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MASTER'S THESIS

**A PERFORMANCE ANALYSIS OF COMPANY  
CIANO TRADING S.R.L**

Ljubljana, April 2017

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Student signature\_\_\_\_\_

# TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>1</b>
<b>1 COMPANY AND INDUSTRY PRESENTATION .....</b>	<b>4</b>
<b>2 BUSINESS PERFORMANCE ANALYSIS .....</b>	<b>7</b>
2.1 Revenue Growth and Profitability Analysis .....	7
2.2 Analysis of Financial Statements .....	9
2.2.1 Income Statement .....	9
2.2.2 Balance Sheet .....	10
2.2.3 Statement of Cash Flows .....	10
2.3 Financial Ratio Analysis .....	111
2.3.1 Liquidity ratios .....	12
2.3.2 Asset management ratios .....	13
2.3.3 Profitability ratios .....	15
2.3.4 Debt management ratios .....	18
2.3.5 Market value ratios .....	20
2.4 Company's Financial Statements and Ratio Analyses .....	21
2.4.1 Liquidity ratios .....	24
2.4.2 Asset management ratios .....	26
2.4.3 Profitability ratios .....	28
2.4.4 Debt management ratios .....	31
<b>3 FINANCIAL STRUCTURE .....</b>	<b>32</b>
3.1 Capital Structure and Leverage Theories .....	33
3.2 Estimating the Cost of Capital .....	34
3.2.1 The Weighted Average Cost of Capital (WACC) .....	34
3.2.2 Factors affecting the WACC .....	35
3.3 The CAPM Approach .....	36
3.4 The Relationship between Leverage and Profitability .....	37
3.5 Empirical Analyses of Capital Structure and Profitability .....	38
3.5.1 The Weighted Average Cost of Capital (WACC) .....	39
3.5.2 The CAPM approach .....	40
<b>4 COMPANY VALUATIONS: THE CORPORATE VALUATION MODEL .....</b>	<b>41</b>
4.1 Valuation of Cash Flows Forecasts .....	42
4.2 Capital Budgeting Decisions .....	43
4.3 Return on Invested Capital (ROIC) .....	44
4.4 Economic Value Added (EVA) .....	45
4.5 Empirical Analysis of Company Valuation .....	46
4.5.1 Analysis of free cash flow and capital budgeting .....	46
4.5.2 Capital budgeting decision .....	47
4.5.3 Analysis of Return on Invested Capital (ROIC) .....	49
4.5.4 Analysis of Economic Value Added (EVA) and Market Value Added (MVA) .....	50
<b>5 WORKING CAPITAL MANAGEMENT .....</b>	<b>51</b>

5.1 Cash Management .....	52
5.2 Receivables Management .....	54
5.3 Account Payables and Accruals .....	55
5.4 Financing Working Capital .....	55
5.5 Empirical Analysis of Working Capital Management .....	57
<b>6 SALES MANAGEMENT .....</b>	<b>59</b>
6.1 The Sales Planning Process .....	58
6.2 Market Situation Analysis .....	60
6.3 Generating and Selecting Strategies .....	59
6.4 Customer's Retention and Problem Solving Capabilities .....	59
6.5 Customer Approach .....	60
<b>CONCLUSION.....</b>	<b>61</b>
<b>REFERENCES .....</b>	<b>64</b>
<b>APPENDICES</b>	

## LIST OF FIGURES

Figure 1: Simple Cash Conversion Cycle for a Production Company.....	54
Figure 2: Simple Cash Conversion Cycle for a Trade Company.....	54
Figure 3: Stages of Sales Planning Process.....	59.

