

Project of Implementation of Economic Value Added (EVA) for Company "ABC" in Order to Improve the Company's Financial Performance

Bc. Henrik Gharagyozyan

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Department of Enterprise Economics
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Degree, First Name and Surname: **Henrik Gharagyozyan**
Personal Code: **M140358**
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Introduction

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I. Theoretical part

- **Prepare literature review focusing on methodology of EVA.**

II. Practical part

- **Briefly introduce ABC Company in general.**
- **Analyze and evaluate the financial situation of ABC Company.**
- **Prepare a comprehensive project of implementation of EVA for ABC Company, representing all related risks and benefits.**

Conclusion

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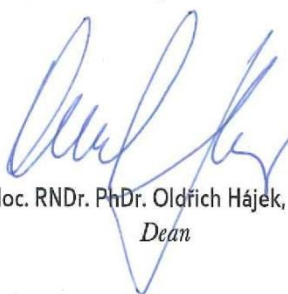
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Thesis Supervisor: Ing. Přemysl Pálka, Ph.D.
Department of Finance and Accounting


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doc. RNDr. PhDr. Oldřich Hájek, Ph.D.
Dean




prof. Ing. Felicity Chromjaková, Ph.D.
Head of Department

ABSTRAKT

Cílem této práce je reprezentace EVA kalkulace krok po kroku stejně jako literární posudek konceptu Ekonomické Přidané Hodnoty (EVA), jak implementovat EVA do firmy ABC, jak kalkulovat a měřit náklady, výhody a čas implementace. Mimo to změřit a zobrazit finanční pozici firmy ABC v oborech mikroekonomie a makroekonomie

Klíčová slova:

Ekonomická Přidaná Hodnota, implementace EVA, EVA krok po kroku, komponenty EVA kalkulace.

ABSTRACT

The purpose of this thesis is to represent step-by-step EVA calculation as well as literature review about the concept of Economics Value Added (EVA), how to implement EVA into ABC Company, calculate and measure the costs, benefits and time of implementation. Moreover, measure and illustrate the financial position of ABC Company in the scopes of Macro and Micro sectors.

Keywords: Economic Value Added, EVA implementation, EVA step-by-step guide, EVA Components calculation.

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INTRODUCTION

The ideology of Economics Value Added was first come in use when there was a question of creating shareholders' wealth. The creation of value is in line with improving the performance and competitiveness in the market indeed. These two aspects are permanent with each other. For instance, if there is no challenge, it means the company is not performing well enough. Therefore it cannot create sufficient value for shareholders, which can cause to closure of the company. In order to comprehend if a company is performing sufficient enough several managers designed the concept of Economics Value Added to measure and even estimate the expected future economic profit. EVA itself has huge impact on finance and has been adopted by thousands of firms these days. In comparison with traditional metrics EVA gave relatively better solution to calculate a company's true economic value.

In addition EVA is not just only a calculation of company's performance, but it's also a mindset, lifestyle with significant philosophical approaches towards shareholders' wealth creation and continuous improvement.

Within the literature review the three main components of EVA will be thoroughly defined by guiding how to calculate them as well as defining EVA itself, comparing EVA with MVA, the essence and history of EVA will be discussed.

Based on the theory a brief calculation of ABC Calculation will be initiated with suggestions of implementation, considering the time and cost of the implementation of the project into the ABC Company.

I. THEORY

1 WHAT IS EVA?

In fact Economic Value Added (EVA) can be illustrated in various ways and with various definitions. According to Nikhil Chandra Shil professor of East West University, faculty of Business administration EVA is a value based performance measure that gives importance on value creation by the management for the owners. Value maximization is a 21st century “gold rush” which most of the world’s biggest entrepreneurs desire to achieve. On the other side, Stern Stewart’s EVA gives a new method and technique of evaluating and measuring a proper company’s performance and current value economic value in the proper market. In order to achieve better results with the calculation of EVA the financial or accounting information should be precise. The traditional accounting information system doesn’t give the ability to compute the true EVA, therefore EVA is considered to be in line with modern management philosophy such as lean management is nowadays.

Another brief definition of EVA can be given by management consulting firm Stern Stewart & Co : Economic value added (EVA) is a measure of a company's financial performance based on the residual wealth calculated by deducting cost of capital from its operating profit (adjusted for taxes on a cash basis). (Also it is referred to as "economic profit".)

The most common in practice formula is represented below:

$$\text{EVA} = \text{Net Operating Profit after Taxes (NOPAT)} - (\text{Capital} * \text{Cost of Capital (WACC)}) \quad (1)$$

More information regarding to NOPAT, Invested Capital and Weighted Average Cost of Capital is represented in the Second chapter.

More specifically, by measuring EVA will give outcome of how much economic value is added for the shareholders by the management for which they have been initiated with for a particular period of time. In comparison EVA with other traditional tools, the latter are mostly dependent to the information generated by accounting. Obviously, accounting is based on historical data, which can be easily distorted or not always presented as precise as it requires being in order to illustrate the current state of a company. On the other hand, EVA uses adjustments to accounting data, which gives more economic vitality to measure the actual economic value of a company.

Generally, when a company generates profit in a short run and it doesn't mean that the company's performance is working properly and it will be profitable for a long run. Some companies pay taxes intentionally in order show their shareholders that they generate income, however, in fact, it is falsification and in most of the cases can be considered as fraud. In order to prevent this EVA gives a solution to this gap by considering the capital created by managers to be paid as if it was a salary.

In addition to these, Peter Drucker claims in a Harvard Business Review article, "Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind that it pays taxes as if it had a genuine profit. The enterprise still returns less to the economy than it devours in resources...until then it does not create wealth; it destroys it." Moreover, EVA fixes the errors of standard accounting by providing more precise financial information. Therefore, EVA is one of the best tools for entrepreneurs in every case. Besides that, EVA is more convenient tool for generating shareholder value, and that's why EVA has been integrated and widely used in many organizations to insist managers to create shareholder and economic value.

As (Stewart, 1991) states: the decision role is very simple; if the EVA is positive, the company creates shareholder wealth. On the other hand, negative EVA indicates that the company doesn't create shareholder wealth and the company needs some specific improvements. Basically, EVA is the same as Residual Income (RI) which is not a new thing and been used for decades.

Surely, there are several specific differences between these two tools. The most significant one is the way these two measurement tools handle with accounting distortions. There has been developed around 164 adjustments for EVA which clearly removes the distortions from accounting data. As for RI calculation it is not applicable.

1.1 History behind EVA

As we previously mentioned the value-based management performance measure EVA introduced by Stern Stewart & Co. is the logical descendant of residual income (RI) concept. Some true observations show that EVA is very dependent to its cost of equity (COE) component, however it is surprisingly insensitive to its cost of debt (COD). The feasibility of EVA is highly correlated with the policies of a company's financial growth, because of the impact of leverage. Even though EVA is considered a very useful tool and its eligibility to use it for various divisions of a company, it is observed to be relatively unstable than the conventional Return on Investment (ROI) and moreover it's directly related to the return on equity (ROE).

Unlike RI, EVA is much more advocated as a management measurement tool, because the purpose of each company is to increase shareholders' wealth. Consequently, the owners wish to have a maximum possible outcome of repayment in connection to the capital they invested. The question is to understand how EVA is efficient regarding to its various component, management policies also internal and external factors. In order to comprehend the whole essence behind EVA we need to start with its origin.

The concept of EVA was formulated in 1990 to measure the profitability and performance of firms. On the other hand, EVA is the reversal of Alfred Marshal's development in 1890. Marshal had his own explanation of Economic profit. He claimed that economic profit can be considered as a reward of continuous improvements. Basically, total net gains less profit than the current interest rate on invested capital.

The concept of EVA can be named Economic Profit (EP) as well as Economic Value Added is a trademark. Obviously, EVA is a worldwide known tool, however in some firms Residual Income concepts can be confused with EVA's one, even though they do not contain the core aspects of it, which is powered by Stern Stewart & Co.

As a matter of fact EVA, currently, as one of the most succeeded performance measuring tools looks to be on a on strengthening trends indeed. Controversial to this fact, Residual Income was not priority in the 1970s. Factually, the numbers of companies adopting is significantly increasing year-by-year. One of the main reasons why EVA has its publicity is that it was integrated with the measurement model of Market Value Added (MVA).

1.2 The main theory behind EVA

The essence of EVA is to measure whether the operating profit is enough compared to total costs of capital employed. Basically, according to Steward EVA (1990, p137) as Net operating profit after taxes (NOPAT) eliminated with a capital charge:

$$\text{EVA} = \text{NOPAT} - \text{COST OF CAPITAL} * \text{CAPITAL EMPLOYED} \quad (2)$$

On the other side if rate of return is defined as NOPAT/CAPITAL EVA can be calculated with a more accurate formula:

$$\text{EVA} = (\text{RATE OF RETURN} - \text{COST OF CAPITAL}) * \text{CAPITAL} \quad (3)$$

Besides this there is an alternative way of calculating EVA:

$$\text{EVA} = (\text{RONA} - \text{NOA}) \times \text{WACC} \quad (4)$$

EVA can be improved by following means:

- By improving Returns on Net Assets (RONA) with the capital Net Operating Assets (NOA)
- By using productive approach towards capita, which means employ less NOA earn more RONA
- Reduce the capital cost (WACC) with relatively less capital (NOA) and operating profit (NOPAT).

1.3 Mission of EVA

The purpose of each EVA based firm is to increase EVA indeed. The value of EVA that we get after calculation illustrates the previous sums of all company's losses and wins. When we have EVA increased it affects positively on Net Present Value (NPV) as well as total stockholders' return (TSR).

Consequently, the objectives of any EVA based firm is to make it less if in the end of each economic period EVA is found negative and of course try to make it more if EVA is found positive. Besides the fact that it is very useful for shareholders and investors EVA can be powerful tools for managers as well for using in cost reduction system. EVA can help managers to invest capital wisely, which part of division to focus on and to turn assets rela-

tively quicker and to discharge capital from non-operating assets in time. Obviously, all of these motives are in line of increasing EVA (Stewart).

Surprisingly, EVA is in fact the only performance measure tool that more is by all means better as more EVA is more NPV. Besides that as a value-added profit EVA starts with bottom and fulfills the top by adjusting the whole decision making procedure.

1.4 EVA as a management performance tool

Obviously, EVA is considered as one of the modern company performance metrics nowadays. As a matter of fact, many firms highly evaluate the importance of shareholder's wealth creation as one of the main goals of its activities. Therefore, the precise implementation of EVA can bring prosperity in terms of creation shareholder value as well as in terms of right decision making.

On the other hand, EVA in comparison to traditional metrics has significant superiority as the usual financial metric like a profitability, cash flow, earnings, and performance ratios do not take part in terms of shareholders' value creation. [1]

Despite that upper mentioned fact there are several arguments that make EVA superior performance company metric, therefore EVA is: [2]

- Very close in terms of amount to the real cash flow of a firm.
- Measures an operating performance and its outcome can be used for managerial decision making.
- Easy to compute and comprehend.
- A basic component of shareholders' creation
- Easy to communicate to the managers
- Is highly correlated to the market values such as the Market Cap and debt

These aspects make EVA more applicable in much entrepreneurship nowadays.

1.5 Evaluation of EVA

1.5.1 Advantages of EVA

The major advantage of EVA is the obvious feasibility of it. Despite the fact that EVA can be implemented for the whole firm as a measurement tool, it also can easily be integrated into the individual divisions of the firm, factories, stores and product lines. [3]

Additionally, EVA, besides being a perfect performance improvement metric is also a mean of improving business literacy because of its easy comprehension. The concept of EVA is understandable even for non-financial specialists and it goes in line with shareholder wealth. [8]

Consequently, the further advantages of EVA include:

- Good assumptions of managerial decision making and approach to the firms best interest.
- Can warn management of the sudden growth of capital cost. This indicates that the assets do not cover their costs.
- Makes managers care about asset and income management and helps to comprehend the relationship between these components.
- Measures how much wealth divisional and corporate managers created for a particular division or for the whole company.
- Creates opportunities for senior managers to get engaged mainly with shareholder value creation.
- Return on Investments (ROI) and EVA are highly correlated with each other thus helps for better changes in the stock market.
- Allows management decision to get modeled, communicated, discussed, monitored,

The approach of EVA is claimed to be efficient in all types of organizations and economic sectors. (Mäkeläinen, 1998). As the ongoing performance is visible in the stock price the current level of EVA turns out to be not much important. From the perspective of Lean management EVA is considered to be a continuous improvement. This valuable tool has a mission of continuously increasing the wealth of shareholders.

1.6 Disadvantages of EVA

Since EVA became applicable worldwide critics have proven that it has limitations indeed. One significant fact against EVA is that it is assumed managers have all of the proper information for the decision making and all of the managers are capable to lead EVA procedure. EVA itself disregards the organizational structure of a company and all types of managers can be involved in the improvement process.

Another limitation is the shortness of EVA. Some financial analysts claim that EVA is not much useful for long-term decision making.

Through EVA it is impossible to indicate the correlation and cooperation between different divisions. Moreover, some EVA critics mention that EVA is complex to measure and in the calculations of EVA it is mostly used book values but not market values. [7]

Negative EVA can be concluded in the calculations even though the Company is proven to be profitable in the long term.

In addition to all these EVA is not a suitable metric for the firms belonging to high cycle economic sectors.

Another limitation can cause a firm to have more inappropriate assets in the balance sheet which are EVA related only.

Eventually, EVA is considered by some analysts to be not accurate measure and it can be measured subjectively as EVA deals with future returns as well, latters can only be estimated.

1.7 Implementation of EVA

One of the major policies of EVA as well as Value Based Management is to change the behaviorism of managers towards economic value creation. [2]

As already stated EVA as a continuous improvement management tool, it requires to start the EVA implementation procedure from a company's CEO and executive staff. The philosophy of EVA claims of its success if applying this methodology. In case the top managers do not know of EVA it will cause lack of inter-understandings and EVA based relationship between executives and managers who initiate EVA. Moreover, an EVA based company is required to organize proper trainings and coaching for its employees in order to be prone to wealth creation. This mentality can make employees apply the methodology of increasing EVA, which is the key to value creation. In order to implement EVA into a firm it requires to make the concept easy to comprehend and accountable. Throughout his research Wallence stated that EVA should be kept simple and the concept should be understandable not only for managers and executives, but also for other employees of lowest positions who are somehow involved in the process of EVA. [7]

According to Ehrbar EVA demands to replace everything else, if not it can't be simple and easily comprehended. On the other side, the managing procedure will be complicated.

