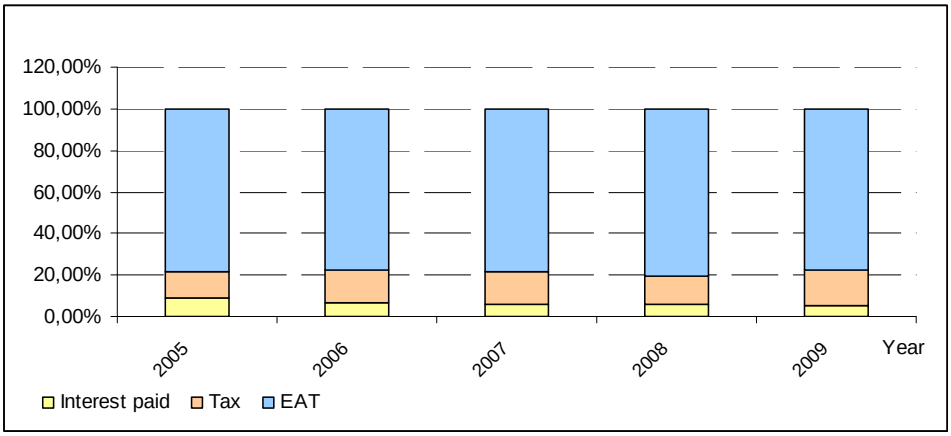


Figure 6. EBIT structure of the company [own elaboration]

Tab. 7. Profits of the company [own elaboration]

(thousands CZK)	**2005**	**2006**	**2007**	**2008**	**2009**
EAT	74 582	74 574	110 773	106 036	68 730
EBT	85 995	89 356	132 884	124 097	84 518
EBIT	94 699	95 768	141 046	132 009	88 917
EBITDA	113 509	113 479	161 613	161 170	128 104

7.3 Cash flow analysis

During the first three years (2005 – 2007) (see Tab.8) the cash flow of the company is negative, but has an increasing trend. In 2008 and 2009 the cash flow reaches the positive

value, but never exceeds EAT. Net cash from operating activities is nudging the positive value, except year 2008. Net cash from operating activities presents a main source of the cash in the company. Net cash from investing and financing activities is negative in all years, apart from 2008. Negative cash flow from investing activities indicates that company makes investments in tangible assets as is already mention above; the positive value in 2008 is caused by the sale of long term investments. Every year, except 2008, the company paid dividends to its shareholders, which is the main cause of the negative cash from financing activities.

Tab. 8. Cash Flow of the company [own elaboration]

(thousands CZK)	**2005**	**2006**	**2007**	**2008**	**2009**
Cash and Cash Equivalents at the beginning of year	**11 720**	**1 185**	**556**	**276**	**80 500**
Net cash from (used in) operating activities	20 099	37 093	100 874	-48 230	95 954
Net cash from (used in) investing activities	-24 698	-23 330	-76 227	121 578	- 30789
Net cash from financing Activities	-5 936	-14 392	-24 927	6 876	-36 882
Net Increase (Decrease) in Cash and Cash Equivalents	***-10 535***	***-629***	***-280***	***80 224***	***28 283***
Cash and Cash Equivalents at the end of year	**1 185**	**556**	**276**	**80 500**	**108 783**

7.4 Net Working Capital

In 2005 and 2007 the net working capital of the company achieves the negative value. It means the company does not have any financial sources in order to cover unexpected financial expenses and it is not able to cover its current liabilities. It also indicates the fixed assets of the company are funded from current liabilities, which has a negative impact on the financial stability of the company. In 2006 the company has changed its financial strategy; it has paid off a predominant part of its short term credit and started to use long term credit. There is also an increase in current assets. As a consequence of those two

changes we can observe a significant increase of net working capital. In the remaining two years the company creates positive net working capital.

Tab. 9. Net working capital of the company [own elaboration]

(thousands CZK)	2005	2006	2007	2008	2009
Current Assets	135435	220289	266960	404674	349 188
Current Liabilities	228 635	191 400	280 597	147 733	125 914
Net Working Capital	**-93 200**	**28 889**	**-13 637**	**256 941**	**223 274**
NWC/Currents Assets	**-69%**	**13%**	**-5%**	**63%**	**64%**

7.5 Ratio indicator analysis

7.5.1 Debt ratios

Since 2006 total debt ratio of the company has been decreasing. The company's total debt ration achieves the higher values than industry in all years, but it still meets the recommended value (30% - 60%). Considering the firm's rate of return on assets, rate of interest on the loan and ROE (see Figure 6 and Tab.26) we can conclude that the company uses its liabilities effectively. The company's debt equity ration is higher than the industry's ratio in whole monitoring period.

In 2005 the company did not meet the "golden rule", which says that fixed assets must be covered by long term capital (long term liabilities + long term credits + equity). It indicates the part of fixed assets is funded from current liabilities and the company is not financial stable. This claim is also supported by the high negative value of net working capital in 2005 (see Tab.9). This kind of funding is characterized as aggressive. Since 2006 the proportion of long term capital to fixed assets is increasing, which indicates the improving financial stability of the company. In 2006 and 2007 the company still does not achieve the value 1, but it is almost 1. In 2008 there is rapid increase in the ratio. The increase is caused by the sale of the capital interests in the subsidiary companies, which decreased a sum of fixed assets.

The interest coverage ration is a measure of a company's ability to honour its debt payments.The company's interest coverage ratio is gradually increasing; it exceeds the

recommended value 5, but in all years it is lower than the interest coverage ratio of the industry. In other words, the company earns enough money to pay off its interests paid.

Tab. 10. Debt ratios of the company [own elaboration]

	2005	2006	2007	2008	2009
Total Debt Ratio (Total debt/ Total assets)	52,57%	55,64%	54,57%	39,30%	29,35%
Debt Equity Ratio (Total liabilities/ Equity)	1,11	1,26	1,21	0,65	0,42
Equity/Fixed Assets	0,64	0,70	0,73	1,40	1,53
Long Term Capital/ Fixed Assets	0,67	0,99	0,98	1,72	1,75
Interest Coverage Ratio (EBIT/Interest paid)	10,88	14,94	17,28	16,68	20,21

7.5.2 Equity multiplier

Equity multiplier is a result of two factors (EBT/EBIT) and financial leverage (A/VK), which works in opposite way. The increase in total liabilities influences the financial leverage (A/VK) and consequently has a positive effect on ROE. On the other had new interest bearing liabilities also increase interest paid. Interest paid decreases (EBT/EBIT) and consequently multiplier. If the multiplier is higher than 1 (EBT/EBIT × A/VK > 1), the increase in liabilities has a resulting positive impact on ROE. The company's equity multiplier is higher than 1 every year, it means the company's financial leverage works positively and borrowing has a positive impact on ROE.

Tab. 11. Equity multiplier [own elaboration]

	2009	2008	2007	2006	2005
EBT/EBIT	0,95	0,94	0,94	0,93	0,91
A/VK	1,42	1,66	2,21	2,26	2,11
Equity multiplier	**1,35**	**1,56**	**2,08**	**2,11**	**1,92**

7.5.3 Liquidity ratios

In 2005 none of company's liquidity ratio reaches the recommended value, it means the company is not able to settle it debts. This finding is also proved by the negative value of the net working capital in 2005. In 2006 and 2007 the ratios still does not reach the recommended value, but we can observe the improving trend. In 2008 all ratios increase rapidly and exceed the recommended value. The increase is caused mainly by the increase in cash coming from the sale of the capital interests in the subsidiary companies. From

2005 to 2007 all company's liquidity ratios are much lower than industry's ratios. In 2008 and 2009 the company reaches higher values of current and cash ratio than the industry.

Tab. 12. Liquidity ratios of the company [own elaboration]

	2005	2006	2007	2008	2009	Recommended value
Current Ratio	0,59	1,15	1,06	2,74	2,77	1,5 - 2
Quick Ratio	0,23	0,33	0,42	1,33	1,61	1
Cash Ratio	0,01	0,00	0,00	0,54	0,86	0,2

7.5.4 Return ratios

Return ratios indicates that the company is profitable in whole monitoring period, but their trend is significantly unequal. During the whole monitoring period, the company is achieving better results of all ratios than the industry; in 2005 the company achieves almost double values of all monitoring ratios. The most significant drops are obvious in 2008 and 2009; they could indicate the change of price of steel and other production inputs. The drop of ratios in 2009 is much more significant; if we consider the company in the same year dissolves the reserves. The release of reserves increases the profit, what means that ratios in 2009 are overestimated. The company uses effectively the financial leverage. In all years the firm's rate of return on assets (ROA) is higher than the rate of interest on the loan (see Tab.26); consequently its return on equity (ROE) is higher than if it did not borrow.

Tab. 13. Return ratios of the company [own elaboration]

	2005	2006	2007	2008	2009
ROS (EAT/Sales)	12,93%	11,02%	14,34%	12,43%	9,65%
ROR (EBIT/Revenues)	13,97%	12,68%	15,69%	10,44%	12,01%
ROCE	22,29%	24,73%	29,34%	24,00%	16,39%
ROA (EBIT/Assets)	18,08%	15,56%	19,63%	18,50%	13,68%
ROE (EAT/Equity)	30,06%	27,34%	34,08%	24,64%	14,98%

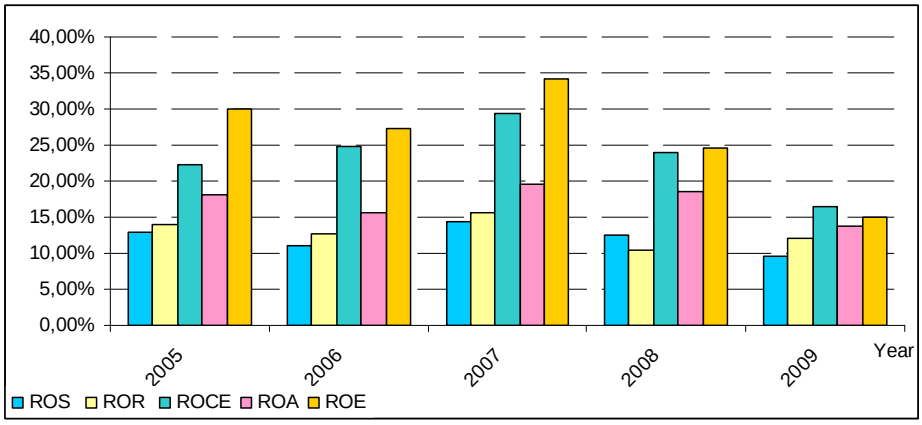


Figure 7. The comparison of the individual return ratios of the company [own elaboration]

7.5.5 Activity ratios

The recommended value of asset turnover ratio is 1. The company exceeds this value every year, but in comparison with the industry it reaches the lower values, except 2008. However, the company uses its assets quit effectively (see Tab.14).

The inventory period of the company is higher than the inventory period of the industry. Its trend is unequal, but every year it is more than 52 days. Regarding to days payable ratio, in 2005 and 2008 the company pays its debts earlier than the industry. Based on the relationship between the inventory period and days payable ratio in 2005 and 2008, 2009 the inventory period of the company is noticeably higher than the number of day, in which the company must pay off its short term liabilities. It means the company finances the rest of the period from other sources than short term liabilities and becomes a creditor of its customers. In 2006 and 2007 the situation is opposite. The inventory turnover of the company is lower than inventory turnover of the industry.