## LIST OF TABLES

Table 1: Ownership Structure of Ciano International Services S.R.L .....	5
Table 2: Revenue and Profitability Analysis of Company.....	22
Ciano Trading & Services S.R.L (in EUR) .....	22
Table 3: The Statement of Cash Flows of Company .....	23
Ciano Trading & Services S.R.L (in EUR) .....	23
Table 4: Liquidity Ratios of Company Ciano Trading & Services S.R.L (in EUR).....	25
Table 5: Asset Management Ratios of Company Ciano Trading & Services S.R.L (in EUR) .....	26
Table 6: Profitability Ratios of Company Ciano Trading & Services S.R.L (in EUR) .....	28
Table 7: Debt Management Ratios of Company Ciano Trading & Services S.R.L (in EUR) .....	31
Table 8: Weighted Average Cost of Capital for Company Ciano Trading & Services S.R.L (in EUR) .....	39
Table 9: Free Cash Flow of Company Ciano Trading & Services S.R.L (in EUR) .....	47
Table 10: Free Cash Flow of Ciano Trading & Services-Kosovo Branch (in EUR).....	48
Table 11: Return on Invested Capital (ROIC) for Company .....	49
Ciano Trading & Services Italy S.R.L (in EUR).....	49
Table 12: EVA Calculation of Company Ciano Trading & Services Italy S.R.L (in EUR)	50

## INTRODUCTION

In such highly competitive environment, the sustainability of corporate financial stability and profitability remain as two fundamental challenges for management of local and international companies. Over time, the company performance evaluation has been a topic debated in an attempt to find the best measurement indicators. In this written work the basics of “the performance measurement” comprises of analysis of financial statements, proper capital structure, liquidity management and the sales management. However, the value of company can also be defined by using other fundamental wealth drivers that are: sales growth, operating profitability, market value added and capital requirements (Brigham & Ehrhardt, 2005, p. 518). Financial statements analysis should provide a wealth of information that can be used by managers, potential investors, creditors and other stakeholders. Moreover, the value of financial ratio analysis lies in the fact that they can be used to measure the company performance against other companies in the same industry and benchmarking (Brigham & Daves, 2007, p.274).

In this research work, the scope of financial performance measures includes analysis of capital structure and financial leverage. The capital structure of a large number of companies consists of blend of debt portion and equity portion. Previous research works about the capital structure support the assumption that capital structure of company should compose of low level of debt and high level of equity. However, Titman and Wessels (1988, p.2), suggested that relatively high debt-ratios might be positively related to growth rates, if growing firms will be capable of substituting short-term financing with long-term financing. As debt is residual of cash flow, increased financial leverage poses negative effect on free cash flow and profitability. However, interest payments on debt are tax deductible. Due to tax advantages associated with borrowing of funds, financial leverage can increase shareholders’ return on investment (Gill & Mathur, 2011, p. 20).

In addition, the statement of cash flow presents one more useful measure of financial strength and liquidity position of a company, as even profitable firms can have insolvency problems if they fail to manage their cash flow effectively. According to Shenoy and Koch (1995, p. 307), the increase of financial leverage and cash flow are negatively related, but across time there might be a positive relationship between them. This research work also aims to examine the relationship between liquidity and profitability, because working capital management has a particular importance to the growth of profitability.

The primary objective of efficient working capital management is to achieve a balanced trade-off between liquidity and profitability (Smith, 1980). This implies that firms with low level of liquidity can be exposed to higher risk, but can yield higher earnings. Conversely, maintaining an optimal level of working capital can reduce risk exposure, but profitability might decrease. The role of efficient working capital management is to maintain an optimal balance among the working capital components. The inability of the firm’s management to

understand the impact of working capital needs and to maintain a proper level of working capital might pose insolvency troubles. Therefore, maintaining a proper level of working capital requires permanent monitoring of its main components such as receivables, payables, and inventory (Gill 2001, p. 30). A firm would be able to maintain an optimal level of working capital if the balance between efficiency and risk is achieved (Filbeck & Krueger, 2005, p. 11).

The purpose of this thesis is to increase the overall understanding of ratio analysis and to recommend improvements regarding the capital structure, the cash conversion cycle and the working capital management. The main purpose for studying liquidity management of the company is to show the role of an efficient working capital policy on liquidity position and simultaneously examine its relationship with profitability. The definition of sales strategy will help the company to develop sales plan, performance measurements and reach verifiable results. It also aims to examine the relationship between sales management and profitability of company.