Young and O'Byrne suggested their own questionnaire and answers of implementation of EVA concept: [2]

- How is possible to find out the centers of EVA metrics? The key is to define the profit centers in order to find the EVA center. This means to conclude EVA with well represented balance sheet and income statement.
- Who will be responsible for its identification? Specialized manager with EVA-based experience as well as senior manager with relatively more experience of the company.
- In what organizational divisions of a firm EVA should be implemented? In fact EVA can be initiated in all of the organizational hierarchy of a company; however lots of unsuccessful researches suggest not going deep though.
- What method of EVA to calculate? Depending on the company's belonging to economic sectors and the type of business the methods and calculations may differ.
- As there are more than 160 EVA related adjustments, which of them should be applied for EVA calculation? Again it depends on the accurateness of using EVA's

components, if in the end the adjustments will give minor difference; most of the companies won't apply them. In general approximately up to 12 adjustments are initiated by most of the EVA based firms.

- What's the frequency of EVA calculation? EVA is usually good for short period measurement, but not for long period as negative EVA can cause managers to wrong conclusions and lead the firm to a wrong direction. Generally EVA can be calculated monthly, seasonal and annual. [3]

Besides this questionnaire there arise other questions of compensating the management project scheme.

- In general what capacity of compensation is covered by EVA based company's project plan?
- What is the sensitivity of bonuses that should be considered?
- If there will be differed components? And if yes, for what position of managers?
- Which is better to choose for whole company EVA, for mix of divisional or EVA group bonus plan?
- What will be the role of stock options in the compensation project?

The development of the desired implementation project most off the firms assign a committee and project coordinator in order to initiate it successfully. Otherwise, unorganized project implementation can cause to chaos, thus to fail. Some companies hire special EVA consultant-individuals as well as consulting companies to maintain and implement the whole project. Moreover the core duty of the developers of the implementation project is to maintain the technical part of EVA implementation such as IT support and to be sure that the legal part of the project compensation plan is initiated. [6]

As a matter of fact, the project includes training and coaching sessions as well. Remains to assign for who this trainings are required, who will be responsible for that program and if the training will be executed or not. In addition to this, if the trainings will be executed how will the concept be represented, how many employees will be considered for the training sessions and if these trainings are going to be ongoing project.

1.8 The relationship between MVA and EVA

Before defining the relationship between EVA and Market Value Added (MVA) we need to comprehend the essence of MVA first. Of course MVA can be defined in various explanations as well. The one that Stewart defines is that this measure evaluates if a firm has created a shareholder wealth, moreover if the total market value of that company exceeds the amount of the capital invested by shareholders in it, this explains the company created shareholder wealth. On the other hand, the controversial version is also true. Stewart's represented equation is shown below: [9]

$$\text{MVA} = \text{Company's Total Market Value} - \text{Capital Invested} \quad (5)$$

And when we make the formula easier we can see that market and book value of debt are equal, therefore we can have this equation as well:

$$\text{MVA} = \text{Market Value of Equity} - \text{Book Value of Equity} \quad (6)$$

The easiest way of clarifying which components are considered as Book Value of Equities are the items which are Equity equivalent such as reserves, provisions, retained earnings. Moreover, all of the items, which are non-debts, are categorized as equities.

Market-to-book ratio and MVA are highly correlated with each other. Though, MVA is an absolute value the market-to-book ratio is a relative measure. Consequently, if MVA is positive then it means market-to-book is higher than 1. Obviously, if MVA is negative, market-to-book is less than one.

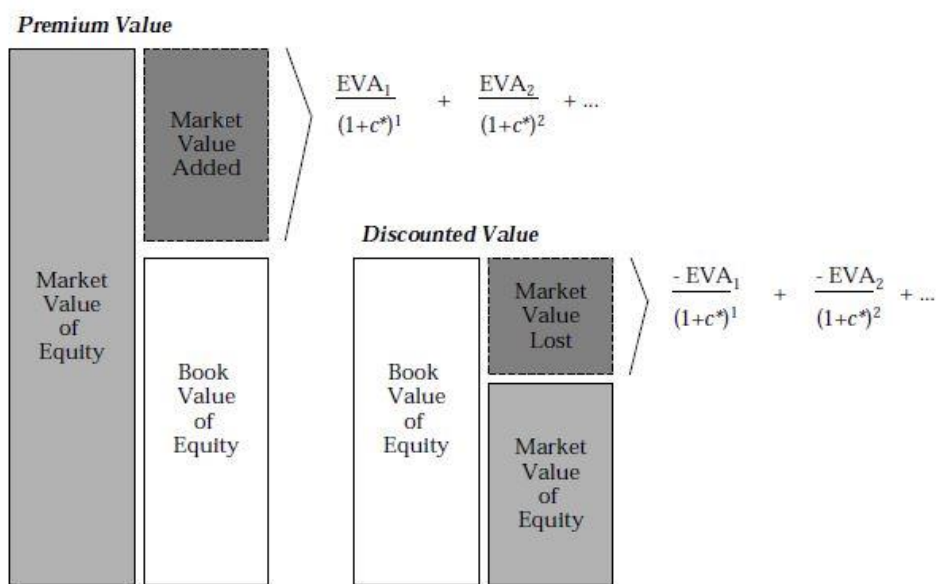
All of successful companies who applied MVA in their management can easily observe the significant increase of their Invested Capital. In fact, the rate of return of the company has a huge impact on its success in creating MVA or increasing stockholder's wealth. For example, if rate of return is more than the company's cost of capital it means it has positive MVA as well as the company can sell its stocks in higher price compared to capital invested. Reasonably, in case of negative MVA the prices of the stocks are less than the original capital. [8]

Thus in order to comprehend if MVA is positive or negative it depends on the difference between rate of return and cost of capital. Consequently, in terms of positive MVA EVA is also positive and vice versa. (Stewart)

Again according to Stewart MVA is the present value of all of future EVA. If a company increases its EVA it also effects on the difference of company's total market value and capital invested.

The figure below represents the relationship between EVA and MVA:

Figure 1 Company's market value depends directly on its future EVA.



Moreover, as we already stated MVA equals to present value of all future EVAs, however if we conclude according to Stewart we can comprehend that this valuation formula is equivalent to Net Present Value (NPV) and Discounted Cash Flow (DCF) regardless of the shareholder's equity. In addition to this, the argument remains true even if invested capital is not a measure of current value of assets, as well as rate of return is not the true return. The reason to this can be explained the following way: [6]

If book value is increased then it decreases all of the seasonal EVAs and the vice versa situation is true indeed.

In the following subchapter the relationship between these three aspects are illustrated.

As we will refer to our equation many times it's much better to assign a number to it.

$$\mathbf{MVE = BVE + PVFEVA} \quad (7)$$

Where:

MVE also known as market value of equity,

BVE in other words is book value of equity,

And PVFEVA is present value of all future EVAs.

In fact, the systematic future EVAs through cost of capital really has a huge impact on book value of equity (BVE). Let's consider the scenario when a company's book value of equity is too high, consequently it means the future capital costs are high as well, despite the fact that the financial worth of all future systematic EVAs will be relatively lower. Thus the market value of equity remains the same regardless of the value of original book value of equity. [8]

2 EVA COMPONENTS

As already stated that there are various methods of calculating EVA, however the most basic formula is considered in this thesis:

$$\text{EVA} = \text{NOPAT} - \text{WACC} \times \text{NOA} \quad (8)$$

Apparently, according to Stern Steward & Co. more than 150 adjustments are required to be applied, hence, to measure the most possibly accurate EVA of a company.

On the other hand, the main factors that the most of all these adjustments are not more often being used, depends on company's policy, economic sector, strategic management and etc.

Moreover, some companies claim that they use around 12 adjustments, despite the fact that there are some others who are not prone to use them at all. The reasons they don't make any adjustment, because they are sure that these adjustments have insignificant impact on economic profit. The essence of applying for adjustments is to transform accounting profit into economic profit as EVA is an economic measure itself. [4]

The major accounting adjustments are Research and development (R&D), capitalized intangibles, LIFO reserves, Goodwill, Operating Leases – Leasing, Deferred Taxes and Bad debts, warranties and restructuring reserves.

2.1 NOPAT

In order to calculate the real NOPAT, we will not consider the non-operating items like dividend/interest on securities invested outside the business, non-operating expenses and etc. During NOPAT calculation dividends, interests on securities invested outside the business are ignored.

Net Operating Profit after Tax (NOPAT) plays a crucial role on the calculation of EVA and is considered as one of four steps of EVA Measurement. Basically, NOPAT measures the operating profit. In addition to that NOPAT is very useful for concluding the operating results of a firm that is why it is being conducted by the managers for the internal use rather than for the external. According to Investopedia.com, NOPAT is a firm's cash as if it has no debt. Therefore NOPAT is not very useful among the companies who own the policy of Tax savings, as they almost always have current liabilities. Usually there are three easy ways of finding NOPAT; however there is no single technique of reaching to the final number of it. Moreover, NOPAT is not a 100 percent accurate measure, as it depends on the adjustments (around 150 of them are available for calculating economic profit) the investors or shareholders are used to initiate. One of drawback of NOPAT is considered to be the fact that basically it is being misinterpreted by various taxations of debt and shareholders' equity. Under these circumstances the amount of debts influences the size of tax, which results errors. More often the amount of NOPAT can be chosen by using only less of them, thus the most significant ones. From an investor's perspective not all of the adjustments are required to consider. What interest them are the reliability and the feasibility of the method which can be used for long term. Obviously, investors as well as shareholders more prefer consistency rather than to have 100 percent precise economic profit value.

The very common formula of calculation of NOPAT is as follows: [6]

$$\text{NOPAT} = \text{Operating Income} \times (1 - \text{Tax Rate}) \quad (9)$$

However, there are also other ways of calculations by using Net Income and Net After-Tax Interest Expense.

As was mentioned earlier, the importance of NOPAT is crucial in not only during EVA calculation, but also in different kind of financial analysis. The main reason behind it is,

that it shows a better concept of operating efficiency, as it uses only operating income and doesn't consider leverages of the organizations, or, moreover, bank loans. The significance of it is that focusing on interest expenses can decrease the level of Net Income and therefore effect on the reduction of company's tax expense. Hence, it outlines how well the company and its basic operations do.

Moreover, as NOPAT is a true economic profit and it has several adjustments.

In order to calculate NOPAT revenues and certain expenses should be adjusted and financial costs should be excluded. In this following table the most applicable adjustments are shown: [6]

Table 1: adjustments of Net operating assets after taxation [2]

Adjustments for NOPAT calculation
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)

2.2 Capital Employed and NOA

Capital employed of a company the same as NOA is not defined as the book capital; however it is just the economic value of all the money invested. Therefore it needs to be adjusted as well in order to get the real Net Operating Assets from the current balance sheets of the firm.

Despite the fact that there are also various methodologies of concluding NOA, the basic comprehension is to subtract all liabilities and financial assets, but to add all financial liabilities from the total assets of a company.

Table 2: adjustments of Net operating assets [2]

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)

2.3 WACC

In order to calculate Weighted Average Cost of Capital (WACC) we need to comprehend that each component of it are proportionately weighted. Moreover, WACC is the measurement of the Cost of Capital.

Obviously, to conclude WACC there are various methods, however in this paper the most basic one is represented. [5]

$$\text{WACC} = Re (E/V) + Rd (D/V) * (1-Tc) \quad (10)$$

Where:

Re= cost of equity (expected rate of return on equity)

Rd = cost of debt (expected rate of return on debt)

E = market value of company equity

D = market value of company debt

V = total capital invested

E/V = percentage of financing that is equity

D/V = percentage of financing that is debt

Tc = corporate tax rate

Total Capital invested (V) equals to the sum of market value of company's debt and equity

$$V = E + D. [6]$$

Market value of the debt usually is more difficult to calculate, as it requires for a company to have all the debt in the form of bonds outstanding in the market. However, many firms have non-traded debt such as bank loans in terms of book value, but not in terms of market value. One of ways to convert book value debt into market value debt is to consider all of the debts on the books as one coupon bond in line with coupon set equal to the interest expenses of all debt. In this methodology the maturity set should be equal to the face value of weighted average maturity of the debt, after that the coupon should be valued at the current cost of debt for a firm.

On the other hand, another methodology of defining the market value of a company's debt is to take the two-year average of book value debt, which is applied in the practical part of the thesis.

As already mentioned, that this paper can be served as a guide to calculate EVA, we can apply the same methodology to WACC's components as well. To calculate WACC there are three basic step of doing this.

Market Value of equity is the total value invested towards a firm by stockholders and investors. The current market price of the company's stock is the main indicator of calculating the market value of equity multiplying by the current number of the shares outstanding.

Moreover, the amount of shares outstanding can be found on the balance sheets of any firm, more specifically in the section of Shareholders' Equity.

From the formula highlighted above, it is seen, that for the calculation we need to find the main sources of finance and calculate the cost of each part of total capital. In this case we need the cost of equity and cost of debt.

2.3.1 Defining Cost of Equity

Cost of equity (R_e), also known as common stock's required rate of return, is the specific rate of return that the particular organization must get in order to maintain the price of its common stock. There are several ways to calculate cost of equity; by using dividend growth model and capital asset pricing model (CAMP).

The first one is calculated by using the following formula:

$$R_e = D/P + g \quad (11)$$

However, this formula has several disadvantages, for instance, in the situation when the organization concentrates on growth, by avoiding dividends. Additionally, it is hard to conduct adjustments for market risk and judge the value of growth rate. Hence, CAMP model is much more practical to use.

CAMP model is possible to calculate with this formula:

$$R_e = R_f + \text{beta} * (R_m - R_f) \quad (12)$$

Where:

R_f = Risk-free rate (in other words U.S. T-Bill rate of 10 years)

Beta = estimated levered equity beta

$(R_m - R_f)$ = market risk premium

One of the good things in this model is, that CAMP measures risk for a certain companies that do not pay dividends, although, it needs to find beta and calculate risk premium while using past data to estimate risk premium.

2.3.1.1 What is Beta?

Beta is a numerical measure of a sensitivity of a particular stock relative to the sensitivity of the market. Usually, if the number is bigger than 1, this indicates more volatility and lower number of less volatility of a stock. Basically, for nowadays companies the number of beta is between 0.5-1.5. Beta is derived by the usage of weekly bases and historical prices. Later on, the procedure of getting the measure follows by getting the covariance of the return of the stock and the variation of the market return. [10]

However, before the usage of beta, the impact of debt must be considered. In other words, we must distinguish between levered and unlevered (industry) beta. Only after un-levering betas and then re-levering it to a particular organization we can implement the levered one in the CAMP.

It can be done simply, by usage of this formula: [6]

$$\text{Beta (Levered)} = \text{Unlevered Beta} (1 + (1 - \text{Tax}) * D/E) \quad (13)$$

Beta is used during not only cost of equity calculation, but also it is usually taken for Discounted Cash Flows (DCF) estimation.

2.3.1.2 What is a Risk Free Rate and market risk premium?

Risk free rate is one of the most important components in calculation of equity and capital. The level of the risk free rate is significant because of two reasons; first of all using high rates boosts discount rates and cuts down present value during discounting cash flows and secondly, due to the process mentioned above, the failure of a company's numerical measure of worthiness into growth assets will move accordingly.