Tab. 14. Activity ratios of the company [own elaboration]

	2005	2006	2007	2008	2009
Asset Turnover Ratio (Revenue/Assets)	1,29	1,23	1,25	1,77	1,14
Inventory Period (days) – [(Inventory/Sales) *360]	52	83	75	88	74
Average Collection Period (days) - [(S.T. Receivables/Sales) *360]	32	34	49	49	47
Days Payable (days) - [(S.T. Liabilities/Sales) *360]	33	95	91	48	46
Inventory Turnover (Sales/Inventory)	6,93	4,33	4,80	4,11	4,86

7.5.6 Other ratios

In the following table you can see the further ratios of the financial analysis. From 2006 to 2008 the value of the value added, sales per employee are increasing, which is evaluated positively, but the values achieve the lower values then the industry. The increase in personnel costs per employee can be evaluate negatively, but on the other the company has the lower personnel cost per employee then is the industry average. During the whole monitoring period the trend of the proportion of the costs of own production to revenues is unequal, but in 2008 we can observe a significant drop in this ratio. The proportions of the costs of own production to revenue of the company is lower than the same ratio of the industry by 15.68%.

Regarding to structure of the value added, the company has the higher proportion of personnel costs to the value added than the industry, but on the other hand the company has lower proportion of depreciation, interest paid to the value added. In comparison with the industry the company the proportion of EBT to the value added is higher during the whole monitoring period. We can conclude that the company has lower personnel cost per employee, but its employees create less value added then the employees of the industry, they are not so effective. For the comparison see table (Tab.46) attached in the appendix P I.

Tab. 15. Other ratios of the company [own elaboration]

	2005	2006	2007	2008	2009
Value Added/Employees (thous. CZK)	524,01	635,37	759,06	769,58	661,65
Sales/Employees (thous. CZK)	1 968,70	2 382,02	2 627,57	2 834,71	2 365,01
Personnel Costs/Employees (thous. CZK)	301,09	329,94	340,29	366,93	348,94
Costs of own production/Revenue	64,81%	70,01%	67,56%	54,67%	69,09%
Personnel costs/Revenue	13,01%	12,41%	11,13%	8,73%	14,18%
Depreciations/Revenue	2,77%	2,35%	2,29%	2,31%	5,29%
Interest Paid/Revenue	1,28%	0,85%	0,91%	0,63%	0,59%
Value Added/Revenue	22,65%	23,90%	24,82%	18,31%	26,90%
Personnel costs/Value Added	57,46%	51,93%	44,83%	47,68%	52,74%
Depreciations/Value Added	12,25%	9,82%	9,22%	12,59%	19,68%
Interest Paid/Value Added	5,67%	3,55%	3,66%	3,42%	2,21%
EBT/Value Added	56,01%	49,52%	59,55%	53,57%	42,44%

7.6 Summary ratios

7.6.1 Altman Z – score

According to Altman model the companies with the score above 2.99 are consider to be healthy, score 1.81 – 2.99 indicates the neutral position, the score under 1.81 indicates that the company has serious financial problems. Z – Score of the company is higher than 1.81, but lower than 2.99 every year, which means that company does not have any serious financial problems, but it is not completely healthy. Z – Score is increasing during all monitoring period, which indicates the improving financial stability of the company, in 2009 Z - Score almost reaches the value of healthy company.

Tab. 16.The calculation of the Altman Z- score [own elaboration]

	2005	**2006**	**2007**	**2008**	**2009**
0,717 * NWC/Assets	-0,128	0,034	-0,014	0,258	0,246
0,847 * EAT/Assets	0,121	0,103	0,131	0,126	0,090
3,107 * EBIT/Assets	0,562	0,483	0,610	0,575	0,425
0,420 * VK/Total Liabilities	0,378	0,334	0,348	0,644	1,010
0,998 * Revenues/Assets	1,099	1,097	1,073	1,193	1,093
Z – score	**2,032**	**2,051**	**2,148**	**2,797**	**2,864**

7.6.2 Index IN01

Since 2006 the Index IN01 has been exceeding the value 1.77, it means the company creates value. In 2005 the company is in the grey zone, but its Index IN01 almost reaches the value 1.77. It indicates the company does not have any serious problem and probably creates value.

Tab. 17. The calculation of the Index IN01 [own elaboration]

	2005	**2006**	**2007**	**2008**	**2009**
0,13 * Assets/Total Liabilities	0,247	0,234	0,238	0,331	0,443
0,04 * EBIT/Interest Paid	0,435	0,597	0,691	0,667	0,809
3,92 * EBIT/Assets	0,709	0,610	0,769	0,725	0,536
0,21 * Revenues/Assets	0,272	0,258	0,263	0,372	0,239
0,09 * Current Assets/Short Term Liabilities	0,053	0,104	0,095	0,247	0,250
Index IN01	**1,716**	**1,802**	**2,057**	**2,342**	**2,277**

7.7 Spider analysis

The spider analysis can be used as a graphic summary of ratios analysis. As we can observe from the graph in 2008 the company reaches higher value of most of the monitoring ratios. The biggest differences are in the area of return ratios (A1 - ROE, A2 - ROA, A3 - ROS).

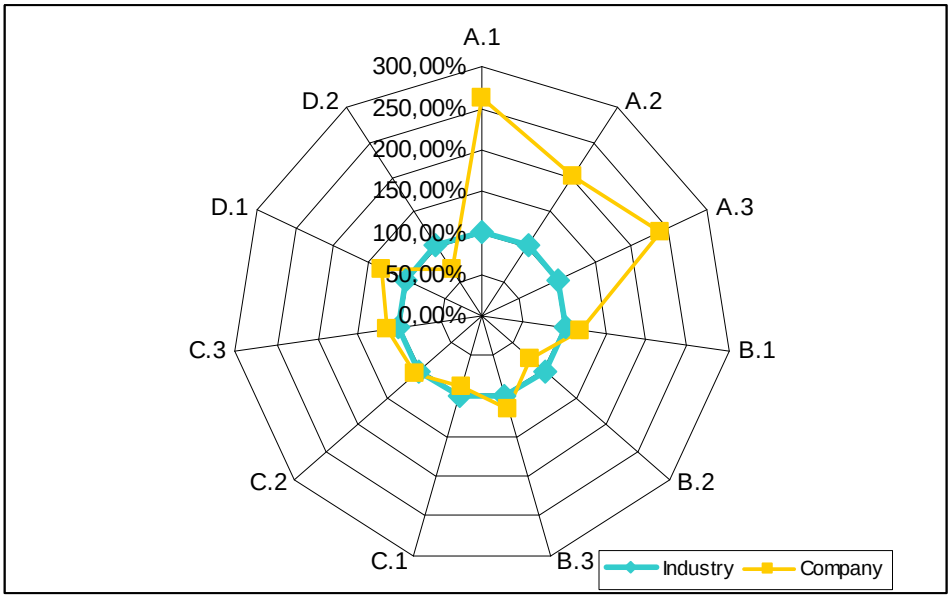


Figure 8. The SPIDER analysis of the company [own elaboration]

8 CALCULATING EVA

In this chapter the economic value added will be computed using the economic model which reflects the economic reality. EVA will be calculated according to the following formula:

$$EVA = NOPAT - NOA \times WACC \qquad (19)$$

8.1 Calculating Net Operating Assets (NOA)

NOA calculation consists of the following steps:

- Capitalization of the items which are not included in balance sheet
- Non - operating assets subtraction from the balance sheet assets
- Subtraction of the of non – interest bearing liabilities from assets

8.1.1 Capitalization

Differences in valuation of current or fixed assets, increase in the reserves, goodwill or other expenses with the long term effect have not been identified in the company, therefore only financial leasing is capitalized.

Financial leasing

Tab. 18. The capitalization of the financial leasing of the company [own elaboration]

(thousands CZK)	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Financial Leasing	10 479	4 476	1 563	9	5	0

Financial leasing is computed as a present value of all future leasing payments for each year and added to NOA.

8.1.2 Non - operating assets subtraction

Cash and Cash Equivalents, Short Term Investments subtraction

The level of cash, cash equivalents and short term investments necessary in operation is determinate by the cash ration. The recommend value of cash ratio is 0.2 to 0.5. If the value of cash ratio exceeds 0.5, it means the company has current liquid assets which are not

necessary in operation. The amount exceeding the amount necessary in operation has to be subtracted from NOA. In case of the Company XY s.r.o., the cash ration exceeded recommended value 0.5 in 2008 and 2009, therefore 6634 000 CZK in 2008 and 45 825 000 CZK in 2009 must be subtracted from NOA.

Tab. 19. Cash ratio of the company [own elaboration]

	2005	**2006**	**2007**	**2008**	**2009**
Cash Ratio	0,0052	0,0029	0,0011	0,5449	0,8639

Tab. 20. The calculation of the cash redundant in operation [own elaboration]

(thousands CZK)	**2008**	**2009**
Cash and Cash Equivalents, Short Term Investments	80 500	108 783
Necessary in operation (L1=0,5)	73867	62 957
Redundant in operation	**6 634**	**45 826**

Long Term Investments

The Long Term Investments of the Company XY s.r.o. do not have a portfolio character. They present the capital participation in the subsidiary companies of which operations are linked to each other, therefore long term investments will not be subtracted from NOA.

Tangible assets (Fixed Assets in Progress)

Fixed assets in progress do not create any value or current income; therefore they will be subtracted from NOA.

Tab. 21. The capitalization of the assets in progress [own elaboration]

(thousands CZK)	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Fixed Assets in Progress	1797	1622	3304	9 254	3 535	7 402

Other assets not needed in principal operation of the company

The Company XY s.r.o. does not have any building or land which is not used in principal operation of the company; therefore there is no change in NOA.

8.1.3 Subtraction of the of non – interest bearing liabilities from assets

Non – interest bearing liabilities is necessary to subtract from NOA. They do not bear the cost of capital; therefore we have to exclude them when computing EVA (EVA = NOPAT – NOA × WACC).

Tab. 22. The calculation of the non - interest bearing liabilities [own elaboration]

(thousands CZK)	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Reserves	23700	35 150	36 000	28 000	36 000	0
Long Term Non - Interest Bearing Liabilities	12 154	11 606	13 040	13 765	20 562	23981
Current Non - Interest Bearing Liabilities	68 628	52 162	179 029	195 003	112 961	91 328
Accruals and Deferrals (Liabilities)	358	328	319	1 467	2 901	470
Total	**104 840**	**99 246**	**228 388**	**238 235**	**172 424**	**115 779**

The following table shows the effects of EVA adjustments on net operating assets, those net operating assets will be use in order to calculate WACC and EVA. NOA computation is coming from the original balance sheet of the company.