The main goals of the study are: to perform ratio analysis over time and industry, to analyze the capital structure, the working capital management and the sales management process of the company. Ratio analysis is designed to help evaluation of company's current results and to facilitate the decision making process. It can be combined under the following types: liquidity ratios, asset management ratios, profitability ratios, debt management, and market value ratios.

The appropriate financial strategy should provide a long-term growth of value of the company by taking acceptable risk. Therefore, the capital structure of the company will be examined in two ways. Firstly, it presents an overview of the relevant theories about determinants of the capital structure, which might affect company's debt to equity ratio and its level of financial leverage. Secondly, it examines the capital structure and debt to equity ratio of the company during past few years. It aims to highlight the impact of financial leverage on free cash flow, profitability, and financial stability of company. In addition, working capital and cash flow management have implications on profitability and financial stability of the company. In addition, working capital and cash flow management have implications on profitability and financing decision of company' management.

Interest in particular topic usually begins with research process. Research questions including supportive hypothesis are necessary steps that help us to design a successful research study and to conduct a proper research process. Research questions that are likely to help us in making decisions about data collection and analysis will be as following:

RQ1: What is this company's financial performance?

RQ2: What is the proper structure of financial sources for this company?

RQ3: What is the value of this company?

RQ4: How the working capital management can be improved?

RQ5: How the sales process management can be improved?

The research method of this research written work includes collection of quantitative data and uses a qualitative research approach to analyze the operating efficiency of business operations. Thus, it constitutes an attempt to take valuable information from specific areas of business performance. The theoretical framework is used as guideline to collect data and to conduct empirical analysis about company past performance. A triangulation method is used where findings and suggestions are built up from literature reviews, interviews and company's profile (Ghauri & Yin, 2009).

The information needed for this thesis research is collected through annual financial reports, interviews, company's websites, and other relevant source, which enabled collection of sufficient information about the case. The thesis research is carried out on three stages as following: firstly the review of the relevant literature and collection of data for financial performance evaluation. The second stage involves the process of evaluating the performance of the company, by comparing its actual performance against a standard, like its historical results. The final stage of the thesis contains suggestion for practice, respectively suggestions about actions that should be taken by management of the company to improve current performance.

Chapter 1 of this written work contains information about market analysis and company profile, such as business scope, its corporate purpose and organization.

Chapter 2 begins with theoretical explanation of the basic value drivers such as sales growth and profitability. In addition, it incorporates theoretical presentation and empirical analysis of main groups of financial ratios, and financial statements.

Chapter 3 presents the hypotheses of some theories about target capital structure, the effect of increased financial leverage on free cash flow and firm's value. In this chapter also three cost components are introduced, and are required for calculation of the weighted average cost of capital (hereinafter: WACC), and the capital asset pricing model (hereinafter: CAPM).

Chapter 4 aims to explain the main characteristics of the basic value drivers, including return of invested capital (hereinafter: ROIC), discounted free cash flow (hereinafter: DCF) and economic value added (hereinafter: EVA) that are used to evaluate the company's value and its operating performance. It is important to point out that these valuation methods rely on discounted free cash flow, consistent with cash operating measure of profit. Moreover, it presents some methods which are used in capital budgeting decisions when company's management has to decide whether a project should be accepted or rejected.

Chapter 5 aims to explain the role of working capital management and cash conversion cycle in liquidity position and level of short-term financing. It emphasizes the importance of

understanding the basic drivers of working capital management, and contains suggestions of some authors regarding the relationship between profitability and liquidity.

Chapter 6 summarizes and shortly describes the main stages of sales planning process such as sales forecast, market analysis and sales strategies. It also incorporates of a short overview of company's customer approach and service offerings.