Although, if we look from the very beginning, in corporate finance the risk free rate is not that easy to calculate. Usually, academics and the ones who practice this use short or long term government's Treasury Bills as risk free rates. Certainly, there are a lot of arguments whether or not to use short term or long term rate, but it was proven that the optimal one is to use 10 years Treasury Bill rate.

Undoubtedly, risk free rate is significant when we look from the investor's perspective. As when investors make its investments during all that period the actual rate may not always be the expected one. Risk is the inseparable component of finance. Accordingly, investors usually pay attention on risk free rate. Additionally, an investment can be considered as risk free only in the condition that it will be issued by an entity that does not hold any default risk. In this situation it is government, not because it operates efficiently and has no any default risk, but the main point is that government has control over printing of currency.

Also, there is one more condition that needs to be mentioned; is the situation when there must not be reinvestment risk. For instance, you are going to estimate a six- year period and the particular risk free rate, hence a seven- month t-bill (holding the fact of being default free) will not be counted as risk free rate, as what exactly will be the risk fee rate during following seven months is unknown.

Here comes another question regarding whether to use real or nominal risk free rate. The answer to this question let's look at the condition when there is a high or volatile inflation and the need to conduct all the estimations by using one real terms. In this case, cash flows are calculated by the usage of real growth rates.

Talking about risk free rate one should remember, that the risk free rate can be changed over a specific period of time. Furthermore, there may be times when the risk free rate can be volatile; it can simply be abnormally high and drastically drop over time. If we have a quick look at the history, overall we will notice that the rates are not being stagnant.

Hence, to put everything in a nutshell, while estimating risk free rate one should always remember, that the calculation of a risk free rate is divided into several steps, which are the selection of currency and focus on future rate levels. It is highly important to make sure that the rate is really free of risk and is acting in the same fashion with cash flows and, finally, in case of some predictions concerning future rise or fall of rates must not be included in the valuation of the company.

Eventually, market risk premium ($R_m - R_f$) is the difference between the risk of the market and risk free rate. In fact, market risk premium is one of the most important parameters in the field of finance. It can be differentiated with three different comprehensions:

- Required risk market premium, which is the return of portfolio over return of treasury bonds necessary for investors.
- Historical risk market premium, which is the historical return of the stock market over t- bonds.
- Expected risk market premium, which is obviously expected return of the stock market over t-bonds.

Therefore, these three risk market premiums are assumed to be the same by many authors and financial analysts; however they are different from each other. From the perspective of investors the historical market is common; however the expected and required market premiums can be very specifically diverse. For defining the CAPM method it is required to assume that required market premium to be equal to expected market premium.

2.4 Defining Cost of Debt

As was mentioned earlier, weighted average cost of capital, the same WACC, plays an important role in EVA calculation and also represents the average minimum rate of return (always taking into consideration after-tax condition) that the company must get for its stockholders. For example, when we say that the company has “cost of capital” of 8% , it indicates, that the organization, in this case, can only have a positive Net Present Value (NPV) on a project if the return is more than 8%. This in its turn illustrates the fact, that a company must obtain 8% just for the compensation. It is a very useful instrument in finance as it shows if a specific project boost stockholders’ wealth.

As a matter of fact the essence of Cost of Debt is simple it is the average rate of a company that pays all of its debts such as bank loans and bonds. It is expressed as an annual percentage. In other words this measure gives investors an idea of comparing the company’s riskiness to other companies’ ones. Obviously, the higher is the cost of debt the higher is company’s risk.

II. ANALYSIS

3 ABC COMPANY PROFILE

3.1 ABC Company's Background

The ABC was founded in 1995 by an Iranian American entrepreneur and economist. During 1998, ABC Company owned 30 employees and around half a million users with the revenue of \$4.7 million USD in the US. In the second half of 1998 the ABC went public and its share price was worth up to \$53.50 on the very first day of trading, which was far beyond its expected price of \$18. The CEO made a successful growth in the ABC as well as her career for 10 years and she went for retirement in 2008. Nowadays, ABC Company is considered as one of the world's leading e-commerce Company, its global portfolio of businesses enables hundreds of millions of investors to buy, sell and pay online. As already mentioned ABC is an e-commerce Company providing consumer-to-consumer and business-to-business sales services via web market. The Headquarter of the Company is located in San Jose California. The essence of the Company is that it offers online auctions as well as "Buy It Now" options for customers, businesses to buy, sell various goods and services all around the world. The website is free to use for buyers but ABC gains profit from the sellers after their items are sold. Moreover the Company has expanded so rapidly since 2000 that it purchased an online payment system "XYZ" in 2002. Nowadays the company has more than 15000 employees and revenue of 7.7 billion in US currency. Moreover, the most significant sellers are Australians around 35000 populations, who earn their income by selling products on ABC's website.

3.2 Porter's five force analysis

As ABC Company is one of the leading players in the global e-commerce market, it is expected long-term growth in this segment relying on its strong market position.

In the table below it is illustrated the Porter's five force analysis by measuring intensities from low to high.

Table 3: Five forces analysis of ABC Company [own elaboration]

Porter Five Force Analysis	
Porter Five Force	Intensity
Competitive Rivalry Within The Industry	Medium to High
Bargaining Power Of Customers	High
Threat Of New Entrants	Medium
Bargaining Power Of Suppliers	Low To Medium
Threat Of Substitute Products	Low

The first three key forces of this analysis such as the competitive rivalry within the industry, bargaining power of customers and the threat of new entrants can pose very promising threats to ABC. Nowadays, ABC has very gigantic competitors from both online and offline sources which causes pricing reduction in the global e-commerce market.

3.2.1 Competitive Rivalry within the Industry

ABC faces powerful competitors from e-commerce sector as well as from offline sector. More specifically, customers can purchase goods and services from various sources such as from retailers, auctioneers, search engines, from other e-commerce websites, thus the challenge is very intensive for ABC. Moreover, unstable prices, variety of products and services have huge impact on consumer's decision.

Paying systems such as online e-money, debit/credit cards, bank wires as well as offline payment methods such as cash, check, money order, cell phones and etc. also have impact on customer's decision depending on the options and alternatives that an e-commerce company can offer.

3.2.2 Bargaining Power of Customers

- Huge competition between global e-commerce companies allows customers to be in a win position as the companies are required to keep the prices lower and lower in order to attract more customers.

- The variety of both online and offline players. As this market allows entering more and more companies and offer more specific and innovated, changed, products and more advanced services.
- The bargaining power is very strength as lots of customers need not only lower price, but also a large range of services and goods.

3.2.3 Threat of New Entrants

The easiest part for new entrants in this field is that there are extremely low barriers and issues to enter the e-commerce market nowadays. On the other hand new entrepreneurs have problems with their brand recognition as well as to have their websites on the highest ranks among the search engines. In addition, the new entrants require huge marketing budgets in order to succeed in this economic sector, which restricts the expansion of many new players. As we already stated that ABC Company is also engaged with online payment market the same methodology regards to online payment market sector. The prior demand is to have advanced secured payment system, in which the subsidiary of ABC Company is considered to be one of the top among the most secured payment systems in the world.

3.2.4 Bargaining Power of Suppliers

Around ten millions of customers/sellers sell their products and services through the Website of ABC Company, which makes the individual bargaining power of the customers very limited. On the other hand, sellers have lots of alternatives of selling their goods and services via multiple international e-commerce websites. Consequently, if ABC attempts to make some price or significant policy changes which can cause to customer dissatisfactions it can result to reduction of customers as well as numbers of items which are listed on the Website.

3.2.5 Threat of Substitute Products

As ABC sells products as well as services on behalf of its sellers there is no special sources for it. Furthermore the varieties of the products keep on expanding which causes to have low disposition of five Porter's analysis.

3.3 SWOT Analysis

For each company a good performance is the key goal and the outcome of an effective operation and relationship not only within its internal, but also external bases. The recognition of strengths, weaknesses, as well as opportunities and threats play a crucial role for any prospective company. Nevertheless, the significance of SWOT, a lot of organizations fail to have clear idea of their competitive advantages and drawbacks. Nowadays, small or medium sized company's managers' optimal concentration on their priorities can lead to long lasting growth and prosperity.

In 21st century every single company is sensitive to micro and macro conditions in the business world. They can either have a big number of opportunities or face several serious failures. That is why managers must put all their efforts in adopting an optimal management strategy. One of the very first steps is to conduct SWOT Analysis and identify the key factors that drive the business.

In this chapter ABC Company's SWOT Analysis is illustrated in order to assist the reader to see the bigger picture of the organization. [2]

In the table below all of the components of SWOT Analysis are represented:

Table 4: SWOT Analysis of the company [own elaboration]

Strengths	Weaknesses
1. World's largest internet marketplace	1. High fees
2. Business model (no strong direct competition)	2. No further growth strategy
3. Economies of scale	
4. Localization	
5. Payment system	
6. Brand reputation	

Opportunities	Threats
1. Growing number of mobile shoppers	1. Online security
2. Become a retailer	2. Regional low cost online retailers
3. Increase services and product portfolio through acquisition	3. Increasing competition from Amazon
4. Open more online stores in other countries	4. Exchange rates

3.3.1 Strengths

Firstly, ABC is the leader in the marketplace, where it mainly conducts online auctions for global brands. The organization consumed by 100 million people has grown enormously over the decade. Secondly, in terms of the design of its business model it is does not have strong direct competition. It only performs as a middle man between sellers and buyers, who buy and sell items. Hence, company’s business model is strength.

Talking about the economies of scale, the organization made a big amount of investments towards IT and customer relationship management (CRM), which provided them with a long-term growth. The other priority is called to be the localization. In other words, the business performs its service in 37 countries, where the reader can find the adapted languages according to the country. If compared to other various businesses like ABC, once can say that without any doubt this one has the highest degree of localization. In terms of payment system, mainly XYZ is being used, to precede almost all of the money transactions. Correspondingly, XYZ indicates an easy use of online payment and has a strong integration, which in its turn provides all the evidence to call it the one of the advantages.

All things considered, ones also should highlight the last, but not least important component, which is the brand reputation. Moreover, the company was recognized as one of the best and trustworthy brands among others.

3.3.2 Weaknesses

As it was mentioned before, weaknesses are several limitations and drawbacks that prevent the company to operate accordingly. Moreover, they do not let them to progress and go in a particular way.

The organization does its best and puts all their efforts enormously hard to handle fraud. However, still today it experiences a number of fraudulent activities. The drawback is that some individuals can cause a lot of harm to C2C business model. In the same fashion, not only fraud, but also nowadays even technological advances cannot eliminate several technological errors that disturb the trading performance of the business.

Furthermore, together with the mentioned above, high fees are another disadvantage for the company. During recent years the fees for the seller's has increased drastically, consequently these takes the company to the condition, where sellers obtain zero profit. Furthermore, ABC does not pay attention to the significance to conduct a long term plan of their operations in order to sustain the business and operate in the complex environment.

3.3.3 Opportunities

Within the framework of the analysis, the main focus was paid on not only internal, but on the external forces as well. The main concentration was directed solely on macro business environment. That therefore refers to the recognition of opportunities and threats. The macro surroundings are comprised of variables from outside of the company, which are unpredictable and hard to take control of, if we talk about short term operations. Moreover, the situation can be subdivided into direct and indirect external conditions.

While talking about opportunities, ones must highlight the fact that ABC Company faces many new business strategy conditions, as it has agreed to consume online telephone company, as another kind of subsidiary. By that strategy they can easily diversify their portfolio. The second one is the market target; as it is well known there are several countries, for example China and India, where customers are becoming wealthier and, furthermore, have more leisure time and by that fashion, they impact on the growth of consumer segments.

Besides, all stated earlier, there are various spaces in current market, as Western Europe and USA, Canada provide potential customers. The main point to summarize that fact is that any product has its own product life cycle that in the very end enters its decline phase, hence such kind of products are just perfect for further procedures, such as selling and buy-

ing, and eventually becoming a retailer. The increased number of potential consumers may create favorable circumstances for opening more online shops in different countries. Such as Asia and Europe, where there is a great space to create and sustain a long term growth.

3.3.4 Threats

ABC Company via its XYZ subsidiary made the online transactions of its customers more reliable and secured. The bank accounts of the customers, personal details which are the main target for hackers and scammers become more advanced and protected via the online payment system powered by XYZ Company. On the other hand, the more customers ABC has the more it is attracted to online thefts these days.

One more thing that might effect on company's profit is the local retailers who provide cheap products with cheap shipping costs and faster in terms of time delivery. Additionally, these regional retailers have more knowledge regarding to the domestic market and consequently offer more specific products that customers can find through ABC's website.

The ongoing competition with Amazon is also a potential threat for ABC as Amazon is just a little behind ABC.

Moreover, the currency exchange also harms ABC as already mentioned ABC is a United States based company and some part of the income ABC receives via foreign currencies, therefore the taxes and some part of its income is required to send back to US, thus the money needs to be converted into dollars and can be affected through these operations.

3.4 PESTLE - PESTEL Analysis of ABC

Throughout this analysis Political, Economic, Legal, Social, Technological and Environmental factors are considered. In fact, these external factors have very significant impact on ABC Company. All of these external factors are represented below: [10]

3.4.1 Political Factors

The main issue that ABC Company can face in terms of policy is the numerous transactions are initiated everyday among the sellers and purchasers. However, ABC as well as most of the gigantic e-commerce companies does not use their customers' data for their

private purposes. The privacy policy document can be found on the company's website on which detailed information is provided. Though, part of the information should be shared among the sellers and purchasers in order to evaluate the ranking of both them. These rankings are subject to avoid potential fraud and scam among them.

3.4.2 Economic Factors

Some marketing researchers proved that customers of ABC can save up to 17 percent via shopping ABC instead of buying from a local store. Apparently, it gives opportunity for the sellers of ABC to reduce their marketing costs as well as for buyers the searching costs are reduced in order to find a proper product or service. The most significant factor is that it is worldwide which gives opportunity for customers to purchase some products from different countries without visiting that country. Such platforms help to save customers to reduce their travel costs as well. In addition to these, ABC stimulates its sellers to list used, second hand goods for a better price, which can be affordable for customers from other parts of the world.

3.4.3 Social Factors

Obviously "fashion chasers" who are used to follow the latest trends are getting more these days. As they shop a lot, that is where a gap is caused in order not to throw their old-fashioned goods as they became useless, such people are free to sell this stuff as used items for an affordable price for lower society or who are just indifferent in terms of fashion and latest trends.

3.4.4 Technological Factors

In terms of technology, ABC was evolved in line with it and due to the fact the latest technologies make ABC to be more convenient and reliable for customers.

The easy accessibility as well as the user friendly platform of ABC makes it convenient for the customers/sellers to compare the prices between other websites; set some limitations according to their needs, as well as to have their items within a very short period of time.