Tab. 23. The calculation of NOA [own elaboration]

(thousands CZK)	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Fixed Assets	***427 019***	***388 274***	***389 807***	***438 454***	***303 599***	***291 541***
Intangibles	5 787	3 839	2 138	1 449	831	286
Tangible Assets	169 809	154 937	153 569	202 900	302 768	291 255
Long Term Investments	251 423	229 498	234 100	234 105	0	0
Current Assets	***162 096***	***135 435***	***220 289***	***266 960***	***398 041***	***303 362***
Inventory	89 078	83 284	156 173	161 073	207 576	146 444
Long Term Receivables	0	0	0	0	83	83
Current Receivables	61 298	50 966	63 560	105 611	116 515	93 878
Short Term Investments, Cash and Cash Equivalents	11 720	1 185	556	276	73 867	62 957
Accruals and Deferrals (Assets)	***2 779***	***3 011***	***3 642***	***3 903***	***1 771***	***1 763***
- Non – Interest Bearing Liabilities	***104 840***	***99 246***	***228 388***	***238 235***	***172 424***	***115 779***
NOA	**487 054**	**427 474**	**385 350**	**471 082**	**530 987**	**480 887**

All EVA adjustments made on the assets part of the balance sheet has to be reflected also on the liabilities part of the balance sheet. As you can see (Tab. 23) NOA matches with capital employed (C).

Tab. 24. The calculation of capital employed [own elaboration]

(thousands CZK)	2004	2005	2006	2007	2008	2009
Stockholders' Equity	***226 009***	***246 525***	***269 416***	***315 740***	***420 098***	***405 467***
Invested Capital	140 000	140 000	140 000	140 000	140 000	140 000
Other Equity Accounts	17 847	-4509	-3	2	-17	-19
Restricted Retained Earnings	9 012	10190	13858	14201	14299	14000
Retained Earnings	35 715	27 884	44 291	60 018	169 948	235 984
Net Income or Loss (+/-)	25 232	74 582	74 574	110 773	106 036	68 730
Equity Equivalent	-1 797	-1 622	-3 304	-9 254	-10 169	-53 228
Total Liabilities	***261 045***	***180 949***	***115 934***	***155 342***	***110 890***	***75 420***
Bank Loans and Other Credits	250 566	176 473	114 371	155 333	110 885	75 420
Leasing	10 479	4 476	1 563	9	5	0
C	**487 054**	**427 474**	**385 350**	**471 082**	**530 987**	**480 887**

8.2 Calculating Net Operating Profit after Tax (NOPAT)

In order to ensure the symmetry between NOPAT and NOA, all EVA adjustments made in NOA and influencing earnings have to be reflected in NOPAT. Further, financing costs must be excluded and certain expenses and revenues must be adjusted.

The starting point of NOPAT calculation is EBT, subsequently:

- Financing costs are excluded, in case of the company interest paid and leasing interest is added to EBT. In order to compute leasing interests, the value of leasing at the beginning of the each year is multiplied by leasing interest rate for the certain year.
- Extraordinary expenses and revenues, which will not repeat, are excluded. In the monitoring period the earnings from the sale of fixed assets is subtracted. In 2005 and 2008 the company sold its capital interests in its subsidiary companies. This operation could be consider as an extraordinary revenues, but from the economic point of view those revenues present the value added coming from the ownership of the companies and using its services, therefore we have considered them as important for the company and decided not to exclude them from NOPAT. In 2009 the company was forced to dissolve all its reserves, 20 000 000 CZK were reinvest into operating activities of the company, but 16 000 000CZK was dissolved into income. There are two possibilities how to deal with this situation. The first of all, the revenues 16 0000 000 CZK will be considered as an extraordinary and excluded

from the NOPAT, but in that case those reserves have to be also excluded from NOA even if they are not buried. The company did not determine the reserves as buried; therefore reserves have not been excluded from NOA. In order to keep the correspondence between NOA and NOPAT, the second possibility was chosen and 16 000 000 CZK have not been excluded from NOPAT.

- The effects of equity changes must be considered. There was no change in company's equity.
- Tax adjustment – In order to calculate the additional tax, the difference between EBT before adjustments and EBT after adjustment is multiplied by the tax for the certain year.

Tab. 25. The NOPAT calculation [own elaboration]

(thousands CZK)	**2005**	**2006**	**2007**	**2008**	**2009**
EBT (before adjustments)	***85 995***	***89 356***	***132 884***	***124 097***	***84 518***
Interest paid	8 704	6 412	8 162	7 912	4 399
Leasing interest	407	184	72	0	0
Earnings from Tangible Assets (Sale)	-23 328	-509	-491	-10 169	-212
EBT (after adjustments)	**71 778**	**95 443**	**140 627**	**121 840**	**88 705**
Difference	-14 217	6 087	7 743	-2 257	4 187
Original Tax	***11 413***	***14 782***	***22 111***	***18 061***	***15 788***
Additional Tax	***-3 697***	***1 461***	***1 858***	***-474***	***837***
NOPAT	**64 061**	**79 200**	**116 658**	**104 253**	**72 080**

8.3 Calculating Weighted Average Cost of Capital (WACC)

8.3.1 Calculating Cost of Debt

In order to calculate cost of debt the cost of loan and leasing have to be computed.

Cost of Loan

The nominal interest rate of the Company XY s.r.o. is based on PRIBOR (Prague Inter Bank Offered Rate) plus risk additional charge. As you can see in the following table, risk additional charge reflects the financial stability of the company. Loan interest rate is the nominal rate after tax (2005 – 26%, 2006, 2007 – 24%, 2008 – 21%, 2009 – 20%).

Tab. 26. The calculation of the loan interest rate [own elaboration]

	2005	2006	2007	2008	2009
PRIBOR	2,03%	2,55%	3,32%	4,05%	2,28%
Risk Additional Charge	2,00%	2,00%	2,50%	1,85%	1,85%
Nominal Interest Rate	4,03%	4,55%	5,82%	5,90%	4,13%
Loan Interest Rate	**2,98%**	**3,46%**	**4,42%**	**4,66%**	**3,30%**

Cost of Leasing

Estimated leasing interest is computed according to the alternative method of estimation based on market data. On the basis of the interest coverage ratio the rating of the company is determined. The Company XY s.r.o. has the rating AAA, therefore the risk additional charge is 0.35 %. Consequently, the risk additional charge is added to the free risk rate. Finally, the tax is imposed on estimated interest rate and leasing interest rate is computed.

Tab. 27. The calculation of the leasing interest rate [own elaboration]

	2005	2006	2007	2008	2009
Free Risk Rate	3,53%	3,77%	4,28%	4,61%	4,92%
Interest Coverage Ratio	10,88	14,94	17,28	16,68	20,21
Rating	AAA	AAA	AAA	AAA	AAA
Risk Additional Charge	0,35%	0,35%	0,35%	0,35%	0,35%
Estimated Leasing Interest Rate	3,88%	4,12%	4,63%	4,96%	5,27%
Leasing Interest Rate	**2,87%**	**3,13%**	**3,52%**	**3,92%**	**4,22%**

Cost of debt is calculated as a weighted average of cost of loan and cost of leasing.

Tab. 28. The calculation of the cost of debt [own elaboration]

	2005	2006	2007	2008	2009
Loans (beginning of the year)	250 566	176 473	114 371	155 333	110 885
Leasing (beginning of the year)	10 479	4 476	1 563	9	5
Loan Interest Rate	2,98%	3,46%	4,42%	4,66%	3,30%
Leasing Interest Rate	2,87%	3,13%	3,52%	3,92%	4,22%
Cost of Debt	**2,98%**	**3,45%**	**4,41%**	**4,66%**	**3,30%**

8.3.2 Calculating Cost of Equity

The most often method of cost of equity calculation is Capital Assets Pricing Model (CAPM), but this method can be used only for the company, whose shares are listed on the

recognized stock market. Shares of the company are not publicly traded; therefore cost of equity will be calculated by using CAMP with the alternative β estimation. The analogy method and beta of similar companies will be used.

$$Levered\ Beta = Unleveled\ Beta \times (1 + (1\text{-}tax) \times (Liabilities/Equity)) \qquad (20)$$

$$Cost\ of\ equity = Risk\ free\ rate + (Levered\ Beta \times Equity\ risk\ premium) \qquad (21)$$

Risk free rate for each year responds to the interest rate of treasury bills and government bonds, because they are considered as risk free. Unleveled beta and risk premium are based on data provided by Damodaran (http://pages.stern.nyu.edu/~adamodar/). Liabilities and equity used in calculation have to be adjusted; it means we are coming from adjusted NOA, not original (non- adjusted) balance sheet.

Tab. 29. The calculation of the cost of equity [own elaboration]

	2005	**2006**	**2007**	**2008**	**2009**
r_f	3,53%	3,77%	4,28%	4,61%	4,92%
Unleveled Beta	0,81	0,91	1,1	1,29	1,29
Levered Beta	1,50	1,42	1,46	1,79	1,56
Risk premium	5,70%	5,96%	5,90%	7,10%	6,67%
r_e	**12,09%**	**12,22%**	**12,89%**	**17,33%**	**15,34%**

8.3.3 Calculating WACC

WACC is calculated in following table. Cost of debt in the table is already after tax, so we will not impose the tax second time, otherwise there would be double taxation.

Tab. 30. The calculation of WACC [own elaboration]

	2005	**2006**	**2007**	**2008**	**2009**
r_e	12,09%	12,22%	12,89%	17,33%	15,34%
Cost of Debt	2,98%	3,45%	4,41%	4,66%	3,30%
Equity/Asset (beginning of the year)	46,40%	57,67%	69,91%	67,02%	79,12%
Liabilities/Asset (beginning of the year)	53,60%	42,33%	30,09%	32,98%	20,88%
WACC	**7,21%**	**8,51%**	**10,34%**	**13,15%**	**12,83%**

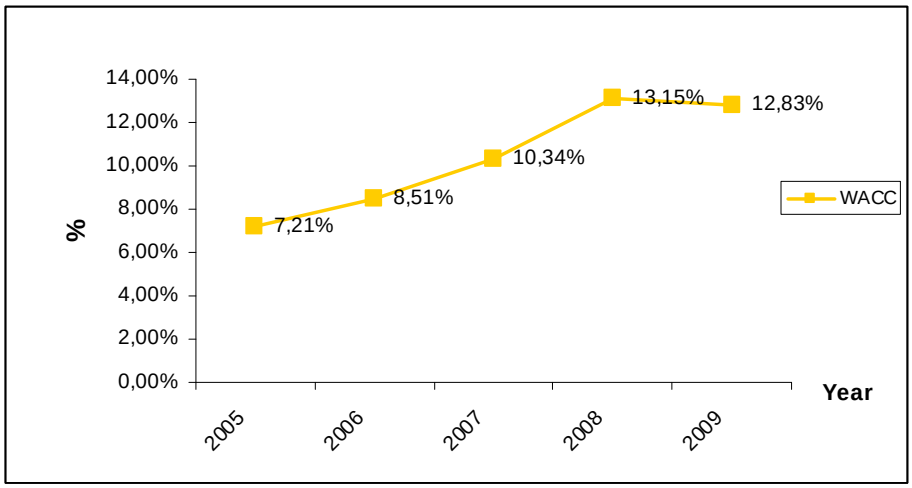


Figure 9. Trend of WACC in time [own elaboration]

8.4 Calculating EVA

EVA is calculated according to the economic model EVA = NOPAT – WACC × C. It is necessary to use NOA at the beginning of the year, it means in order to calculate EVA in 2005 we use NOA at the end of year 2004.

Tab. 31. The EVA calculation [own elaboration]

(thousands CZK)	**2005**	**2006**	**2007**	**2008**	**2009**
NOA (at the beginning of the year)	487 054	427 474	385 350	471 082	530 987
NOPAT	64 061	79 200	116 658	104 253	72 080
WACC	7,21%	8,51%	10,34%	13,15%	12,83%
EVA	**28 956**	**42 835**	**76 810**	**42 299**	**3 968**

According to the graph (see Figure 10) the economic value added created by the company is increasing from 2005 to 2007, the EVA increase is accompanied by the decrease in NOA and increase in NOPAT and WACC (see table). From 2008 to 2009 the economic value added is sharply decreasing. The decrease in EVA is caused by increasing NOA, WACC and decreasing NOPAT. The most significant drop in EVA we can observe in 2009, in the chapter 10 the drivers of the EVA drop will be identified.

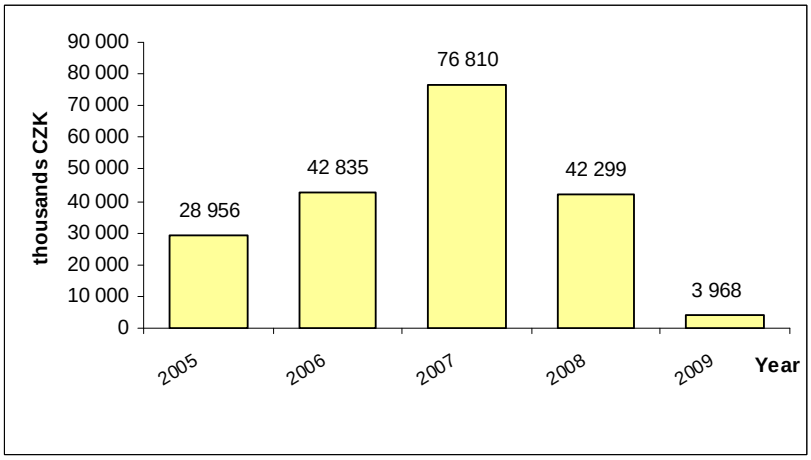


Figure 10. Trend of EVA in time [own elaboration]

8.5 Calculating EVA according to the accounting model

In order to compare the EVA accounting and economic model, the EVA will be calculated also according to the accounting model used by the Ministry of Industry and Trade of the Czech Republic:

$$EVA = (ROE - Cost\ of\ Equity) \times Shareholder's\ Equity \qquad (22)$$

Tab. 32. The calculation of EVA - Accounting Model [own elaboration]

(thousands CZK)	**2005**	**2006**	**2007**	**2008**	**2009**
ROE	30,06%	27,34%	34,08%	24,64%	14,98%
r_e	12,09%	12,22%	12,89%	17,33%	15,34%
Shareholder's Equity	248 147	272 720	324 994	430 265	458 695
EVA	**44 573**	**41 250**	**68 873**	**31 476**	**-1 640**

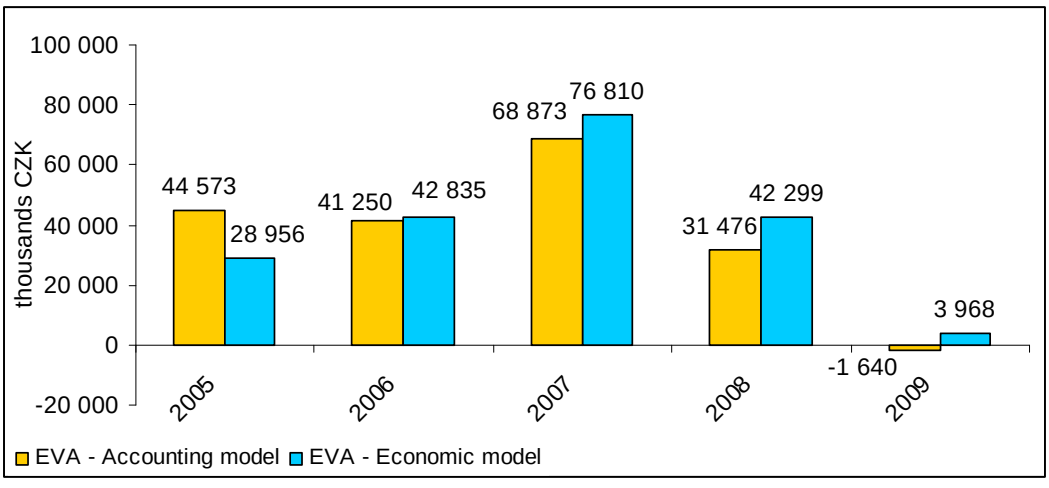


Figure 11. The comparison of Accounting and Economic EVA [own elaboration]

The EVA calculated according to accounting model is based on accounting figures therefore it has most of limitations of the traditional metrics. In practise, if the EVA adjustments made by the company are so insignificant, that the accounting EVA is the same or very similar to the EVA calculated according to the economic model, it does not matter which model is used.

As we can see from Figure 11, in case of the of the Company XY s.r.o., it matters which model is used. In 2005 the accounting EVA achieves higher value than the economic EVA, in 2006 they have almost the same value and in 2007 accounting EVA is negative. It is hard to say if the trend of accounting EVA is better or worst than the trend of economic EVA, but we can conclude the EVA adjustments applied on the EVA calculated according to the economic model reduce the limitations of the traditional metrics and therefore in the following proposal of the EVA implementation the EVA calculated according to the economic model will be used.

9 COMPARISON OF TRADITIONAL INDICATOR WITH EVA

The company uses as the main performance indicators earnings after tax, return on capital employed, and return on sales, total debt ratio and current ratio. The following table shows the values of all indicators reached during the monitoring period. EVA, EAT, ROCE and ROS have the same trend in the time, from 2005 to 2007 they are increasing, since 2008 they have been decreasing. Current ratio has been increasing for whole monitoring period.

The graph (see Figure 12) shows the comparison of economic value added and earnings after tax. As we can observe EAT reaches much higher values then EVA every year. In 2009 EAT reaches seventeen times higher value than is the value of EVA.

The graph (see Figure 13) presents the comparison of the trend in economic value added and return on capital employed in the time. The ROCE development curve copies the EVA development curve during the whole monitoring period, but the EVA curve increases and decrease in shaper angle. It means the changes in EVA are much higher than the changes in ROCE and the company thinks that it creates better performance than it really creates. The traditional metrics indicate that the company is doing better than it really does.

In conclusion, the carried out analyses and comparisons indicate the EVA concept would be beneficial for the company and the company meets the requirements which the literature review makes on the EVA implementation, therefore the EVA implementation is recommended.

Tab. 33. The comparisony of the traditional indicatrors with EVA

[own elaboration]

	2005	**2006**	**2007**	**2008**	**2009**
EVA (thousands CZK)	28 956	42 835	76 810	42 299	3 968
EAT (thousands CZK)	74 582	74 574	110 773	106 036	68 730
ROCE	22,29%	24,73%	29,34%	24,00%	16,39%
ROS	12,93%	11,02%	14,34%	12,43%	9,65%
Total Debt Ratio	52,57%	55,64%	54,57%	39,30%	29,35%
Current Ratio	0,59	1,15	1,06	2,74	2,77

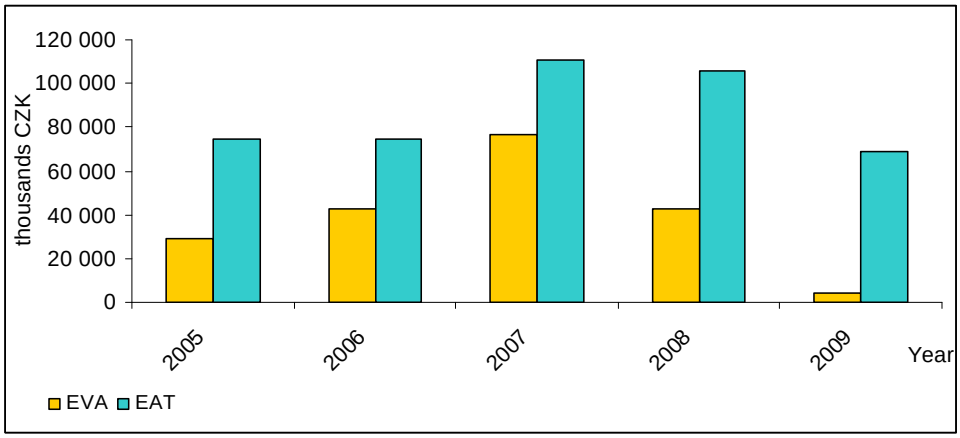


Figure 12. The comparison of EVA and EAT [own elaboration]

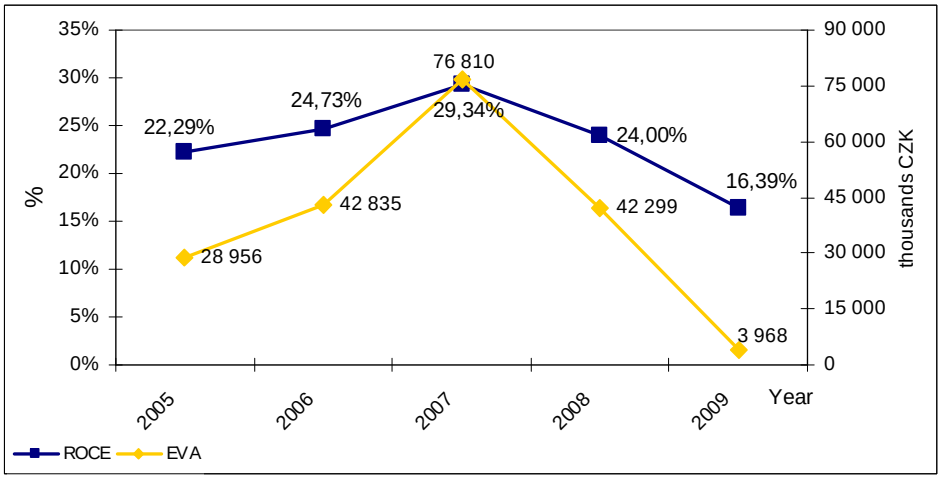


Figure 13. The comparison of the trend of EVA and ROCE in time [own elaboration]

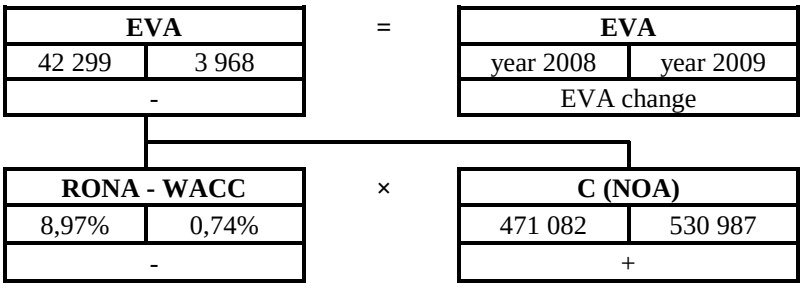
10 ECONOMIC VALUE ADDED DRIVERS

In 2009 EVA significantly decreased, in order to identify the drivers which caused the decrease of EVA the pyramidal analysis will be carried out. The diagram of the pyramidal analysis you can see in appendix P II.