On the other hand the rapid growth of technology has negative impact on e-commerce websites as it allowed lots of scammers to fool people around. Happily, the XYZ Company which was purchased by ABC helps customers to make secure transactions worldwide and significantly reduces the scam situations.

3.4.5 Environmental Factors

In terms of Environmental factors ABC Company has initiated lots of things such as helped customers to purchase green, bio products. Moreover such products are more relatively more expensive in the local stores rather than purchasing online via ABC Company.

3.4.6 Legal Factors

ABC Company strictly follows the Laws and Legal regulations of United States and is among the top hundred trusted e-commerce websites according to Scamadviser.com.

However, ABC allows generating numerous users with fake emails and identity. That can cause to steal some other users' information in terms of communication. Obviously, this is a major gap among the companies of e-commerce sector, which still remains unsolved.

3.5 Financial Analysis

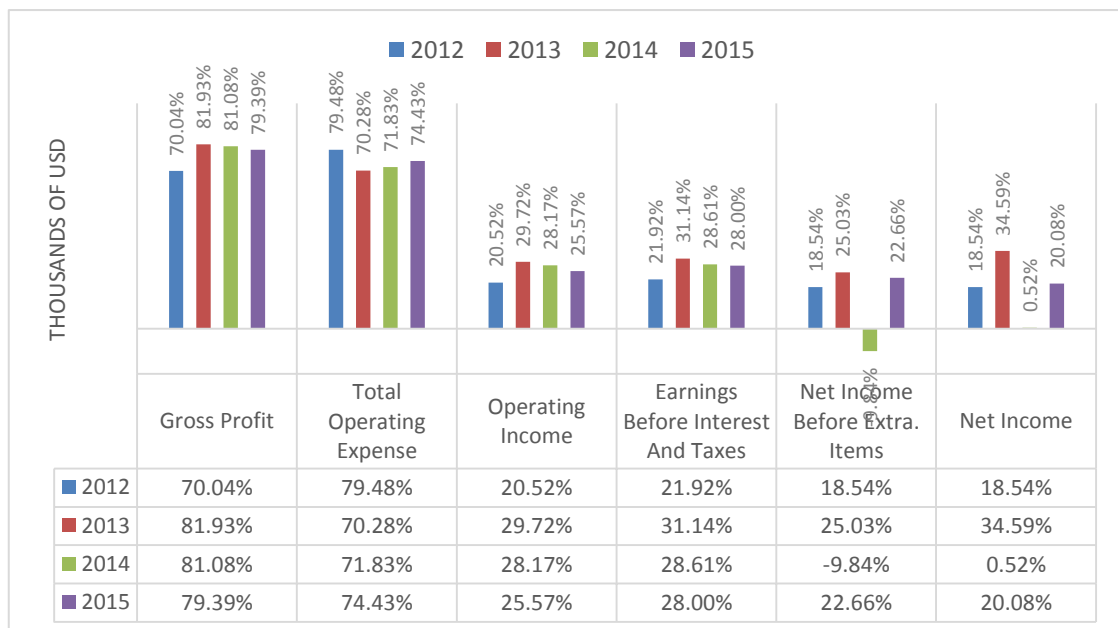
Before calculation of EVA for ABC Company the financial position requires to carry out.

In this chapter besides the analysis of Income and Balance sheet the key financial ratios are illustrated as well. The main focus was driven on conducting financial analysis. In the analysis the main concern was to perform analysis over 4 year's period in order to better illustrate a time-trend analysis. Throughout this chapter the financial statements are shorten and amended in order to make easier to comprehend and calculate. All the tables and extra information that was used regarding the company is attached in the appendix P I and P II.

3.5.1 Income Statement analysis (horizontal and vertical)

This part of analysis illustrates the income statement by comparing ABC’s financial condition and performance to the base amount. Furthermore, revenue’s figure was used as the base year and the rest of components like cost of revenue, gross profit; operating expenses, income tax, and net income are shown as a percentage of revenue. Common-size analyses helped to picture and see the comparison. According to graph (see figure 2), the gross profit comprises a higher percentage compared to 2012 and it is pretty much stagnant from 2013-2015 period. This highlights the fact that the cost of Revenue has been decreased through years. Another thing to pay attention is the operating expenses, which were reduced and resulted to an increase in operating income and, furthermore, an increase in percentage of earnings before interest and taxes (EBIT). Lastly, the net income was increased in 2013 compared to 2012; from 18.34% it reached to 34.59%. However, in 2014 the company experiences a drastic drop to 0.52%, which was because of a negative balance of earnings after tax (EAT). This might happen due to a firm getting a low income during a period of fiscal year, hence by that it impacts on having difficulties and experience hard time by facing high losses. Although, in 2015 it started to recover and the net income comprised nearly 20% of the revenue. Which shows that the company deals well with overcoming difficulties and can recover loses. [13]

Figure 2: ABC’s Common-Size Income Statement analysis [own elaboration]



Hence, to better illustrate what was mentioned above (see figure 2), visually a drastic decrease and later on an increase in key components of income statement is pictured. Even though, in 2015 there was a slight increase in operating cost (around 74.43%), but it did not affect Net Income to recover. One more positive indicator is a rise of percentage in operating income; from 2013 it started to grow and in 2015 comprised about 25.57% of revenue. This result was an outcome of a decline in cost of goods sold; in 2015 it experienced a slight increase, however it is still lower than in period of 2012.

Figure 3: Common-Size Income Statement [own elaboration]

In Thousands of USD	2015		2014		2013		2012	
Revenue	8592.00	100.00%	8790.00	100.00%	8257.00	100.00%	14072.00	100.00%
Cost of Revenue, Total	1771.00	20.61%	1663.00	18.92%	1492.00	18.07%	4216.00	29.96%
Gross Profit	6821.00	79.39%	7127.00	81.08%	6765.00	81.93%	9856.00	70.04%
Selling/General/Admin. Expenses, Total	3660.00	42.60%	3593.00	40.88%	3260.00	39.48%	5029.00	35.74%
Research & Development	923.00	10.74%	983.00	11.18%	915.00	11.08%	1573.00	11.18%
Depreciation/Amortization	41.00	0.48%	75.00	0.85%	136.00	1.65%	335.00	2.38%
Interest Expense(Income) - Net	144.00	1.68%	123.00	1.40%	100.00	1.21%	63.00	0.45%
Unusual Expense (Income)	-	-	-	-	-	-	31.00	0.22%
Other Operating Expenses, Total	-	-	-	-	-	-	-	-
Total Operating Expense	6395.00	74.43%	6314.00	71.83%	5803.00	70.28%	11184.00	79.48%
Operating Income	2197.00	25.57%	2476.00	28.17%	2454.00	29.72%	2888.00	20.52%
Interest Income(Expense)	-	-	-	-	-	-	-	-
Gain (Loss) on Sale of Assets	-	-	-	-	-	-	0.00	0.00%
Other, Net	-12.00	-0.14%	-10.00	-0.11%	28.00	0.34%	7.00	0.05%
Earnings Before Interest And Taxes	2406.00	28.00%	2515.00	28.61%	2571.00	31.14%	3084.00	21.92%
Income After Tax	1947.00	22.66%	-865.00	-9.84%	2067.00	25.03%	2609.00	18.54%
Minority Interest	-	-	-	-	-	-	-	-
Equity In Affiliates	-	-	-	-	-	-	-	-
Net Income Before Extra. Items	1947.00	22.66%	-865.00	-9.84%	2067.00	25.03%	2609.00	18.54%
Accounting Change	-	-	-	-	-	-	-	-
Discontinued Operations	-	-	-	-	-	-	-	-
Extraordinary Item	-	-	-	-	-	-	-	-
Net Income	1725.00	20.08%	46.00	0.52%	2856.00	34.59%	2609.00	18.54%

	Horizontal analysis (2012-2013)		Horizontal analysis (2013-2014)		Horizontal analysis (2014-2015)	
In Thousands of USD	Dollar change	% change	Dollar change	% change	Dollar change	% change
Revenue	533.41	-129083.25%	-532.94	-99.99%	-198.06	-306832.83%
Cost of Revenue, Total	171.65	-26566.08%	-170.89	-99.93%	107.89	94131.58%
Gross Profit	362.31	-115527.76%	-361.95	-99.99%	-306.05	-571948.07%
Selling/General/Admin. Expenses, Total	333.35	-94766.87%	-332.90	-99.97%	66.90	65491.59%
Research & Development	68.42	-16355.93%	-67.93	-99.89%	-60.07	-80835.29%
Depreciation/Amortization	-60.41	10168.84%	60.55	-99.26%	-33.55	7480.33%
Interest Expense(Income) - Net Operating	22.41	3816.22%	-22.77	-99.00%	20.77	9030.43%
Unusual Expense (Income)		#DIV/0!	-	-	-	-
Other Operating Expenses, Total	-	-	-	-	-	-
Total Operating Expense	511.48	-106307.47%	-510.91	-99.98%	80.91	91884.93%
Operating Income	22.15	-14739.63%	-21.99	-99.96%	-279.01	-3112218.18%
Interest Income(Expense), Net Non-Operating	-	-	-	-	-	-
Gain (Loss) on Sale of Assets	-	-	-	-	-	-
Other, Net	-41.00	-1366.67%	36.64	-96.43%	-0.64	47.37%
Earnings Before Interest And Taxes	-55.83	33565.50%	55.98	-99.96%	-108.98	500326.79%
Income After Tax	-2931.79	1411263.10%	2930.58	-99.95%	2813.42	-198340.25%
Minority Interest	-	-	-	-	-	-
Equity In Affiliates	-	-	-	-	-	-
Net Income Before Extra. Items	-2931.79	1411263.10%	2932.00		2812.00	#DIV/0!
Accounting Change	-	-	-	-	-	-
Discontinued Operations	-	-	-	-	-	-
Extraordinary Item	-	-	-	-	-	-
Net Income	-2810.09	-2968233.60%	2809.02	-99.96%	1679.98	-170748.54%

Horizontal Analysis is another approach which helps to picture a comparison of an increase and decrease in income statement through years. In other words, it is a tool of analysis that assists to compare a firm's financial condition and performance across time. Hori-

zontal analysis of income statement is implemented in a two-year format; the first column shows general changes by account over multiple year and the next one is similar to vertical analysis and helps to see expenses as a percentage of total sales in that period of time. The revenue declines year by year, which tells us that the company was not generating enough sales. Furthermore, even though the cost of goods sold was cut down, the gross profit shows a decrease; compared to 2014 in 2015 it dropped by nearly 4% and was 6621 thousand USD. Despite all that, there was a significant increase in Net Income (in 2015 it went up by \$1679.00), due to a rise in earnings after taxes. According to analysis the company had losses during 3 years, but proved that it is able to recover.

3.5.2 Balance Sheet Analysis

Starting from 2012-2015 the amount of cash and cash equivalents decreased, which was a result of an increase in short term investments. For that reason total current assets in 2015 comprised about 44.45% of total assets. In contrast to that, total fixed assets expand and by that the accumulated depreciation grew and reached to 19.81% of total assets in 2015. During the period of 2012-2014 the value of Goodwill is decreasing, however the proportion of it on total assets grows, which goes on till the end of 2015. Tangible assets are expanding, as the firm is acquiring more equipment and property that is one of the reasons why cash is decreasing. Through this period from 2012-2014 the proportion of current assets was higher than 50%, but in 2015 it went down to 44.44%. The main reason of that more money was invested into fixed assets. Another reason is that because of the nature of firm's business, it does not have any inventory. Also one more reason is Prepaid Expenses; only in 2012 the company had \$181 of prepaid expense (see figure 5). Over the years the value of prepaid expenses as assets declines, in other words, it is amortized. [12]

Even though from 2012-2014 Total Liabilities are going up; in 2015 the amount of total liabilities is reduced to \$11209, but the proportion of percentage is increasing, due to decrease in total equity (see figure 4). This means that the company is financed more with debt than equity. In 2015 the firm does not have a short term debt. This is a good indicator, because, if the account is higher than cash, the company may be in a poor financial situation and will not be able to pay off its current liabilities, which are due within one year. Furthermore, it does not carry any notes payable if we look at the balance sheet. That is

why the proportion of current liabilities is lower than the proportion of total debt (see figure 4).

From the Stockholder's Equity prospective, the retained earnings increased significantly. It is an account that holds firm's cumulative, undistributed earnings. From purchases, acquisitions and payment of dividends to stockholders the amount's balance may go down or up. Hence, an increase in retained earnings only indicates a positive factor, which means that the company is doing well by reducing costs and boosting company's Net Income. The increase might be because the firm did not make a declaration of cash dividends. The Treasury Stock, which represents shares of stock acquisitions from the company's stockholders, is expended through the period of 2012-2015 in the balance sheet. This is mainly because the firm makes payment for its stock with cash and by that action reduces equity by the identical amount.

Figure 4: The proportion of Debt and Equity [own elaboration]



Figure 5: Horizontal analysis of balance sheet [own elaboration]

In Thousands of USD	2012		2013		2014		2015	
Total Assets	37074.00	100.00%	41488.00	100.00%	45132.00	100.00%	17785.00	100.00%
Cash & Equivalents	6817.00	18.39%	4494.00	10.83%	4105.00	9.10%	1832.00	10.30%
Short Term Investments	2591.00	6.99%	4514.00	10.88%	3711.00	8.22%	4271.00	24.01%
Cash and Short Term Investments	9408.00	25.38%	9008.00	21.71%	7816.00	17.32%	6103.00	34.32%
Accounts Receivable - Trade, Net	822.00	8.74%	899.00	2.17%	600.00	1.33%	619.00	3.48%
Receivables - Other	-	-	-	-	-	-	-	-
Total Receivables, Net	11438.00	30.85%	12948.00	31.21%	600.00	1.33%	619.00	3.48%
Total Inventory	-	-	-	-	-	-	-	-
Prepaid Expenses	181.00	0.49%	-	-	-	-	-	-
Other Current Assets, Total	371.00	1.00%	1327.00	3.20%	18115.00	40.14%	1182.00	6.65%
Total Current Assets	21398.00	57.72%	23283.00	56.12%	26531.00	58.79%	7904.00	44.44%
Property/Plant/Equipment, Total - Gross	5957.00	16.07%	7120.00	17.16%	4544.00	10.07%	5078.00	28.55%
Less Accumulated Depreciation, Total	3466.00	9.35%	4360.00	10.51%	3058.00	6.78%	3524.00	19.81%
Goodwill, Net	8537.00	23.03%	9267.00	22.34%	4671.00	10.35%	4451.00	25.03%
Intangibles, Net	1128.00	3.04%	941.00	2.27%	133.00	0.29%	90.00	0.51%
Long Term Investments	3044.00	8.21%	4971.00	11.98%	5736.00	12.71%	3391.00	19.07%
Other Long Term Assets, Total	476.00	1.28%	266.00	0.64%	6575.00	14.57%	395.00	2.22%
Total Liabilities & Shareholders' Equity	37074.00	100.00%	41488.00	100.00%	45132.00	100.00%	17785.00	100.00%
Accounts Payable	8395.00	22.64%	9569.00	23.06%	107.00	0.24%	349.00	1.96%
Accrued Expenses	1260.00	3.40%	2648.00	6.38%	3810.00	8.44%	1711.00	9.62%
Notes Payable/Short Term Debt	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Short Term Debt	413.00	2.31%	6.00	0.01%	850.00	1.88%	0.00	0.00%
Other Current Liabilities, Total	856.00	2.31%	416.00	1.00%	12764.00	28.28%	203.00	1.14%
Total Current Liabilities	10924.00	29.47%	12639.00	30.46%	17531.00	38.84%	2263.00	12.72%
Long Term Debt	4100.00	11.06%	4117.00	9.92%	6777.00	15.02%	6779.00	38.12%
Capital Lease Obligations	6.00	0.02%	-	-	-	-	-	-
Total Long Term Debt	4106.00	11.08%	4117.00	9.92%	6777.00	15.02%	6779.00	38.12%
Total Debt	4519.00	12.19%	4123.00	9.94%	7627.00	16.90%	6779.00	38.12%
Deferred Income Tax	972.00	2.62%	841.00	2.03%	522.00	1.16%	2092.00	11.76%
Minority Interest	-	-	-	-	-	-	-	-
Other Liabilities, Total	207.00	0.56%	244.00	0.59%	396.00	0.88%	75.00	0.42%
Total Liabilities	16209.00	43.72%	17841.00	43.00%	25226.00	55.89%	11209.00	63.03%
Redeemable Preferred Stock, Total	-	-	-	-	-	-	-	-
Preferred Stock - Non Redeemable, Net	-	-	-	-	-	-	-	-
Common Stock, Total	2.00	0.01%	2.00	0.00%	2.00	0.00%	2.00	0.01%
Additional Paid-In Capital	12062.00	32.53%	13031.00	31.41%	13887.00	30.77%	14538.00	81.74%
Retained Earnings (Accumulated Deficit)	15998.00	43.15%	18854.00	45.44%	18900.00	41.88%	7713.00	43.37%
Less Treasury Stock - Common	8053.00	21.72%	9396.00	22.65%	14054.00	31.14%	16203.00	91.10%
Other Equity, Total	169.00	0.46%	235.00	0.57%	142.00	0.31%	-319.00	-1.79%
Total Equity	20865.00	56.28%	23647.00	57.00%	19906.00	44.11%	6576.00	36.97%

3.6 Cash Flow Analysis

Starting from 2012-2015 time period the Net Cash from Investing activities is negative, which proves that firm conducts investment in tangible assets as it was mentioned in balance sheet analysis. On the other hand, Net cash from operating activities shows a positive balance. It is a very good sign, because it represents the most significant source of the cash in the company, by the help of which firm operates. Net cash from financing activities is negative between the periods of 2013-2015. This result was an outcome of dividends paid to firm's stockholders. Even though, these two factors are negative, but the net cash at the end of year is positive during 4 years. That indicates that company is operating effectively and maintains a positive ending balance for the next operating cycle.

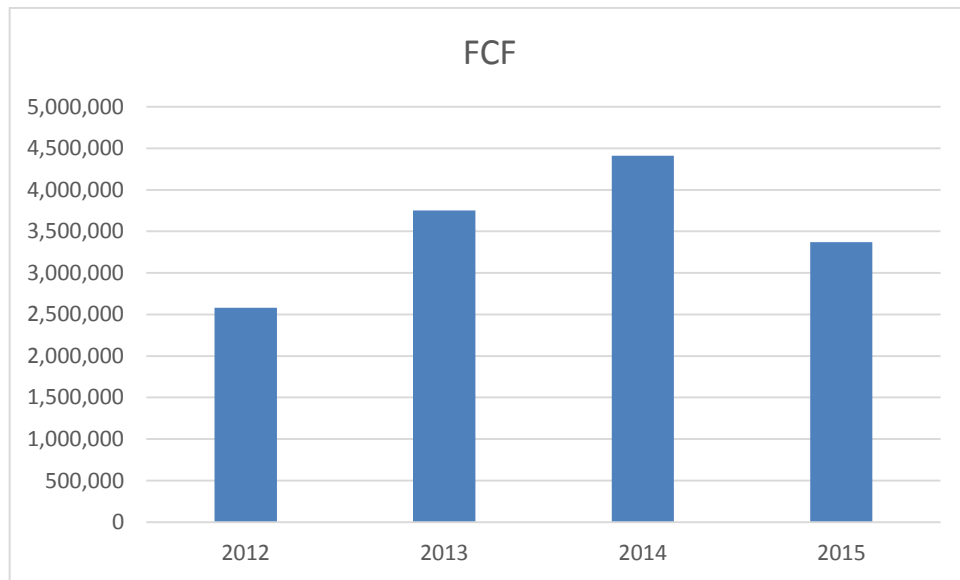
Table 5: Cash Flow Analysis [own elaboration]

(thousands USD)	2012	2013	2014	2015
Cash and Cash Equivalents at the beginning of year	6,817,000	4,494,000	4,105,000	1,832,000
Net cash from (used in) operating activities	3,840,000	4,995,000	3,677,000	4,033,000
Net cash from (used in) investing activities	-3,760,000	-4,030,000	-2,673,000	-3,611,000
Net cash from financing Activities	-2,403,000	-1,354,000	-3,277,000	-1,554,000
Net Increase (Decrease) in Cash and Cash Equivalents	-2,323,000	-389,000	-2,273,000	-1,132,000
Cash and Cash Equivalents at the end of year	4494000	4,105,000	1,832,000	700,000

In figure... the trend of increasing Free Cash Flows is illustrated from 2012-2015 time periods. As it is known, growing free cash flow tell about expanded earnings. Investors usually look at companies experiencing an increase in FCF. The growth was due to efficiency improvements, cost reduction strategies, dividend distributions that was conducted

by the firm. However, there is one disadvantage regarding debt and FCF. As was mentioned earlier, the proportion of debt was greater than the proportion of equity and one of the main causes might be because of growing FCF.

Figure 6: Trend of Free Cash Flow [own elaboration]



3.7 Financial Ratio Analysis

In this subchapter, the evaluation of ABC's financial position in the form financial ratios is represented. Consideration is given to key ratios and the most crucial ratios are initiated.

3.7.1 Debt ratios

Since 2012 the total debt ratio is lower and unstable with increase and decrease, only gets relatively higher in 2015 but still meets the recommended value from 30% to 60%. As we can see ABC is process well enough. ABC covers most of its debts and this ratio indicates how much per each year is not covered by using company's assets. From the perspective of investors ABC is a good target as it generates enough cash to cover the annual interests. However if it is less than 30 percent it is much better and higher than 60 percent it means

ABC would be over-leveraged. Even in the year of 2015 which is significantly higher in comparison with previous years is considered normal. Using EVA concept can make this lower as it will illustrate where exactly to focus on. [3]

The debt to equity ratio indicates the sensitivity between shareholder's equity and company's debt, which is obviously increasing since 2012 to 2015. Basically it is the coefficient of showing for each dollar owned by shareholders of ABC how much it owes to debtors. Unfortunately, it is getting higher annually.

Moreover, the interest coverage ratio each year is higher than the standard suggested value of 5, however we can see in the table 7 that it's rapidly decreasing year-by-year. This ratio illustrates the sensitivity of ABC's ability to pay its debts. Thus it means ABC earns enough cash to cover its debts.

Table 7: Debt ratios of ABC [own elaboration]

	2015	2014	2013	2012
Total Debt Ratio (Total debt/ Total assets)	38.12%	16.90%	9.94%	12.19%
Debt Equity Ratio (Total liabilities/ Equity)	1.70	1.27	0.75	0.78
Interest Coverage Ratio (EBIT/Interest expenses)	16.71	20.45	25.71	48.95

3.7.2 Equity multiplier

An equity multiplier measures a company's financial leverage by using the relationship of the company's total assets and its stockholders' equity. Obviously, low equity multiplier means company has low financial leverage which is better as ABC would have used less debt to finance its assets. The increase indicates that company ABC uses more debt to finance its assets rather than equity. As we can see in the table 8 ABC is financing more and more its assets year-by-year. There is around 20 percent change between 4 years which is high enough.

Table 8: Equity multiplier ratio of ABC [own elaboration]

	2015.00	2014.00	2013.00	2012.00
Total Assets	17785.00	45132.00	41488.00	37074.00
Total Equity	6576.00	19906.00	23647.00	20865.00
Equity multiplier assets / equity	2.70	2.27	1.75	1.78
percentage of equity in assets	36.97%	44.11%	57.00%	56.28%
percentage of debt in assets	63.03%	55.89%	43.00%	43.72%

3.7.3 Liquidity ratios

As we can see in the table 9 as well as in the balance sheets of ABC, it has no inventories based on the online platforms as there no inventories required. The quick ratio remains the same as current ratio, as already mentioned there is no inventory to subtract from current assets of ABC.

Moreover, according to recommended values current ratio should be between 1.5 to 2, where only in 2015 ABC doesn't meet.

Table 9: Liquidity ratios of ABC [own elaboration]

	2015	2014	2013	2012
current ratio current asset / current liabilities	3.49	1.51	1.84	1.96
quick ratio current assets - inv. / current liabilities	3.49	1.51	1.84	1.96
cash ratio cash and equiv. / current liabilities	0.81	0.23	0.36	0.62

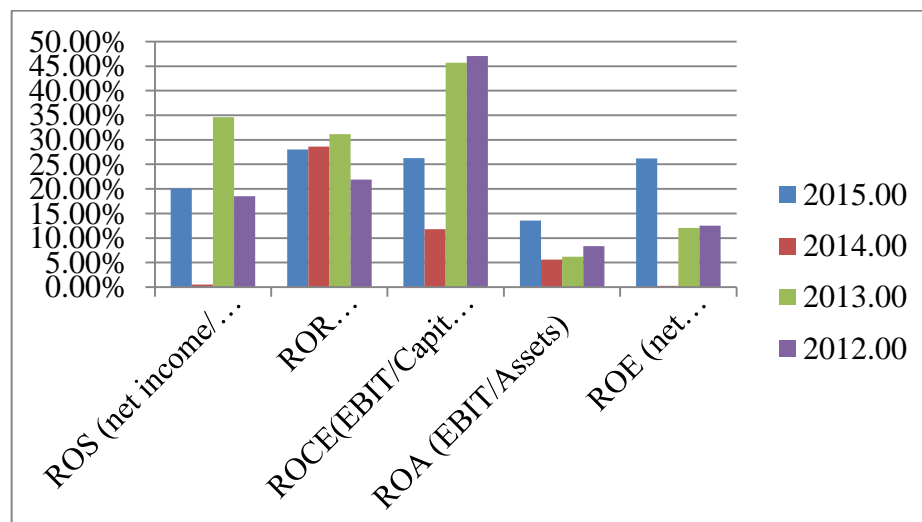
3.7.4 Return ratios

Throughout the analysis of table 10 and figure 7 it's visible that return on revenues and return on equity is significantly less in 2014. That is explained with relatively less net income of ABC in 2014. Additionally the drop in 2014 affected on other ratios as well, however ABC recovered to its normality in 2015. Significant increases are in 2012 and 2013 of Return of Capital employed. From the perspective of investors, they more appreciate to make investments in more stable company as we can see ROCE has rapidly drop in 2014 and increases less in 2015.

Table 10: return ratios of ABC [own elaboration]

	2015	2014	2013	2012
ROS (net income/ revenue)	20.08%	0.52%	34.59%	18.54%
ROR (EBIT/Revenues)	28.00%	28.61%	31.14%	21.92%
ROCE(EBIT/Capital employed)	26.30%	11.80%	45.71%	47.06%
ROA (EBIT/Assets)	13.53%	5.57%	6.20%	8.32%
ROE (net income/Equity)	26.23%	0.23%	12.08%	12.50%

Figure 7: Trend of return ratios [own elaboration]



3.7.5 Activity ratio

Table 11: Asset Turnover ratio of ABC [own elaboration]

	2015	2014	2013	2012
Asset Turnover Ratio (Revenue/Assets)	0.48	0.19	0.20	0.38

Asset Turnover Ratio indicates the efficiency how much assets ABC deploys in generating revenue of it. However, based on the economic sector ABC belongs to, this ratio relatively varies. Even though the recommended value is considered to be 1, but as stated it depends on the economic sector.

The inventory turnover ratio is not included in the calculation as ABC does not have inventories.

4 CALCULATION OF EVA FOR ABC COMPANY

Obviously, EVA can be calculated in various ways and methods. However in this paper the basic 5 steps of calculation of EVA are illustrated.

In this following chapter we will conclude EVA for ABC Company with its main components.

4.1 Step 1: Observation of financial statements

We need to observe ABC Company's financial data. All of the relevant information can be found on the balance sheet and on the income statement. In some companies some of data can be found as well as on the notes to the financial statements.

In the previous chapter the financial position of ABC Company is already represented, however within the scopes of traditional financial metrics.

4.2 Step 2: Calculating ABC's Capital Employed and NOA

After precise research on our company's financial statements we can identify our company's capital (C). Obviously, it is not always easy to identify a company's Capital. Moreover, according to Clinton & Chen (1998) Generally Accepted Accounting Principles (GAAP) often fail to describe a company's financial position. As ABC Company's financial position is illustrated on our previous chapter, we can try to define our Capital as precise as possible. However, back to the gap of GAAP Stewart in order to conclude a company's real financial performance introduced up to 164 adjustments (Stewart, 1991; Blair, 1997). The main idea behind why these adjustments are initiated is to avoid of errors (distortions) while calculating Net Operating Profit after Taxation (NOPAT) and Capital (C) (Stewart, 1991). This approach gave opportunity to accountants to consider some accounting items such as research and development expenses, marketing expenses and some others not as expenses but investments on Capital (Stewart, 1991). Obviously, Capital is all of the funds which are invested in the company. In order to measure company's Capital Employed there are two basic ways of doing.

- To add all debts (short term and long term) to the shareholder's equity

- To subtract all non-interest-bearing liabilities from total liabilities or from total assets.

Therefore, following to the methodology it doesn't matter if in the company the money invested were through the funds of shareholder's or it was borrowed from banks as loans.