The pyramidal analysis starts with EVA which is broken down according to following formula:

$$EVA = (RONA - WACC) \times NOA \qquad (23)$$

Generally spread (RONA – WACC) affects EVA positively; in our case spread decreases from 8.97% to 0.74 %, therefore the effect on EVA is negative. Considering the positive value of spread, the increase in NOA has a positive impact on EVA creation. Spread itself is influenced by RONA and WACC. Decrease in RONA has the negative impact on EVA, on the other hand the decrease in WACC influences EVA positively (see P II).

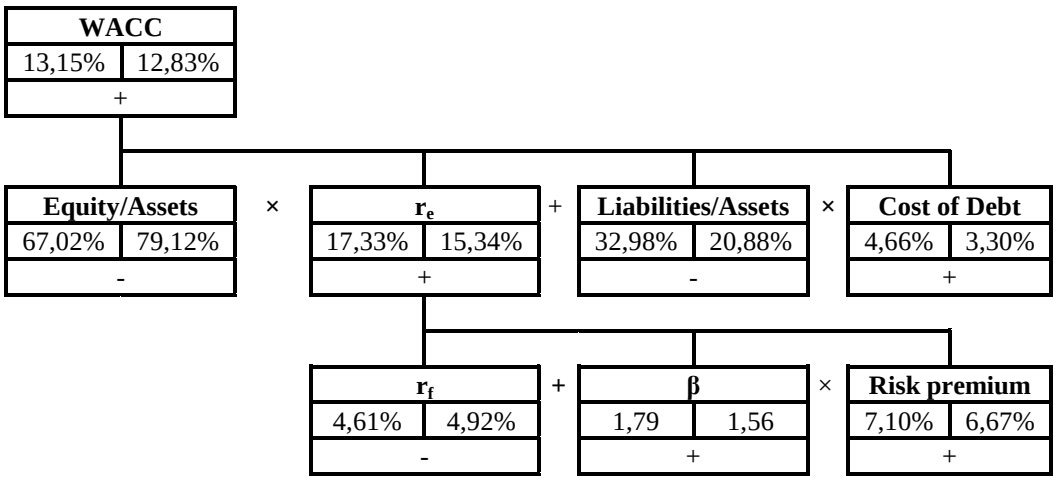


RONA itself is influenced by the profit margin (NOPAT/sale) and invested capital turnaround (sales/C). As you can see from P II, the profit margin and the invested capital turnaround decreases, which influences EVA creation negatively. The main reason of profit margin drop is the increase in personnel cost and depreciations.

The invested capital turnaround is required to be the lowest as possible; it depends on sales and assets value. In 2009 the invested capital increases mainly because of the increase in tangible assets, inventory, receivables, cash and cash equivalents (current investments – appendix P II) and current liabilities. The individual drops have the negative impact on EVA. On the other hand the noticeable drop in long term investments influences EVA

positively. The sales consisting of product and service revenues decrease. Decrease in sales and assets results in the drop in the invested capital turnaround and has the negative impact on EVA creation.

Now, we will deal with the second part influencing spread, we will deal with WACC. Cost of equity is calculated by using CAMP with the alternative β estimation. Cost of equity depends on three elements risk free rate, β coefficient and risk premium. As we can see from the diagram (P II) the free risk rate increases from 4.61% to 4.92%, but value of β coefficient and risk premium decreases. The positive impact of risk premium and β coefficient drop prevails over the negative impact of free risk increase and results in the cost of equity drop. The positive decrease in cost of equity is accompanied by the negative impact of the increase in the proportion of equity on assets. The share of liabilities on assets decreases and is accompanied by the positive reduction in cost of debt. The positive impact of decrease in cost of debt and equity prevails and has the positive impact on EVA creation.



In summary, the significant drop in EVA is caused by the increase in personnel cost, depreciations, tangible assets, inventory, receivables, cash, cash equivalents and current liabilities, and decrease in sales. Those changes influenced negatively the profit margin and invested capital turnaround, which has a negative impact on RONA and consequently on EVA. The company increases the assets, but they are not sufficiently profitable.

11 PROPOSAL OF EVA IMPLEMENTATION

In this chapter on the basis of the previous analysis the proposal of EVA implementation will be elaborated. Process of EVA implementation is very specific process, it differs from the company. There is no a certain EVA implementation guideline and the implementation must be suited to the needs of the company. The process of the implementation and its length depends on the size of the company, its organization structure and its culture, mainly between the managers. As was already mentioned the company has quite flat organizational structure (see appendix P III).

The proposal of EVA implementation will be based on the information coming from the literature review of the theoretical part. As the main guideline the recommended steps by Young and O'Byrne, which will be enlarged by the experiences of the company Harsco and other authors, will be used.

11.1 Step 1: Establishment of the project team

In the first stage of the implementation the project team should be established. It should consist of the project manager, financial director, economic – personal manager and the external specialist who has already the experience with EVA implementation. The first and main tasks of the project team will be to establish buy – in at the board and management level. The implementation has to start from the top; it means they have to ensure that the executive director and the rest of the management understand the concept of economic value added and its contributions for the company. The crucial person is the executive director, who has to push the EVA concept trough the mother company.

11.2 Step 2: Make the major strategic decision on the EVA program

In the second stage of EVA implementation, the project team should incorporate the EVA concept in to the all processes of the company. EVA should become a part of strategic business planning, capital allocation and operating budgeting. The strategic decision on the EVA program should cover topics such as EVA measurement centers, EVA calculation, and the management compensation scheme.

11.2.1 EVA measurement centers

In order to capture all relationships between the factors influencing economic value added it will be measured at two levels, at the business level as a company's performance measurement and at the costs (profit) centers. If the company measures EVA also at the existing cost centers, it will be able easy to identify, which centre influences total economic value added negatively and make the remedy such can be increase in the personnel costs, increase or decrease in the capital employed. At the cost centre level it is much easier identify and read EVA drivers than at the company level. The main goal of all EVA measurement centers should be to create and improve the economic value added. The financial manager will be responsible for EVA measurement centre identification, but this task will not be very complicated, because the company has already identified its cost centers.

11.2.2 How will be EVA calculated?

In order to calculate EVA we would recommend using the economic model rather then accounting model. Economic model is more complicated to calculate, but it removes the influence of accrual accounting and approaches better the economic reality.

What adjustments will be made?

In order to keep EVA calculation simple and understandable the company should make those EVA adjustments which are significant for the company. It means if the company sponsors the ice hockey team, which is consider as a marketing expense with the long term effect, but this expense is insignificant in comparison with other costs, the company does not need to capitalize it.

Considering net operating assets (NOA) we would recommend the following adjustments:

- Capitalization of differences in valuation of current and fixed assets, financial leasing and costs with long term effects such as research and development, marketing costs and education costs.

- The subtraction of excessive cash and cash equivalents, short term investments, long term investments, which have a portfolio character, fixed assets in progress and other non – operating assets from NOA.

Considering net operating profit after tax (NOPAT) we would recommend the following adjustments:

- Exclusion of financing costs such as interest paid and leasing interest from NOPAT. In order to compute leasing interests, the value of leasing at the beginning of the each year should be multiplied by leasing interest rate for the certain year.
- Exclusion of expenses and revenues, which will not repeat, from NOPAT.
- The effects of equity changes must be considered
- NOPAT must be tax adjusted.

Based on the analysis carried out in the previous chapters, we have recommended the potential EVA adjustments. But the situation of the company is changing every year and therefore every year the company itself must decide, which adjustments are necessary to make. We would suggest that company will use a basic group of adjustments and according to the needs and changes in the company it will make extra adjustments.

How the capital costs will be calculated?

The costs of debt will be calculated as a weighted average of cost of loan and cost of leasing. The company knows the costs of its loans; cost of leasing will be computed according to the alternative method of estimation based on market data. The cost of equity will be calculated by using CAMP with the alternative β estimation. Consequently, the capital costs will be calculated.

How often will be EVA calculated?

EVA should be calculated at least twice time a year, but we would suggest to calculate it every 3 months. If the company calculates EVA each quarter, it can easily watch and control the change in its trend and consequently implements remedies. EVA drives should be calculated each month as a part of operating planning.

11.2.3 The management compensation scheme

EVA can not work by itself; it has to be incorporated into the incentive compensation system. The main aim of EVA based compensation system is to make managers think as shareholders, owners. The EVA bonus should motivate employees to increase the EVA rather than short term goals.

Who will be cover initially, and will be there a gradual expansion of participation in EVA based incentives?

On the basis of the experiences of other companies, at the beginning we would recommend that the EVA based compensation schema will be applied on the senior managers, in our case 8 senior managers. Within three years it will be expanded on the inferior management.

What proportion of target or compensation is covered by the EVA based incentive compensation plan?

Considering the current incentive compensation scheme the basic managerial reward will consists of three components:

- Annual business bonus, which will present 15% of the annual managerial salary, it will be earned when the manager accomplishes its personnel tasks established by the executive board. If not the rewards could be reduced, it will depend on the executive board decision.
- Annual corporate bonus, which will present 10% of the annual managerial salary and will increase by 1%, but no more than 20%, if the total profit of the company and other companies in the group will increase by 1%. We keep this bonus in order to cover the synergy effect coming from the group cooperation.
- EVA bonus, which will depend on the created economic value added.

Sensitivity of bonuses to EVA performance and bonus bank

The EVA bonus system will be implemented in two phases. At the beginning of the implementation it would be very complicated for the company to estimate the expected EVA improvements. If the company determines too high improvements which the manager would no be able to meet, it could discourage them from the new concept. Therefore, in the first phase the EVA bonus will be calculated according to the older version of the modern EVA based compensation system:

$$EVA\ bonus = (x\ \% \times EVA) + (y\ \% \times \Delta\ EVA) \qquad (24)$$

In the second phases in two years time, when the company gets used to the economic value added, its calculation and management system and will be able to estimate precisely the expected EVA improvement, we suggest that the company will switch from the current projected way of EVA bonus calculation and implement the modern EVA bonus system, which is described in the chapter 4 of this paper. The modern EVA bonus system more motivates managers to improve EVA than the older version.

In both phases the EVA bonus will be deposit with a bonus bank and if the current balance of the bank is positive, ¼ of the bonus bank balance will be paid out to the managers. It means the final EVA bonus of the manager at the end of the year will be:

$$EVA\ bonus = ¼\ of\ the\ bonus\ bank\ balance\ /\ number\ of\ managers \qquad (25)$$

Consequently, the basic managerial reward will be calculated as a sum of the annual business bonus, annual corporate bonus and EVA bonus.

$$Basic\ managerial\ reward = Annual\ bonus + Annual\ corporate\ bonus + EVA\ bonus \qquad (26)$$

In case the EVA will be negative, the current balance of the bonus bank will be decrease by the value of negative EVA. If the EVA is negative, but the current balance of the bank after the deduction of negative EVA value will is positive, the EVA bonus will be paid out in order to keep motivating manger.

Demonstration of EVA bonus calculation

For the following demonstration of EVA bonus calculation in the first phases x = 6.5 % and y = 2.5 % were chosen, they are based on the average level of managerial rewards in

2009. In 2005 the economic vale added is calculated the first time, so we can not compare it with the previous year. As you can see in 2005 the bonus earned was 1 882 000 CZK, all bonus is deposited with a bonus bank and consequently ¼ of the balance is paid out.