Regarding to our ABC Company we used the method of eliminating all non-interest bearing or non-operating liabilities

Generally, some of significant EVA authors suggest using starting Capital, as it gives more precise measurements of calculating company's Capital (Stewart, 1991). Consequently, for ABC Company we have considered 4 years from 2012 to 2015 of its balance sheet data for estimating ABC's Capital. The same order of years is taken in regards to other EVA components such as calculation of NOPAT as well as WACC. In some cases where some data from financial statements are misleading average data is suggested to take for a considered season (Copeland, Koller, & Murrin, 1996). Below is represented the table of ABC Company's Capital estimation:

Table 12 ABC Company's Capital estimation for time period of 2012-2015 [own elaboration]

ABC Company	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Total Liabilities	11,209.00	25,226.00	17,841.00	16,209.00
Accounts Payable	349	107	9,569.00	8,395.00
Accrued Expenses	1,711.00	3,810.00	2,648.00	1,260.00
Capital Employed	9,149.00	21,309.00	5,624.00	6,554.00

As this project is a step-by-step guide for implementing EVA into ABC Company we assume that no significant adjustments to capital have been initiated. In other words, even if there were some we disregard the adjustments to make the process easier to comprehend. Accordingly, the shareholder's equity of ABC Company as well as the loans borrowed from banks is traded on the financial markets. Thus, we assume that the financial statements of ABC are enough to measure the Capital. Apparently, our observed data from the

balance sheets and the income statements of the selected periods from 2012 to 2015 are good estimators to conclude not only Capital, but other EVA components as well.

On the other hand each company's Capital employed should be equal to Net Operating Assets (NOA), therefore it much more would look like in this way:

Table 13 ABC Company's Net Operating Asset estimation for time period of 2012-2015

[own elaboration]

	2015	2014	2013	2012
Current Assets	7904.00	26531.00	23283.00	21398.00
Intangibles, Net	90.00	133.00	941.00	1128.00
Long Term Investments	3391.00	5736.00	4971.00	3044.00
Other Long Term Assets, Total	395.00	6575.00	266.00	476.00
Fixed Assets	3876.00	12444.00	6178.00	4648.00
non - interest - bearing liabilities	2631.00	17666.00	23837.00	19492.00
NOA	9,149.00	21,309.00	5,624.00	6,554.00

4.3 Step 3 Calculating ABC's Cost of Capital.

The major gap of calculating EVA is to determine the Cost of Capital of each Company. Basically, WACC is referred to as the company's Cost of Capital. As a matter of fact, the sources of any company's assets are funded by debt (D) and equity (E). Weighted average cost of capital (WACC) is the average of the costs of these sources. By calculating WACC we want to comprehend how much interest the company has to pay for every dollar financed.

Below is illustrated one of the most basic formulas of calculation of WACC, which is considered on the thesis:

$$\text{WACC} = \frac{E}{E + D} * \text{Cost of Equity} + \frac{D}{E + D} * \text{Cost of Debt} * (1 - \text{Tax Rate}) \quad (14)$$

As our thesis is a step-by-step guide for a reader it is separated into 5 steps of concluding all of the components of WACC for ABC Company.

4.3.1 Weights

When speaking about weights we comprehend the weights of the market value of debt and the market value of equity of the company. In order to make the calculation simpler in this paper book value of Debt (D) is used in this paper. To do this for each year the sum of latest two-year average Short-Term Debt and Long-Term Debt are taken.

*Table 14 ABC Company's Short-term and Long-term debts for time period of 2012-2015
[own elaboration]*

	2015	2014	2013	2012	2011
Short Term Debt	0.00	850.00	6.00	413.00	550.00
Long Term Debt	6779.00	6777.00	4117.00	4100.00	1530.00

After measuring of the two-year averages of Short Term Debt and Long Term Debt we have this table below:

Table 15 ABC Company's 2-year average Short-term and Long-term debts for time period of 2012-2015 [own elaboration]

	2015	2014	2013	2012
average of short term debt	425.00	428.00	209.50	481.50
average of long term debt	6778.00	5447.00	4108.50	2815.00
Total average book value of debt	7203.00	5875.00	4318.00	3296.50

Market value of Equity (E) can be calculated by multiplying the market price of a share by the total number of shares outstanding.

Thus, here is the final table regarding to this topic, where the weights of equity and debt are defined in percentages:

Table 16: ABC Company's weight of Debts and Equity for time period of 2012-2015 [own elaboration]

	2015	2014	2013	2012
Market value of Equity (E)	29974.00	6522.00	6882.00	4007.00
average book value of debt (D)	7203.00	5875.00	4318.00	3296.50
weight of Equity E/(E+D)	80.63%	52.61%	61.45%	54.86%
weight of Debt D/(E+D)	19.37%	47.39%	38.55%	45.14%

4.3.2 Cost of Equity Calculation

To calculate the rate of return of ABC Company we used Capital Asset Pricing Model (CAPM).

The explanation of CAPM calculation is defined in the theory part of this project. Therefore only the formula is required to illustrate the calculation:

$$R_e = r_f + (r_m - r_f) * \beta \quad (15)$$

In order to obtain all of these data thoroughly observation is held in order to provide as accurate data as possible. Thus, risk free rate (r_f) is focused on 10-year Treasury Constant Maturity Rate. Such data can be taken via gurufocus.com as well as ycharts.com. Risk premium ($r_m - r_f$) which is the difference between Expected Return of the Market (r_m) and Risk-Free Rate of Return which is called Risk Premium. In the following table is represented the calculation of ABC Company's Risk Premium: [6]

Table 17 ABC Company's Market Risk Premium for time period of 2012-2015 [own elaboration]

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Historical Market Returns	9.3%	8.80%	8.60%	8.90%
r_m				
risk free rate r_f	1.8%	3.01%	1.87%	1.99%
risk premium ($r_m - r_f$)	7.5%	7.0%	6.73%	6.91%

To obtain unlevered beta for period 2012-2015 ABC Company's unlevered beta for 4 years is used. To conclude WACC it is required to take the levered beta for ABC, and consequently it is done using the same formula from theory part of the thesis:

$$\text{Beta (Levered)} = \text{Unlevered Beta} (1 + (1 - \text{Tax}) * D/E)$$

Table 18 ABC Company's calculation of levered Beta for time period of 2012-2015

[Own elaboration]

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Beta unlevered	1.19	1.19	1.19	1.19
Beta levered	1.21	1.25	1.47	1.46

After obtaining all these data we are only able to measure the cost of equity of ABC Company, which is represented on the table below:

Table 19 ABC Company's calculation of Cost of Equity for time period of 2012-2015

[Own elaboration]

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Historical Market Returns	9.3%	8.80%	8.60%	8.90%
risk free rate r_f	1.8%	3.01%	1.87%	1.99%
risk premium ($r_m - r_f$)	7.5%	7.0%	6.73%	6.91%
Beta levered	1.21	1.25	1.47	1.46
Cost of Equity R_e	10.88%	11.76%	11.76%	12.08%

4.3.3 Cost of Debt

Cost of Debt is obtained of using each fiscal year end Interest Expense divided by the latest two year average debt to get the simplified cost of debt for ABC Company:

*Table 20 ABC Company's calculation of Cost of Debt for time period of 2012-2015
[Own elaboration]*

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Interest Expense(Income) - Net Operating	144.00	123.00	100.00	63.00
average book value of debt (D)	7203.00	5875.00	4318.00	3296.50
Cost of Debt	1.999%	2.094%	2.316%	1.911%

4.3.4 1 – Tax rate

Following to the same methodology for calculation of 1- Corporate Tax rate of ABC Company, but in order to make it simplified average of two year tax rate is used:

*Table 21 ABC Company's 2-year Average corporate tax calculation for time period of
2012-2015 [own elaboration]*

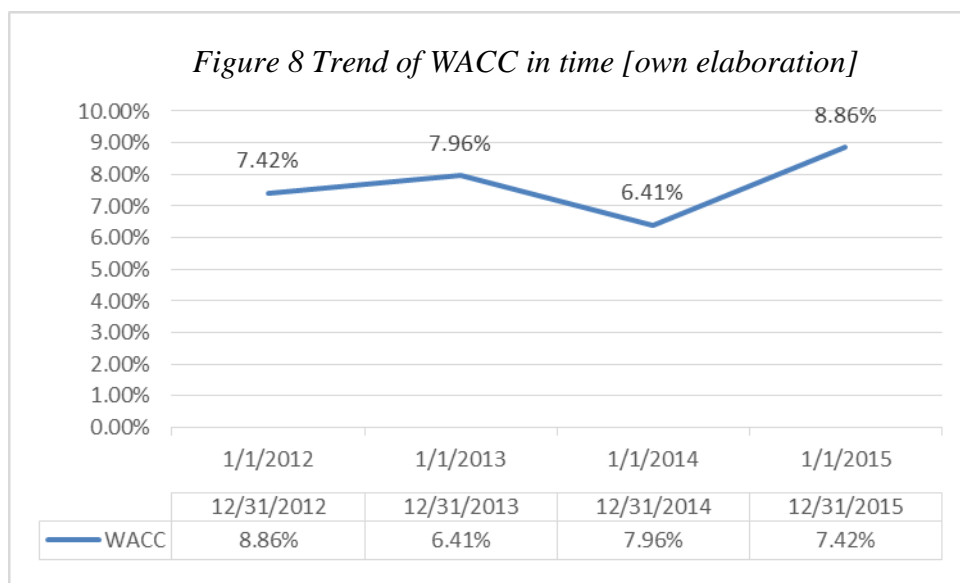
	2015-12-31	2014-12-31	2013-12-31	2012-12-31
corporate tax rate	19%	134%	20%	15%
average tax rate	76.5%	77%	17.5%	7.5%
1- average tax rate	23.5%	23.0%	82.5%	92.5%

4.3.5 WACC Calculation

After collecting all of the measures together WACC of ABC Company is represented in the table below:

Table 22 ABC Company's calculation of WACC for time period of 2012-2015
[Own elaboration]

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
weight of Equity E/(E+D)	80.63%	52.61%	61.45%	54.86%
weight of Debt D/(E+D)	19.37%	47.39%	38.55%	45.14%
Cost of Debt	2.00%	2.09%	2.32%	1.91%
1-average tax rate	23.5%	23.0%	82.5%	92.5%
Cost of Equity Re	10.88%	11.76%	11.76%	12.08%
WACC	8.86%	6.41%	7.96%	7.42%



4.4 Step 4 Calculating ABC's NOPAT

Although there are various ways of calculating Net Operating Profit after Taxation, the most common method of calculation is considered for ABC Company:

$$\text{NOPAT} = \text{Operating Profit} * (1 - \text{Tax Rate}) \tag{16}$$

Accordingly, instead of Tax rate two-year average corporate tax rate is taken.

As from 2012 to 2015 of ABC Company there were some adjustments for better result it's much precise to take Company's Earnings before Interest and Taxes (EBIT) from the Income statement. The results of NOPAT from 2012 to 2015 for ABC Company are shown on the table below:

*Table 23 ABC Company's calculation of NOPAT for time period of 2012-2015
[own elaboration]*

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Earnings Before Interest And Taxes (EBIT)	2406.00	2515.00	2571.00	3084.00
1-tax rate	0.235	0.230	0.825	0.925
NOPAT	565.41	578.45	2121.075	2852.7

4.5 Step 5 Calculating ABC's EVA

Eventually, as we have all of the EVA components calculated for ABC Company from 2012 to 2015, we can measure its EVA for that period. Obviously, the traditional method of calculation is taken for EVA. The last part of the calculation becomes the simplest part as we have all of the EVA components already measured shown in the steps. It only remains to calculate EVA by simply using economic model of it:

$$\mathbf{EVA = NOPAT - (Capital Employed * WACC)} \quad (17)$$

The calculation of EVA is shown in the table below for ABC Company:

Table 24 ABC Company's calculation of Economic EVA for time period of 2012-2015
[own elaboration]

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
NOPAT	565.41	578.45	2121.075	2852.7
WACC	8.86%	6.41%	7.96%	7.42%
Capital Em- ployed	9149.00	21309.00	5624.00	6554.00
EVA	-245.19	-339.57	1815.11	2575.55

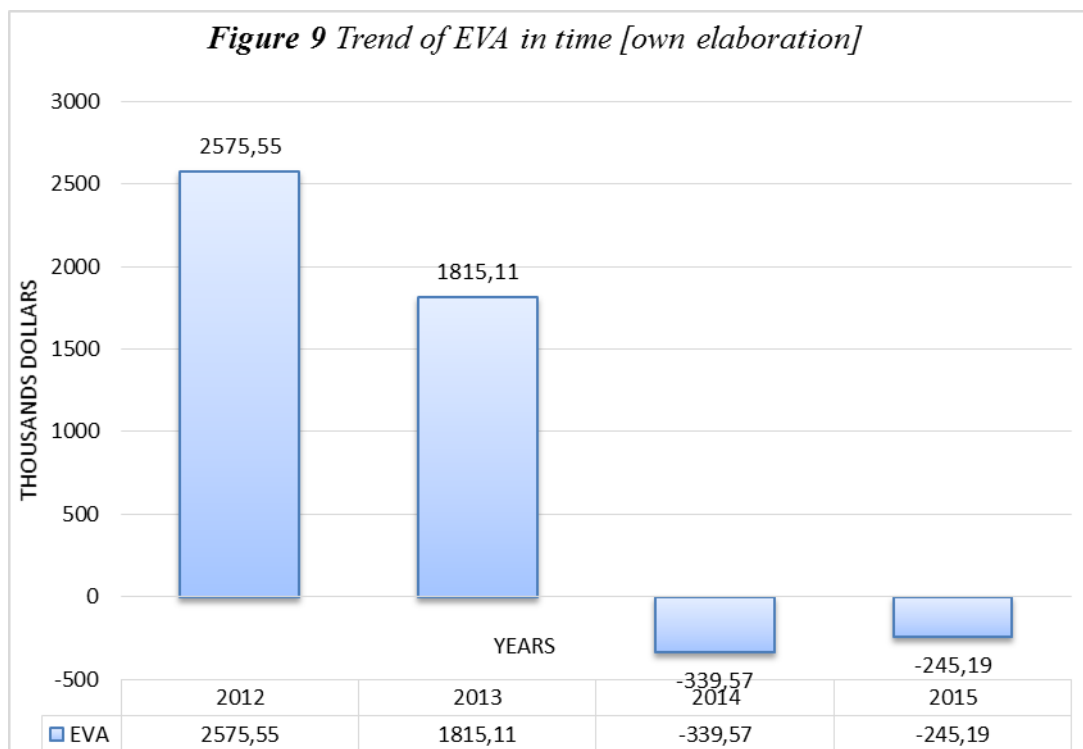


Figure 9 Trend of EVA in time [own elaboration]

An alternative way of counting EVA can be calculated as an accounting model. To do this the following formula can be used:

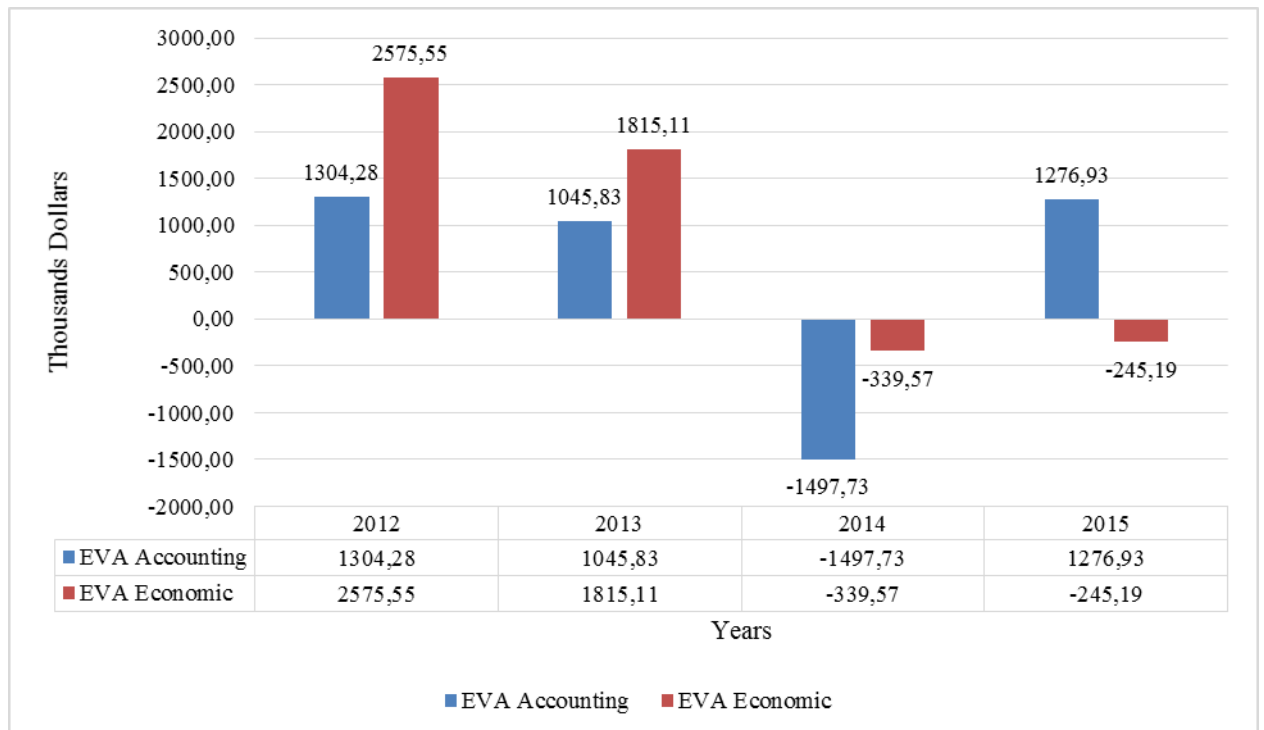
$$EVA = (ROE - Cost\ of\ Equity) \times Shareholder's\ Equity \quad (18)$$

Table 25 ABC Company's calculation of Accounting EVA for time period of 2012-2015
[own elaboration]

	2015-12-31	2014-12-31	2013-12-31	2012-12-31
ROE	26.23%	0.23%	12.08%	12.50%
Cost of Equity Re	6.81%	7.76%	7.65%	6.25%
Total Equity	6576.00	19906.00	23647.00	20865.00
EVA	1276.93	-1497.73	1045.83	1304.28

In the figure below the comparison between accounting and economic EVAs are represented:

Figure 10. Comparison of Accounting EVA and Economic EVA [own elaboration]



Undoubtedly, the accounting model of concluding EVA has limitations as traditional measure such as Return on Equity is used in the model. If there were no adjustments used

in the economic model this means the values of economic and the accounting models would be the very close to each other and there will be no matter which method is used for calculation. As it is visible both in the numbers and in the charts the EVA for 2014 year is negative. Both models showed negative EVA and thus defines that for 2014 the company didn't create shareholders wealth. As a matter of fact it doesn't mean if EVA is negative the company earns no profit or the company is at the edge of bankruptcy. As we can see the accounting based EVA somehow exaggerates the number and shows that in 2015 it is positive, which admits the fact of the limitations of traditional metrics.

5 PROJECT OF IMPLEMENTATION OF EVA FOR ABC COMPANY

Implementation of EVA for each company depending on its structure and engagement is specific. In this chapter based on the previous analysis the whole implementation procedure will be described especially for ABC. On the other hand, as each company is unique with its organizational structure, philosophy, occupation and etc. integration of EVA is also subjective. Consequently, there is no certain way of implementing EVA into a company. However, Young and O'Byrne suggested their own guidelines which are represented in the theory part of the thesis. [3]

Throughout this project step by step guide is initiated to exhibit the whole procedure to the reader. The very process starts with the establishment of project team. Generally, the team consists of project coordinator, financial director and the EVA experience manager. As already mentioned the position of EVA experience manager can be outsourced and depending on the company's capacity it can even be even outsourced to a whole agency. The establishment of this team starts from its top: it requires ensuring that all of the managers of the top positions including the executive director understand how EVA works and how it can benefit to ABC Company. The executive director of ABC Company, who will lead the EVA project as well, plays a crucial role in this project he or she has to push the EVA processing managers to succeed the whole EVA implementation project. In other words, the executive director is the main person who will encourage this project to be completed since its start to end. Obviously, this role can be continuous if ABC Company decides to integrate EVA concept as its normal activity. In other words, EVA Concept can be used till ABC Company runs.

After defining all of the position handlers in terms of EVA project initiation of ABC Company, where every single manager as well as EVA experience personnel knows their role of this project comes the second step of uniting the EVA concept in to the whole divisions of the company. In the strategic business plans EVA should be included as well as for operating budgeting and capital allocation should be considered. The board that already incorporated among EVA implementation project, requires to make the strategic decision where the mainly the crucial targets of measurements will be discussed. Consequently, the team should also consider what components or subcomponents of EVA should be calculated. Eventually, management compensation scheme of EVA concept should be planned.

5.1 Targets of measurements of EVA concept

Generally, there are two crucial targets that at least ABC Company requires to take into consideration: the measurement of ABC's business performance and in terms of loss-profit. As it is already shown in the EVA Calculation of ABC Company in the previous chapter, in 2014 both economic and accounting calculations of EVA illustrated that ABC has negative EVA; therefore this means ABC should focus on its existing costs as well. Basically, it will give managers to easily analyze which type of cost need be highly focused on. Additionally, it will help managers to detect where cost can be reduced. It is also proven that specific costs indeed have huge impact on economic value added. In order to fix this gap can be reduction of personnel costs, decrease or increases the capital employed, as well as in some specific cases the board can even decide to temporarily low the percentages of shareholder payments.

At the level of cost analysis it's easier to comprehend EVA rather than at the level of the whole company. As a matter of fact, all the targets of EVA such as cost reduction, profitability increasing has one main common mission: to improve economic value added which is in line with shareholders wealth creation. As the identification of cost targets in the scopes of EVA is already defined the financial manager has to be responsible for it.

5.2 The question of how EVA will be calculated for ABC

5.2.1 Adjustments to use for EVA Calculation

As the calculation in the previous chapter showed it is more precise calculation if ABC handles the economic model of EVA rather than the accounting one. Obviously, comparing to accounting model economic model is relatively difficult to calculate as there are some adjustments are required to be considered, however it removes the impact of accounting and shows more real values. In case if ABC decides to choose to option of economic EVA concept the hardest part turns to be to determine the adjustments and which of these adjustments will be considered in the economic EVA calculation. At least the significant adjustments should be calculated, for instance let's ABC owns long term marketing expenses, which is less important when compared to other costs. ABC does not require adjusting this cost in the calculation of EVA. [3]

Regarding to NOA there the most significant adjustments are required to consider:

- Adjustments of the difference between current and fixed assets, financial leasing with long term debts, including the R&D, marketing and training expenses which are long term.
- Adjustments should be made by eliminating cash and cash equivalents, short and long term investments and all other non-operating assets in order to define Net operating asset of ABC from 2012 – 2015.
- As Capital (C) should have the same value of Net operating Assets (NOA), we can subtract all non-interest-bearing current liabilities from total liabilities. In the case of ABC accounts payable and accrued expenses represent the same as non-bearing current liabilities. (see table 12)
- In some cases when a company has Bank loans and other Credits or leasing that should also be eliminated. However in the case of ABC is not represented.

In terms of NOPAT it is required to: [3]

- Subtraction of interest paid and leasing interest from NOPAT. The best way of defining the leasing interests is to consider the value of leasing at the beginning of each year multiplied by the interest rate of leasing for according year.
- If there are changes of equity for each year, that also should be taken into consideration
- Adjustments of tax, in this project for corporate tax rate per each year the average of current year and previous year is taken in order to make the calculation easier.
- In this example of ABC Company we assume that the Earnings before Interest and Taxes (EBIT) are already adjusted from leasing. Thus, we compute the adjusted $NOPAT = EBIT * (1 - T)$.

As the company is indeed fictional and the data obtained is limited most of the adjustments are not considered. However, the financial situation of each company is changing year-by-year and each year, depending on the company's strategic decisions and final outcomes, the amounts of adjustments may vary. In other words the company should decide itself for each year what adjustments to include.

The basic suggestion is to take the adjustments which changes are significant for that year as they will effect on the real amount of EVA.

Moreover, another suggestion is to use the most common and basic ones in case there are no special necessity or managerial decisions in terms of adjustments for that particular year.

5.2.2 The consideration of capital costs of ABC Company

Generally, typical EVA Calculation should be concluded by taking the weighted average of cost of loan and cost of leasing per each year. However as already stated for simplified calculation, however due to the circumstances of not obtaining enough data, an alternative methodology is considered of adjusting the cost of debt. The last fiscal year end of interest expenses are divided by the latest two-year average debt to get the simplified version of cost of debt. On the other hand, even if obtained the data of the costs of loan and cost of leasing it is assumed that there would not be significant differences between these two approaches.

In case of cost of equity calculation the traditional CAMP method is considered, however the other alternative of dividend capitalization model ($Re = D/P + g$) is not very precise as it is necessary to be. The main gap of this method is that the growth rate is relatively more complex to define. The CAMP method requires to lever beta by the equation of Beta (Levered) = Unlevered Beta $(1 + (1 - Tax) * D/E)$, which is defined in the theory as well as the calculation of it from 2012 to 2015 in the analysis part of the thesis.

5.2.3 The frequency of EVA estimation for ABC Company

As already stated previously, EVA can be calculated at least twice per each year, however in order to implement the concept of EVA into ABC Company and get much benefit, it is recommended to calculate EVA quarterly. The reason why it is more beneficial to choose the quarterly EVA is that quarterly EVA allows easily monitoring and controlling the significant changes which might occur within the quarters and consequently, initiate proper solutions and prevent the further issues. The fact of obvious negative EVA in 2014 illustrates, that the managers should determine where the gap was and provide specific preventions as well as compensations in order to prevent the upcoming negative EVAs.

5.3 The management compensation plan of ABC Company

The main purpose of creating the management compensation plan for ABC Company is to make managers think in a way of shareholders or investors.

5.3.1 Establishment of EVA based trainings for ABC Company

One of the most significant parts of implementation are EVA based trainings. The purpose of such trainings is to make the concept of EVA more efficient to be sure it's understandable for everybody. EVA based trainings are suggested to develop the mindset as well as the basic philosophy of EVA. The integration of EVA has cultural manners indeed. In case of poor training procedure can cause of failure of the whole EVA concept implementation in the company. [10]

For ABC Company in terms of time schedule the following components are suggested:

- Training for EVA Experts (up to 1 week)
- Training for EVA handling managers up to 1 week
- Capital Budget Training up to 2 weeks
- General EVA concept training for everyone 1 day

Training for EVA Experts (up to 7 days)

This training has a purpose of training and recapping the key financial materials of ABC Company. As this sub-project is for the experts who have to handle the core part of the EVA implementation the staff should consists of the following personnel:

- Head of the division
- Controllers
- General accountants
- Material accountants
- Credit accountants
- Personal manager
- Trainers and consultants
- Salary and bonus administrators

Obviously, the training should incept with the basic comprehension of economic value added concept among the staff. Later throughout the procedure of this training the whole measurement and the strategy of EVA in the scope with financial processes should be represented. All of the components of EVA are required to be discussed in details from the basic overview of the EVA management system deep into the calculation of the whole EVA. More specifically on a live example will be covered the practical part. In addition, besides determining and explaining the key drivers of EVA, it is recommended to focus on the pyramidal analysis of EVA concept as well. Especially for ABC Company two consultants of more than ten years of practical experienced is suggested to involve in the training project as the sizes of the Company are relatively larger. Besides that, the purpose of it is to ensure that in the end of this training session the company will acquire qualified EVA experts. It is believed that highly experienced consultants can drive the company to a significant success. Throughout the training it is expected to give suggestions of ABC's main problems that EVA is capable to cover. As EVA is a full-time job before the trainings are held it is recommended to have the concept of EVA in a desk instruction manual form. In the manual all the procedure and the aspects are represented in details as it is going to serve as a guideline during the training sessions as well as a recap tool after the trainings. This technique is also accepted for hiring an employee to a new job position. This means the desk instruction manual is given beforehand for an employee to overview in terms of time and training efficiency. Trainings are expected to be led by the project manager. [8]

Training for EVA handling managers up to 1 week

These trainings are served to be for EVA handling managers, senior and junior managers, and specialized managers such as cost mangers of ABC. The training mainly focuses on the philosophy of value creation in ABC. Obviously, the sessions should cover the topics of EVA measurement, calculation, pyramidal analysis, drivers, key EVA Components, however not as thoroughly as it is required to be for EVA expert trainers. On the other hand during the sessions it will be highlighted on EVA compensation system and EVA management system. Again it is worthy to provide the managers with the manuals of EVA concept a week before. As already stated it will be more efficient for the managers to have a basic idea what they are going to cover. As the EVA experts already should be in their roles this training is a perfect way to show their abilities and training skills combined with

the knowledge they achieved throughout the EVA expert trainings. The training will be led by the head of project team. The significance of this training is that EVA experts will hold the trainings, but depending on the specialization and each of them should handle only a certain part of the training. One aspect that unites them is to be responsible for providing exact information and proper answers/solutions to the raised questions/problems of trainees. It is highly recommended these trainings to be interactive and mostly should be focused on practical knowledge, real time operations and cases. During the trainings specialized software such as “EVA software solutions” can be used. The latter is recommended by most of the EVA based companies nowadays. All the proper training based materials will be placed on the online clouds which will be accessible to all EVA related persons.

Capital budgeting training up to two weeks

These two day trainings should be held especially for financial department. The aim of this course is to combine the EVA concept with corporate finance. Throughout the capital budgeting training it will be mostly focused on WACC calculation and cost of equity calculation. The sessions should be held in the form of discussion and throughout of these discussions the project team will train the staff.