In 2006 the company crates positive EVA and it increases by 13 879 000 CZK.

The bonus earned $_{(2006)}$ *= (6.5% × EVA*$_x$*) + (2.5% × Δ EVA)*

The bonus earned $_{(2006)}$ *= 2 784000 CZK + 347 000 CZK = 3 131 000 CZK*

All bonus earned is deposited with a bonus bank (1 412 000 CZK + 3 131 000 CZK = 4 543 000 CZK) and consequently ¼ of the balance is paid out (4 543 000 CZK / 4 = 1 136 000 CZK).

EVA bonus of the senior manger $_{(2006)}$ *= 1 136 000 CZK / 8 = 142 000 CZK*

Since 2007 the EVA is decreasing, but the EVA bonus is still earned and the bank pays out the bonus, but there is a decreasing trend. In 2009, there is a very significant drop in EVA. This drop influences negatively the EVA bonus earned, it is negative. In this case 700 000 CZK is subtracted from the balance of the bonus bank (6 618 000 CZK – 700 000 CZK = 5 916 000 CZK), but the EVA bonus 1 479 000 CZK is still paid out in order to keep manager motivated.

Tab. 34. Demonstration of EVA bonus calculation and its pay out [own elaboration]

thousands CZK	**2005**	**2006**	**2007**	**2008**	**2009**
EVA_x	28 956	42 835	76 810	42 299	3 968
6,5% × EVA_x	1 882	2 784	4 993	2 749	258
EVA_x - EVA_{x-1}	X	13 879	33 975	-34 511	-38 331
2,5% × Δ EVA	X	347	849	-863	-958
EVA bonus earned	**1 882**	**3 131**	**5 842**	**1 887**	**-700**
EVA bonus earned + bonus bank	1 882	4 543	9 249	8 823	5 917
Paid out EVA bonus	**471**	**1 136**	**2 312**	**2 206**	**1 479**
Bonus bank balance	**1 412**	**3 407**	**6 937**	**6 618**	**4 438**

In 2011, in the first year of the EVA implementation, the Company XY s.r.o. will be in the same situation as the company in the demonstration of EVA calculation in 2005. EVA bonus earned will be computed only as a percentage from the achieved EVA value. The

percentage X, which the company will choose in 2011, will depend on the decision about the level of the annual bonus and annual corporate bonus which are not known yet. The percentage X should be set in such level that the basic managerial reward for the year 2011 will be approximately at the same level as the previous year. In the following years the company will choose the percentage X and Y according it needs and experience.

In the second phase when the company will get used to EVA, it will start calculating EVA bonus according to following formula:

$$Bonus = Target\ bonus + y\ \%\ (\Delta\ EVA - EVA\ improvement) \qquad (27)$$

Target bonus presents the amount of the money, which the managers earn when they reach the expected EVA improvement. It should be based on the competitive compensation analysis which will ensure that the firm's managers will be rewarded at the same level as the managers of the other comparable companies. Finally, the target bonus will depend on the strategic decision of the company. Expected EVA improvement should be at least at the level of the expected investor return on the company's market value. The company is not publicly traded; therefore we suggest the company will determine the expected EVA improvement on the basis of its experiences, in the same way as the financial manager is able to estimate the annual profit. *Δ EVA* presents the real change of EVA against the previous year. The rest of the EVA bonus paid out calculating process will be the same as in the first phase of the EVA based compensation scheme.

11.3 Step 3: Establish the training program.

The training on EVA concepts presents the crucial part of the EVA implementation. The training is the mean how to communicate EVA effectively and ensure its understanding. The training program serves the as the main tool to create mindset and the EVA philosophy culture. In case this part of the implementation fails, the whole implementation can fail as well.

The training program constricts will of following components:

- Three day EVA Experts Training
- Two day Managers Training

- Two day Capital Budgeting Training
- Day General EVA Training

Three day EVA Experts Training

Three day EVA Experts training course will be meant for the key financial staff of the company. The key financial staff of the company includes the economic – personal manager, controller, head of IS department, general accountant, wages clerk, material accountant and credit clerk. The main purpose of the course will be to ensure a detail level of the economic value added concept understanding among the financial staff and incorporate EVA measure and its understanding within the financial processes of the company. The course will cover all aspects of the measure from a basic overview of the EVA management system to the details of the EVA calculation including pyramidal analysis of EVA and the determination of EVA drivers. The outcome of this course will be the EVA experts who will serve as the main contacts for the EVA – related questions and problems within the company. A week before the course the financial staff will receive the EVA concept manual, which will cover all aspects and details of EVA measure. This manual will serve as a guideline for the EVA expert course and it will be place at all employees' disposal in electronic form. The distribution of EVA concept manual a week before the course should ensure that staff will have the possibility to go through the manual in advance, which should make the course more effective. The training will be delivered by the project team in the company area.

Two day Managers Training

Two day Manager training course will be meant for all senior managers, junior managers and heads of the cost centers of the company. The course should ensure the EVA concept understanding and develop a value creation mindset in the company. The course will cover the topics such as the EVA measure, its calculation, pyramidal analysis and EVA generators, but not so in details as in the case of EVA Experts training course. The manager training course will be focused on the EVA management system and the compensation system. The managers will also receive the EVA concept manual a week before the course; the manual will be accompanied by the hand out with the content of the

course. The training will be delivered by the member of the project team and the company's EVA expert. The member of the project team will be present during the whole course, but in case of EVA experts, each of them will deliver a certain part of the training. The main purpose of the EVA experts' presence at the manager training course is to train them for their role as the contact for the EVA – related questions and problems within the company. They will deliver only a part of the course in order to ensure the smooth running of the company. The course will be interactive, focused on real time operating situation and cases. The course will held in the company's area. All materials and out puts will be placed on the intranet of the company, so all managers and heads of the costs center will have free access to them.

Two day Capital Budgeting Training

Two day training course will be meant for the staff of the financial department. The main purpose of the course will be to ensure a more consistent understanding of EVA by using the relationships in the corporate finance. The course will be focused on capital budgeting and WACC calculation, mainly cost of equity calculation. The part of the course will be in the form of the discussion, which should result out in the creation of the best way of input assumption. The project team will educate the employees how to use EVA as a decision tools in terms of capital budgeting. The course will be delivered by the project team in the company's area.

General EVA Training

General EVA training will be design for all employees (workers + office staff) of the company. The training will last three hours, it will be delivered by the heads of the cost centers and junior managers in the area of the company. The heads of the cost centers will introduce in the very simply way the EVA concept and its importance for the company. They will explain how important role the certain centre and its stuff play in EVA concept and company strategy. The main goal of the training is to support the development of value creation mindset in the company. The training will be delivered by the head of the cost center because it has the closest relationship with its staff and it will be also training for him or her. The training will be carried out continuously during a month in order to ensure

the smooth running of the company. The only common area for all employees of the company is the cloakroom. When all training sessions will be done, the blackboard with continuous EVA results for each cost centre will be placed in the cloakroom. The EVA results will have a form of traffic lights, if EVA decreases the red light will shine, if EVA increase the green light will shine and if EVA does not change the orange light will shine. The traffic lights will be accompanied by the percentage EVA changes. Through the using of the combination of traffic lights and percentage EVA changes the employees could see, if their cost centre creates EVA or not and can compare their change in EVA with other centers. By this way the value creation mindset in the company could be support and maintain.

The total training program will last 110 hours. After EVA implementation the training program will be continue according to needs of the company. All new employees will attend the EVA training.

11.4 Step 4: Develop an implementation plan.

Who will develop the implementation and who will be responsible for the implementation?

The implementation plan will be developed by the project team, which will be established by the executive director. The team leader of the project team will be responsible for it implementation and also EVA implementation. As was already mentioned, the project team will consist of the project manager, financial director, economic – personnel manager and the EVA consultant. EVA consultant will not be a permanent component of the team; he will provide trainings and consultation according to the needs of the team. He or she will not be a full time employee of the company.

Activities	September				October				November				December			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
Introduction of EVA to the executive board																
Executive board approval of the EVA project																
Establishment of the project team																
Training of the project team																
The major strategic decision on the EVA program (project planning)																
EVA materials creation																
EVA material distribution																
Training program execution - mindset creation																
Completion if the implementation																
Control																

Figure 14. The EVA implementation schedule [own elaboration]

The EVA concept is planned to come in the reality in January 2011, it means in that time the company should start using EVA. The beginning of the EVA implementation should start 1.9. 2010. The project team will be trained on EVA by the EVA consultant during the second and third week in September. During the following three weeks the project team will work on the project planning which will include all major strategic decisions such the EVA calculation, identification of EVA measurement centers, compensation system, training program preparation, EVA material creation. In sixth week the EVA materials will be distributed among the employees and place on the Intranet. From seventh to fourteenth week the trainings will be carried out. During the fifteen and sixteenth week the implementation should be completed.

Tab. 35. Plan of the EVA training program [own elaboration]

	Involved persons	Delivered by	Days	Hours
Three day EVA Experts Training	Key financial staff	Project team	**3**	**24**
Two day Managers Training	Senior and junior managers Heads of the cost centers	Project team Company's EVA experts	**2**	**16**
Two day Capital Budgeting Training	Financial department staff	Project team	**2**	**16**
General EVA Training	All employees	Heads of costs centers Junior managers	**9**	**54**

Tab. 36. The schedule of activities and cost calculation [own elaboration]

Activity	Responsible person	Costs (CZK)	Opportunity costs (CZK)
Introduction of EVA to the executive board	Financial director		
Executive board approval of the EVA project	Executive board		
Establishment of the project team	Executive director		
Training of the project team	EVA experienced person	19200	
The major strategic decision on the EVA program (project planning)	Team leader of project team	6000	
EVA materials creation	Project team	1000	
EVA material distribution	Project team		
Training program execution - mindset creation	Project team	66 000	132 300
Completion if the implementation	Project team		
Control	Financial director		
Total		**92 200**	**132 300**

In the table (tab.36) you can see the persons responsible for the individual activities, estimated costs and opportunity costs. The activities, which will be executed by the executive board and managers are considered as the part of their job description, therefore any costs or opportunity costs are not considered.

The project team will be trained by the EVA consultant approximately 32 hours, the total length of training program will be 110 hours (see tab.35) and during the project planning the team will need approximately 10 hours of consultation with EVA consultant. Considering the salary rate of the EVA consultant 600 CZK/hour the total expenses for the consulting service will be approximately 91 200 CZK. The all material, except hand outs, will be in the electronic form, which will significantly reduce the material expenses, they will be approximately 1000 CZK. The company will provide the training to 294 persons; each person will spent approximately 3 hours at the training, some of them even more. Considering the opportunity cost of each hour, which the employee will spend on the training and will not work, 150 CZK, the total opportunity costs will be 132 000 CZK. Considering all expenses the total cost of the EVA implementation will be approximately 224 500 CZK.

What is the risk related with the implementation?

The company does not any experiences with the economic value added therefore there is the risk that project team will not manage its implementation. WACC could be calculated and EVA measurement centers identified in wrong way, EVA drives could not be determined properly. The project team will be train on EVA by the EVA consultant, so this risk should be eliminated.