General EVA concept training for everyone 1 day

The general EVA training is for all of the staff including all the workers and officers of the ABC Company. The session will last around three hours. This training will be led by the heads of the cost centers and junior managers who took part in one week EVA handling manager training. The general talk about the EVA implementation should be represented. Brief description about the decisions, expectations and importance of EVA concepts should be represented. It should include brief description about the strategy and the mission in the scope of EVA. This will be done as EVA is a continuous management tool and requires involving everyone in the company. For those who are less related with the EVA implementation they at least need to be aware of what changes and improvements are going to be held in the company. The crucial philosophy of EVA as a value creating tool should be educated everybody not depending on their positions. Such trainings are suggested to be initiated continuously to make sure all of the staff is integrated into the con-

cept. After the general training is held the company will decide if there will be required extra trainings.

Usage of EVA software

The most accurate EVA without trended software would be very complex to calculate. Besides that in terms of time productivity software are designed to make life easier and time saving. [3]

As already stated before, it is recommended for ABC Company to use “EVA Software Solutions” in line with implementation of it. Throughout this software EVA managers will have very range of features such as live monitoring the behavior of current EVA as well as future EVAs, expected and historical EVAs. The software has also warning alert in case of negative EVA or EVA reaches the set limit. In addition, via this software the calculations will be relatively easier and based on historical and preferred components of EVA it can easily conclude and estimate the expected EVA for particular month and even for a day.

Obviously, the expected EVA can illustrate for a specific period and thus can give managers to foresee and will help them in their decision making by showing with red alerts on the screen. The software itself is an artificial intelligence and provides suggestions for decision making and improving the performance of the company. Moreover, it has categorized section for controlling the adjustments for all of the components of EVA such as “recommended”, “favorite”, “all” and “custom”. Another significant advantage that has the software is designed to control as well the logistic and marketing sectors of the company as well.

Development of EVA implementation plan in terms of time and cost

ABC’s the implementation plan will be developed by the project team, which will be headed by the executive director. The team will lead the most experienced EVA manager and should be assigned as a team leader. He or she will be responsible for both EVA calculation and project planning as well. The main project implementation staff should comprise of, as already stated before, financial director, project manager, personnel manager, EVA handling managers and experts. However our two consultants are not considered as part of the team, because they will be hired as temporary employees and with specific work contract, therefore not being full-time positioners they are not part of the project management team. [5]

The consultants will provide trainings and coaching sessions considering the team needs.

Figure 11: EVA implementation time schedule [own elaboration]

Activities	First month				Second month			
	1st week	2nd week	3rd week	4th week	5th week	6th week	7th week	8th week
Introduction of EVA project to the executive board	■							
Executive board approval of the EVA project	■	■						
Establishment of the project team		■						
Project team training and coaching		■	■					
EVA strategic decision and project planning					■	■	■	
EVA materials creation					■	■		
EVA material distribution						■	■	
Training program, coaching sessions,								■
Completion of the implementation								
Control								
Quality check, recap and evaluation and tests				■				
Activities	third month				forth month			
	9th week	10th week	11th week	12th week	13th week	14th week	15th week	16th week
Introduction of EVA project to the executive board								
Executive board approval of the EVA project								
Establishment of the project team								
Project team training and coaching								
EVA strategic decision and project planning								
EVA materials creation								
EVA material distribution								
Training program, coaching sessions,	■	■	■	■	■	■		
Completion of the implementation							■	■
Control							■	■
Quality check, recap and evaluation and tests			■				■	
							■	whole week
							■	end of the week

The implementation of EVA concept is supposed to begin since the year of 2017; therefore the arrangements should begin at least since September of 2016. If preparation of the project starts in September it can be finished within 4 months as it is shown above.

During the second and the third week of September EVA managers are being trained by the EVA consultants. They will be taught how to initiate all crucial EVA based managerial decisions including EVA calculation, compensation system and the training program preparation. Later, after the trainings the EVA consultants will prepare recap tests to ensure the material is covered. After the evaluation of the tests and assessments a proper decision will follow to continue within the schedule or more practice requires. As it is shown in the figure the EVA manuals within the end of 5th week and 7th week will be created and distributed among the whole EVA related employees. Moreover, it will be uploaded in the company's online shared clouds in order to be accessible for everyone. Since the end of 6th week the major trainings will be held by EVA experts and managers excluding the EVA consultants, as they are already will be finished with their part of coaching the managers. The implementation is expected to end in December between 15th and 16th week. In the table below is the schedule of training sessions with time measured:

Table 26: EVA training session time plan [own elaboration]

	Staff involved	held by	Days	Hours
Training for EVA experts	Key financial staff	Project team	14	80
Capital budgeting training	Financial department staff	Project team Company's EVA experts	14	80
General EVA training for everyone	all of the employees	Project team	1	8
Total			29	168

As it is shown in the table, the first two weeks of the training sessions are the crucial ones. It includes the coaching by EVA Consultants and then later already trained EVA experts and managers will train the financial department how to use EVA in terms of capital budgeting again within 2 weeks. Later the junior managers will represent the whole EVA project within one day for the whole company. Overall it is expected to have 168 hours within 29 days. However, the test assessments, quality check and training recaps are not included within the training session. The eleventh week in the EVA implementation time schedule is taken especially for such activities. The similar 14th week is also considered for final exam and finishing the training sessions. [3]

In the table below responsible personnel for the training activities, estimated costs and opportunity costs is represented. As for executive board and managers this project will be considered as part of their job duty, consequently none of the costs are illustrated in the cost calculation. The salary they are paid is assumed to be sufficient, however, in case of the succession of the project bonuses to the salary can be applied.

The opportunity costs are calculated considering that employees will be trained and do not work. The cost of 7970\$ will include the cost of EVA consultants that will work for coaching EVA based managers and future EVA experts. In total, the full implementation of EVA for ABC Company is expected to cost 15 345 US dollars.

Table 27: Cost calculation of activities [own elaboration]

Introduction of EVA project to the executive board	Responsible person	Costs	Opportunity costs
Executive board approval of the EVA project	Financial director		
Establishment of the project team	Executive board		
Project team training and coaching	EVA experienced managers and consultants	\$1,530.00	
EVA strategic decision and project planning	Team leader of project team	\$480.00	
EVA materials creation, distribution and other expenses	EVA concept project team	\$ 180.00	
Training program, coaching sessions,	EVA concept project team	\$ 2,630.00	\$ 7,375.00
Completion of the implementation	EVA concept project team		
Control	Financial director		
Quality check, recap and evaluation and tests	Quality team and EVA consultants		
EVA Software training and license		\$3,150.00	
Total		\$7,970.00	\$ 7,375.00

Expected risks and benefits of EVA implementation

The most obvious risk of EVA implementation is that ABC hasn't experienced with EVA and EVA related projects before. Thus it can cause to the project failure. Throughout the thesis it was visible that WACC is not an accurate measure and therefore the EVA as WACC is a component of it. In addition, in case of wrong WACC calculation and disregarding the significant adjustments can cause to wrong EVA calculation and to wrong decision making. The EVA consultants will be hired especially to avoid the poor judgments of ABC Company in future.

Another risk of EVA implementation is that managers may not feel comfortable as this is a new project for them as well as it may take more time for them to get adapted, thus can cause decrease of company's temporary productivity. This can also have a negative impact on their approach towards EVA and their motivation.

However, on the other side when EVA will be fully integrated it will bring more benefit in comparison to the opportunity costs that ABC will experience. In addition to this, one of the most significant benefits of EVA is to create the mindset of lean thinking. If the philosophy of the continuous improvement of EVA is involved among the employees, that will encourage them to achieve better results, though there is a risk that the employees will not comprehend it. [3]

As EVA will be some part of the job of the managers, it is suggested to initiate EVA gradually by prolonging the result. It is much better for a manager to get focused on the usual of the daily basis and do what he or she did before the implementation and only set the 1/3 of the working hours for EVA, by later gradually reaching to the half of it. However, the adaptation of the philosophical part of EVA will take some period of time and in the end with the experience the employees will be fully integrated EVA mindset thinkers. Majority of the biggest firms pay attention very seriously in terms of trainings as they are the key to success in every type of implementation project.

Eventually, another risk is that even if the concept of EVA is implemented into ABC Company, however the missions of EVA to increase the performance of ABC as well as to create shareholder's wealth will not be completed. In other words, the implementation will not change anything for better. Moreover implementation can cause to reduce investments.

However in case of successful implementation the performance of ABC will be improved, the managers will make more precise decisions which is the key to future firm growth and shareholder value creation.

CONCLUSION

In this part the overall review of the thesis and conclusion is explained. The main goal of the implementation project is to attempt to fill all of the gaps of ABC by improving the performance of it. Moreover, it will guide managers where to highly focus on. The components of EVA are itself individual indicators and breaking down them into value drivers will allow managers to control ABC in much better way as well as integrating the philosophy of EVA's continuous improvement concept will make them keep on creating shareholders wealth. The three main components of EVA should be carefully monitored and should be positively influenced on them in this way influencing on economic value added.

Moreover, the better motivation, which is one of the main aspects of implementation project plays crucial role in the company's performance improvement. The precise calculation of EVA with well-defined WACC, NOA and NOPAT will attract new investors and will increase the trust towards ABC.

EVA illustrates the main assets and liabilities of a company by eliminating the non-operating ones in this way providing more useful information for the investors than can provide the traditional metrics. As WACC is not only a component of EVA, the better control of it will benefit better control of ABC's financial structure.

Eventually, the purpose of the thesis was to illustrate economic value added in a way of improving ABC's performance, raising its economic profit and creating wealth for shareholders. The project of implementation is suggested by analyzing the main activities in terms of time and cost management. In addition, by considering the main risks of integrating the project several solutions are recommended. In the end, we came into conclusion by mentioning the benefits of EVA usage in future.

The thesis is divided into two main parts, the theoretical and practical part. The theory part includes the literature review and the definitions of EVA's main components. The thesis also has an aim to serve as a guide; it is illustrated step-by-step calculating them, using various methodologies and suggesting the most optimal one.

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LIST OF ABBREVIATIONS

EVA	Economic Value Added.
MVA	Market Value Added.
RI	Residual Income.
NOPAT	Net Operating Profit after Taxes
EBIT	Earnings Before Interest and Taxes
WACC	Weighted Average Cost of Capital
CAPM	Capital Asset Pricing Model
NOA	Net Operating Assets
FCF	Free Cash Flow
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, tax, depreciation and amortization
WACC	Weighted average cost of capital
C	Capital employed
CAMP	Capital assets pricing model
ROE	Return on Equity
ROCE	Return on Capital Employed

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APPENDIX P I: INCOME STATEMENT

Table: 28 ABC Company's Income Statement (in thousands of dollars) for time period of 2012-2015 [own elaboration]:

In Thousands of USD	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Revenue	8,592.00	8,790.00	8,257.00	14,072.00
Other Revenue, Total	-	-	-	-
Total Revenue	8,592.00	8,790.00	8,257.00	14,072.00
Cost of Revenue, Total	1,771.00	1,663.00	1,492.00	4,216.00
Gross Profit	6,821.00	7,127.00	6,765.00	9,856.00
Selling/General/Admin. Expenses,	3,660.00	3,593.00	3,260.00	5,029.00
Research & Development	923	983	915	1,573.00
Depreciation/Amortization	41	75	136	335
Interest Expense(Income)	-	-	-	-
Unusual Expense (Income)	-	-	-	31
Other Operating Expenses, Total	-	-	-	-
Total Operating Expense	6,395.00	6,314.00	5,803.00	11,184.00
Operating Income	2,197.00	2,476.00	2,454.00	2,888.00
Interest Income (Expense)	-	-	-	-
Gain (Loss) on Sale of Assets	-	-	-	0
Other, Net	-12	-10	28	7
Earnings Before Interest And Taxes	2,406.00	2,515.00	2,571.00	3,084.00
Income After Tax	1,947.00	-865	2,067.00	2,609.00
Net Income Before Extra. Items	1,947.00	-865	2,067.00	2,609.00
Net Income	1,725.00	46	2,856.00	2,609.00

APPENDIX P II: BALANCE SHEET

Table 6: ABC Company's Balance sheet (in thousands of dollars) for time period of 2012-2015: [own elaboration]

In Thousands of USD	2015-12-31	2014-12-31	2013-12-31	2012-12-31
Cash & Equivalents	1,832.00	4,105.00	4,494.00	6,817.00
Short Term Investments	4,271.00	3,711.00	4,514.00	2,591.00
Cash and Short Term Investments	6,103.00	7,816.00	9,008.00	9,408.00
Accounts Receivable - Trade, Net	619	600	899	822
Receivables - Other	-	-	-	-
Total Receivables, Net	619	600	12,948.00	11,438.00
Total Inventory	-	-	-	-
Prepaid Expenses	-	-	-	181
Other Current Assets, Total	1,182.00	18,115.00	1,327.00	371
Total Current Assets	7,904.00	26,531.00	23,283.00	21,398.00
Property/Plant/Equipment, Total - Gross	5,078.00	4,544.00	7,120.00	5,957.00
Accumulated Depreciation, Total	-3,524.00	-3,058.00	-4,360.00	-3,466.00
Goodwill, Net	4,451.00	4,671.00	9,267.00	8,537.00
Intangibles, Net	90	133	941	1,128.00
Long Term Investments	3,391.00	5,736.00	4,971.00	3,044.00
Other Long Term Assets, Total	395	6,575.00	266	476
Total Assets	17,785.00	45,132.00	41,488.00	37,074.00
Accounts Payable	349	107	9,569.00	8,395.00
Accrued Expenses	1,711.00	3,810.00	2,648.00	1,260.00
Notes Payable/Short Term Debt	0	0	0	0
Short Term Debt	0	850	6	413
Other Current liabilities, Total	203	12,764.00	416	856
Total Current Liabilities	2,263.00	17,531.00	12,639.00	10,924.00
Long Term Debt	6,779.00	6,777.00	4,117.00	4,100.00

Capital Lease Obligations	-	-	-	6
Total Long Term Debt	6,779.00	6,777.00	4,117.00	4,106.00
Total Debt	6,779.00	7,627.00	4,123.00	4,519.00
Deferred Income Tax	2,092.00	522	841	972
Minority Interest	-	-	-	-
Other Liabilities, Total	75	396	244	207
Total Liabilities	11,209.00	25,226.00	17,841.00	16,209.00
Redeemable Preferred Stock, Total	-	-	-	-
Preferred Stock - Non Redeemable, Net	-	-	-	-
Common Stock, Total	2	2	2	2
Additional Paid-In Capital	14,538.00	13,887.00	13,031.00	12,062.00
Retained Earnings (Accumulated Deficit)	7,713.00	18,900.00	18,854.00	15,998.00
Treasury Stock - Common	-16,203.00	-14,054.00	-9,396.00	-8,053.00
Other Equity, Total	-319	142	235	169
Total Equity	6,576.00	19,906.00	23,647.00	20,865.00
Total Liabilities & Shareholders' Equity	17,785.00	45,132.00	41,488.00	37,074.00
Shares Outs - Common Stock Primary Issue	-	-	-	-
Total Common Shares Outstanding	1,184.00	1,224.00	1,294.00	1,294.00