There is the risk that the project team will not establish buy – in at management level and consequently at the inferior levels. There could be also the risk related to the EVA compensation scheme, at the beginning it could not be set up in favor of managers. They could obtain lower rewards than before, which could influence negatively their approach towards EVA and also their motivation. The employees can feel uncomfortable with new incentive scheme, they can feel under the pressure and they might resign all efforts to improve the performance, but as was mention above the employees are used to meet the goal, so they should not suffer from such feelings. Further, during the first two year the EVA bonus based compensation scheme will be applied only on the senior managers, so it will serve as a pilot study for the company.

In terms of mindset, there is a risk that training program will fail; the employees will not understand the EVA concept and they will not be motivated to participate on shareholder value creation. The careful training program planning is the best mean how to avoid and reduce this risk.

The further risk is the EVA implementation will fail, it means the EVA concept will be implemented, but the value of the company and its performance will not increase. There is the risk that EVA implementation will reduce the investments.

12 CONTRIBUTION OF THE EVA IMPLEMANTION

In conclusion the contribution of the project of the EVA implementation to the company will be explained.

The implementation of the EVA as a performance measure should reduces imperfections of the current system of the performance measures used in the company which have been described in the internal analysis of the company. The EVA will link the performance with the shareholder value and it will provide to shareholders the better way how to measure their real economic wealth. The break down of EVA into the value drivers will allow the company to better control and drive the individual drivers and by this way influence positively NOA, NOPAT and WACC and consequently economic vale added.

The incorporation of the economic value added into the compensation plan of the managers should motivate them to outperform the current performance, because their rewards will not increase only if the profit increases by whole 1%. The rewards will increase every time when economic value added increases. So consequently, the problem that manager could defer the important investments or operations for the next years will be dispelled.

In summary, the implementation of the EVA concept will improve the performance of the company through the combination of the better control of the value drivers and better motivation of the managers and employees. The company will be more attractive and trustworthy for new potential investors, because they will be able to better measure the value which is created by the company. As a consequence of the better value driver control, EVA control, performance increase and the increase of the trustworthiness of the investors the value of the company will improve and increase as well. The EVA implementation will bring also other contribution such as improvement of the competitive position on the market and better control of the financial structure through the WACC control.

CONCLUSION

The main aim of this paper was to introduce the economic value added concept, highlight its virtuous and elaborate the proposal of its successful implementation into the management company in order to raise its economic performance. The implementation is suggested, because the company does not use EVA concept and carried out analyses indicate that this approach would be beneficial for the company.

The thesis is divided into two parts, the theoretical and practical part. In the first part the value based management and shareholder value is introduced. Later on the overview of the traditional and modern performance measures with their virtues and limitations is provided. The EVA concept is introduced and described in details, the means of its utilization and virtues are highlighted. On the basis of the literature review the implementation of the economic value added is suggested.

The second part consists of the analytical and the project part. In the analytical part the different types of analysis such as macro and microeconomic analysis, internal analysis and financial analysis are carried out. The EVA for the last five years is calculated and consequently compare with traditional measures, which are used by the company. The EVA trend indicates a significant drop in EVA in 2009, in order to determine the reason of this increase and demonstrate EVA break down and its application the pyramidal analysis is carried out.

In the project part the proposal of EVA implementation is elaborated. It deals with topics such as EVA measurement centers, EVA calculation, the compensation plan, training program, mindset creation. Later on the EVA implementation plan is develop, its costs calculated and the contribution of the project described.

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LIST OF ABBREVIATIONS

C	Capital employed
CAMP	Capital assets pricing model
CFROI	Cash flow return on investment
EAT	Earnings after tax
EBIT	Earnings before interest and tax
EBITDA	Earning before interest, tax, depreciation and amortization
EVA	Economic value added
FIFO	First in first out
MVA	Market value added
NOA	Net operating assets
NOPAT	Net operating profit after taxes
NWC	Net working capital
PRIBOR	Prague interbank bid offer rate
ROA	Return on assets
ROE	Return on equity
ROI	Return on investment
ROS	Return on sales
VBM	Value based management
WACC	Weighted average cost of capital

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P II DuPond analysis of EVA

PIII Organizational chart

APENDIX P I: FINANCIAL ANALYSIS

Tab. 37. The Assets trend of the company [own elaboration]

(thousands CZK)	06/05	07/06	08/07	09/08
TOTAL ASSETS	***17%***	***17%***	***-1%***	***-27%***
Fixed assets	*2%*	*14%*	*-31%*	*-3%*
Intangible assets	-44%	-32%	-43%	-66%
Tangible assets	2%	37%	44%	-2%
Long term investments	2%	0%	-100%	
Current assets	*63%*	*21%*	*52%*	*-14%*
Inventory	88%	3%	29%	-29%
Accounts receivable	25%	66%	10%	-19%
Cash and cash equivalents, short term Investments	-53%	-50%	29067%	35%
Accruals and deferrals	*21%*	*7%*	*-55%*	*0%*
TOTAL LIABILITIES	***17%***	***17%***	***-1%***	***-9%***
Stockholders' Equity	*10%*	*19%*	*32%*	*7%*
Invested Capital	0%	0%	0%	0%
Other Equity Accounts	-100%	-167%	-950%	12%
Restricted Retained Earnings	36%	2%	1%	-2%
Retained Earnings	59%	36%	183%	39%
Net Income or Loss (+/-)	0%	49%	-4%	-35%
Liabilities	*24%*	*15%*	*-28%*	*-32%*
Reserves	2%	-22%	29%	-100%
Long term liabilities	12%	6%	49%	17%
Current liabilities	243%	9%	-42%	-19%
Total bank credits	-35%	36%	-29%	-32%
Short term credits	-93%	363%	-39%	-1%
Long term credits	0%	-4%	-22%	-46%
Accruals and deferrals	*-3%*	*360%*	*98%*	*-84%*

Tab. 38.The structure of the revenues of the company [own elaboration]

		2005	2006	2007	2008	2009
I.	Merchandise revenues	0,29%	0,00%	0,00%	0,00%	0,00%
II.	Internal activities	87,41%	93,91%	92,38%	72,99%	95,99%
II.1.	Product and service revenues	84,79%	89,60%	85,92%	67,46%	96,13%
II.2.	Changes in inventory of own production	0,30%	1,62%	0,53%	0,50%	-3,20%
II.3.	Capitalization of own production	2,32%	2,68%	5,94%	5,03%	3,05%
III.	Material and tangible asset revenues	5,28%	1,27%	3,28%	3,36%	2,11%
III.1.	Tangible asset revenues	4,39%	0,15%	0,39%	1,08%	0,03%
III.2.	Material revenues	0,89%	1,12%	2,89%	2,28%	2,07%
IV.	Other operating revenues	0,35%	0,26%	0,08%	0,14%	0,38%
VI.	Revenues from the sale of capital interests	0,00%	0,00%	0,00%	21,56%	0,00%
VII.	Long term financial investment revenues	5,90%	3,97%	3,56%	0,00%	0,00%
VII.1.	Revenues from controlling interests	5,90%	3,97%	3,56%	0,00%	0,00%
X.	Interest received	0,01%	0,00%	0,01%	0,17%	0,18%
XI.	Other financial revenues	0,76%	0,59%	0,69%	1,78%	1,34%
	Total Revenues	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**

Tab. 39. The cost structure of the company [own elaboration]

		2005	2006	2007	2008	2009
A.	Costs of merchandise (goods)	0,28%	0,00%	0,00%	0,00%	0,00%
B.	Costs of own production	74,31%	78,47%	79,26%	61,19%	77,69%
B.1.	Costs of material and energy	63,85%	66,03%	67,24%	54,14%	65,36%
B.2.	Costs of servise	10,46%	12,45%	12,02%	7,05%	12,32%
C.	Personnel costs	14,92%	13,91%	13,05%	9,77%	15,95%
C.1.	Wages and salaries	10,94%	10,19%	9,57%	7,13%	11,64%
C.2.	Board member compensations	0,00%	0,00%	0,00%	0,01%	0,05%
C.3.	Social security expenses	3,77%	3,55%	3,33%	2,50%	3,85%
C.4.	Fringe benefits	0,21%	0,18%	0,15%	0,13%	0,41%
D.	Taxes and charges	0,21%	0,08%	0,08%	0,10%	0,10%
E.	Depreciations of tang. and intang. assets	3,18%	2,63%	2,68%	2,58%	5,95%
G.	Changes in reserves	1,84%	0,21%	-1,16%	0,96%	-5,52%
H.	Other operating expenses	0,67%	0,54%	0,43%	0,33%	0,48%
J.	Sold capital interests	0,22%	0,00%	0,00%	20,71%	0,00%
M.	Changes in financial reserves	0,00%	0,00%	0,00%	0,01%	0,00%
N.	Interest paid	1,47%	0,95%	1,06%	0,70%	0,67%
O.	Other financial expenses	0,98%	1,01%	1,70%	2,06%	2,29%
Q.	Tax (operating profit)	1,93%	2,19%	2,88%	1,60%	2,40%
	Total Expenses	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**

Tab. 40. The calculation of the profits of the company [own elaboration]

(thousands CZK)	**2005**	**2006**	**2007**	**2008**	**2009**
Operating income	56501	68118	115 758	91 999	92 716
Financial income	29494	21238	17 126	32 098	-8 198
Extraordinary income	0	0	0	0	0
Interest paid	8704	6412	8 162	7 912	4 399
Depreciation	18810	17711	20 567	29 161	39 187
Tax	11413	14782	22 111	18 061	15 788
EAT	**74 582**	**74 574**	**110 773**	**106 036**	**68 730**
EBT	**85 995**	**89 356**	**132 884**	**124 097**	**84 518**
EBIT	**94 699**	**95 768**	**141 046**	**132 009**	**88 917**
EBITDA	**113 509**	**113 479**	**161 613**	**161 170**	**128 104**

Tab. 41. The EBIT structure of the company [own elaboration]

	2005	**2006**	**2007**	**2008**	**2009**
Interest paid	9,19%	6,70%	5,79%	5,99%	4,95%
Tax	12,05%	15,44%	15,68%	13,68%	17,76%
EAT	78,76%	77,87%	78,54%	80,32%	77,30%
EBIT	100,00%	100,00%	100,00%	100,00%	100,00%

Tab. 42. Return ratios of the industry [own elaboration]

	2005	2006	2007	2008	2009
ROS	6,32%	7,77%	11,43%	5,22%	N/A
ROR	7,77%	9,47%	14,38%	6,94%	N/A
ROA	13,12%	14,37%	17,93%	9,16%	N/A
ROE	16,39%	17,31%	20,79%	9,39%	N/A

Tab. 43. Debt ratios of the industry [own elaboration]

	2005	2006	2007	2008	2009
Total Debt Ratio	44,54%	39,59%	37,63%	36,44%	N/A
Debt Equity Ratio	0,74	0,64	0,59	0,56	N/A
Equity/Fixed Assets	1,27	1,20	1,27	1,55	N/A
Interest Coverage Ratio	23,28	27,55	23,97	5,64	N/A

Tab. 44. Liquidity ratios of the industry [own elaboration]

	2005	2006	2007	2008	2009
Current Ratio	2,05	1,86	2,03	2,28	N/A
Quick Ratio	1,38	1,24	1,36	1,69	N/A
Cash Ratio	0,21	0,34	0,62	0,47	N/A

Tab. 45. Activity ratios of the industry [own elaboration]

	2005	2006	2007	2008	2009
Asset Turnover Ratio	1,67	1,52	1,25	1,32	N/A
Inventory Period (days)	46	44	53	58	N/A
Average Collection Period (days)	80	64	58	91	N/A
Days Payable (days)	57	56	65	63	N/A
Inventory Turnover	7,84	8,17	6,80	6,22	N/A

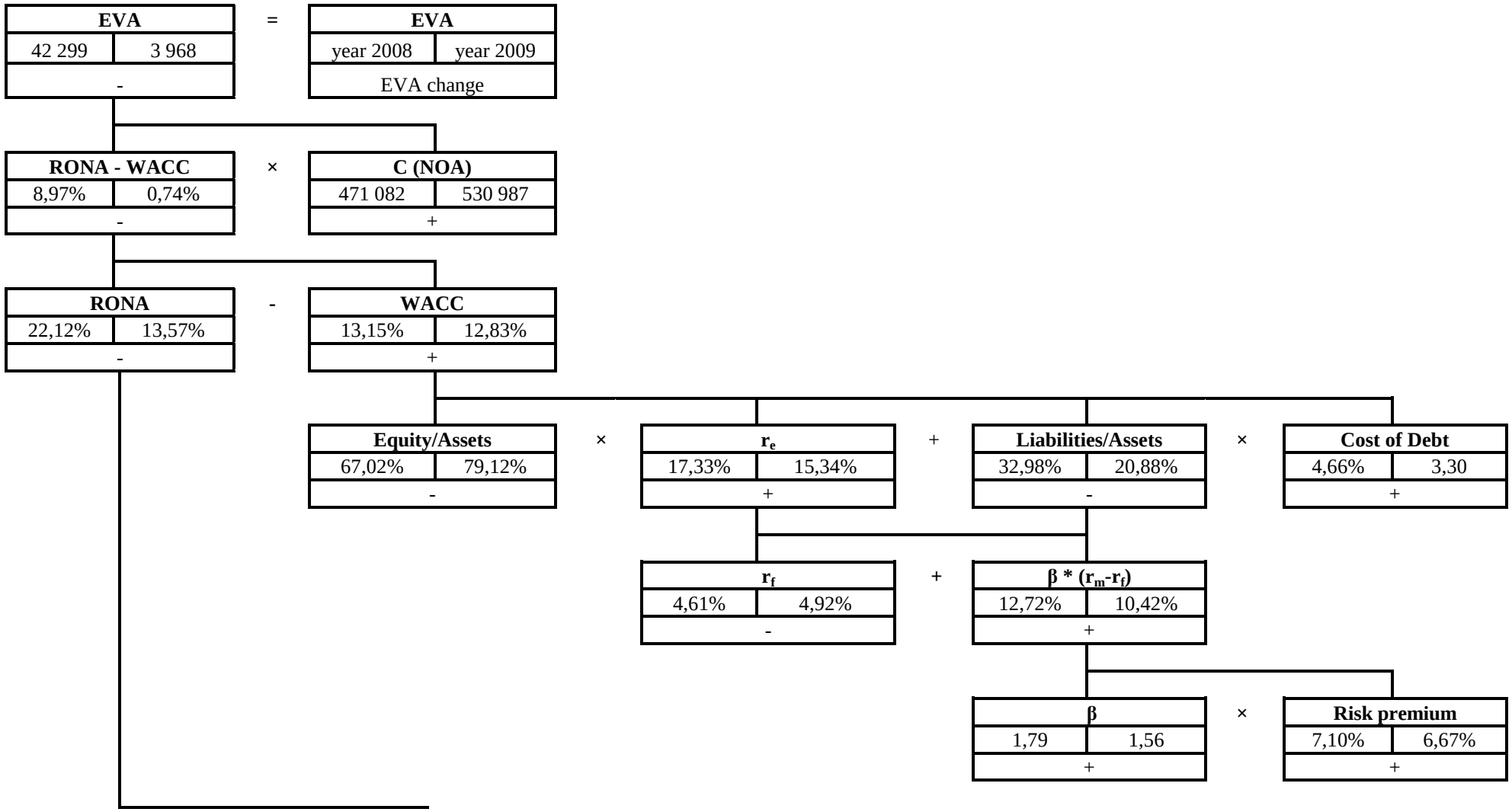
Tab. 46. Other ratios of the industry [own elaboration]

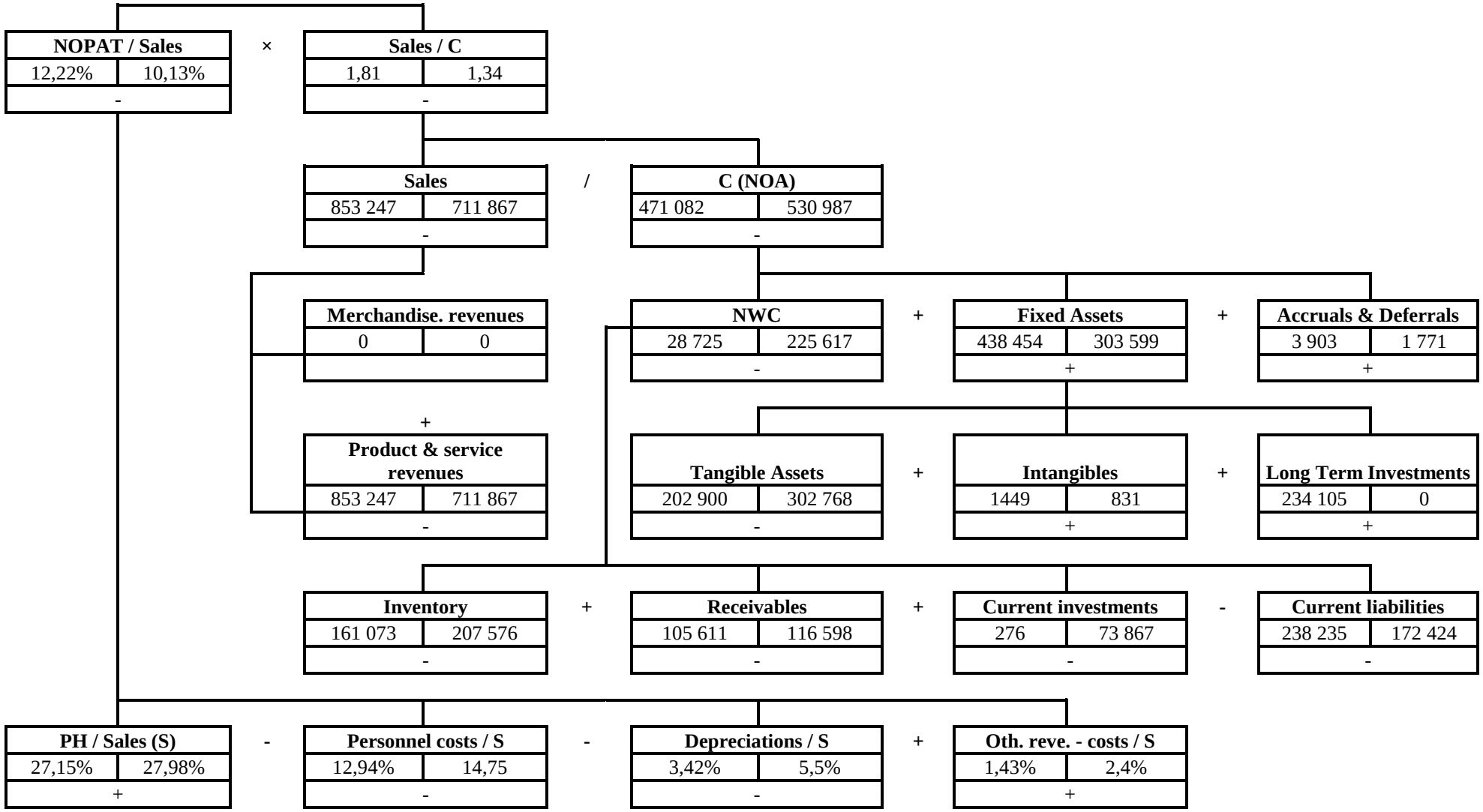
	2005	2006	2007	2008	2009
Value Added/Employees (thous. CZK)	775,09	921,40	1 129,41	924,74	N/A
Sales/Employees (thous. CZK)	3 717,86	4 266,07	4 363,22	4 572,77	N/A
Personnel Costs/Employees (thous. CZK)	344,77	387,61	378,01	416,65	N/A
Costs of own production/Revenues	68,74%	66,22%	69,28%	70,35%	N/A
Personnel costs/Revenues	7,90%	8,06%	7,88%	7,90%	N/A
Depreciations/Revenues	2,30%	2,35%	2,94%	2,71%	N/A
Interest Paid/Revenues	0,32%	0,33%	0,58%	1,05%	N/A
Value Added/Revenues	17,77%	19,16%	23,54%	17,54%	N/A
Personnel costs/Value Added	44,48%	42,07%	33,47%	45,06%	N/A
Depreciations/Value Added	12,93%	12,26%	12,49%	15,45%	N/A
Interest Paid/Value Added	1,80%	1,73%	2,45%	5,96%	N/A
EBT/Value Added	30,30%	35,96%	58,63%	33,60%	N/A

Tab. 47. SPIDER analysis 2008 [own elaboration]

Spider Analysis - year 2008			Company	Industry
Return Ratios	**A.1**	ROE	24,64%	9,39%
	A.2	ROA	18,50%	9,16%
	A.3	ROS	12,43%	5,22%
Liquidity Ratios	**B.1**	Current Ratio	2,74	2,28
	B.2	Quick Ratio	1,33	1,69
	B.3	Cash Ratio	0,5449	0,47
Debt Ratios	**C.1**	Equity/Fixed Assets	1,40	1,55
	C.2	Total Debt Ratio	0,39	0,36
	C.3	Debt Equity Ratio	0,65	0,56
Activity Ratios	**D.1**	Asset Turnover Ratio	1,77	1,32
	D.2	Inventory Turnover	4,11	6,22

APENDIX P II: DUPONT ANALYSIS OF EVA




NOPAT / Sales
12,22%
10,13%
-
×
Sales / C
1,81
1,34
-
Sales
853 247
711 867
-
/
C (NOA)
471 082
530 987
-
Merchandise. revenues
0
0
+
Product & service revenues
853 247
711 867
-
NWC
28 725
225 617
-
+
Fixed Assets
438 454
303 599
+
+
Accruals & Deferrals
3 903
1 771
+
Tangible Assets
202 900
302 768
-
+
Intangibles
1449
831
+
+
Long Term Investments
234 105
0
+
Inventory
161 073
207 576
-
+
Receivables
105 611
116 598
-
+
Current investments
276
73 867
-
-
Current liabilities
238 235
172 424
-
PH / Sales (S)
27,15%
27,98%
+
-
Personnel costs / S
12,94%
14,75
-
-
Depreciations / S
3,42%
5,5%
-
+
Oth. reve. - costs / S
1,43%
2,4%
+

APENDIX P III: ORGANIZATIONAL CHART