The limitations of this written work consist of inability to define company's market- value ratios during empirical analysis, and some limitations arise when estimating company's beta is used in CAPM. Likewise, due to the lack of information about unit price and unit variable costs it isn't able to calculate the company's break-even point. Another likely problem that can distort the relevance of ratio analysis is the accuracy of financial statements and differences in the activities of the company.

Large companies like Ciano Trading & Services S.R.L that operates in different sectors of different industries, and therefore it is difficult to conduct comparative analysis based on a set of standard metrics like industry average or benchmarking. Another deficiency is the lack of ability to compare ratios with those of other companies operating in same industry. Moreover, the lack of access to book-keeping data access does not allow finding out whether all sales and profit generated by its subsidiaries were presented on company's income statement. Also, inventory valuation method used by company can have significant effect on the value of inventory in the balance sheet and on the amount of costs of the sold goods and profit in the income statement.

## **1 COMPANY AND INDUSTRY PRESENTATION**

Since 1885, Ciano International Services S.R.L has been performing important and rapid support services worldwide. Company's headquarter is in Piazza Dei Legnami, Livorno, in Italy. For 130 years company has been committed to deliver high quality products and services. It also owns and operates hotel properties, warehouses and retail buildings, all designed to complement their core business offerings and to bring the efficiency to their customers. The main corporate purpose of the company is to serve various kinds of military authorities in Italy and abroad by providing catering services, store management, duty free shop and Italian PX, placed in Italy and abroad. Its business scope also relates to the supply of vessel and aircraft equipment, as well as all related services for operation of the storage warehouses at any customs procedure. Company provides the supply and management of on-boards shops and free shops, organization of meals and drinks by management of canteens, restaurants and catering services in general.

Logistic services in general include shipping assistance, transportation and customs clearance of goods. Logistics expertise is driven by innovation and it is designed for a sustainable transportation activity. Company has established logistic divisions to enhance

the global transportation projects, including supply of food, beverages, vehicles, fuel, and other transport services. They use all mediums of transport, with most of operations involving rail, sea and road, as a partner of international shipping lines and agencies. Company supports same-day and overnight requests for delivery of equipment, spare parts, food and water, and when it is necessary it can call on air-transport capabilities.

Also, it provides the supply of goods in storage and distribution of goods for third parties, representation of companies and other entities about the marketing of their products. The company can undertake and manage such representation, as long as the intake of these investments takes place without the purpose of placement on the market.

The structure of company's ownership as on October, 2016 is as following:

Table 1: Ownership Structure of Ciano International Services S.R.L

Shareholder/Company	Book value	Percentage	Estimated market value
ARBIB WALTER	2,040,000.00	64.03%	2,561,200.00
CIANO MASSIMO	645,783.00	20.27%	810,800.00
MAVIMA S.A.S DI CIANO MASSIMO&C	500,000.00	15.70%	628,000.00
<b>Total</b>	<b>3,185,783.49</b>	<b>100.00%</b>	<b>4,000,000.00</b>

Source: CIANO (official website), *Ownership structure*, retrieved December 15, 2016 from <http://cianointernational.com/meet-ciano/ciano.html>

The Board of directors has all the powers for administration of the company. The management board might delegate its attribution to an executive committee or its components to other according to provision contained in charter paragraphs. They might be appointed directors as a deputy to the proprietor and prosecutors for carrying out decisive acts or categories of acts, establishing their powers. In case of appointment of the board, the representation of the company is up to the chairman of the board of directors and to the individual managing directors, if appointed.

The economic downturn has considerably impacted foodservices sector in Italy, resulting with decline in sales value and number of outlets. However, in 2014, fast food outlets achieved an increase in value of sales of 3%, while traditional full-service restaurants faced quite enough difficulties to run their business. Restaurants, hotels, and catering companies to some extent rely on importers, wholesalers and food manufactures, whereas pizzerias are supplied directly from large retail food outlets. Wholesalers are the main customers for fish and seafood as they distribute goods to large number of restaurants and hotels. Moreover, it is estimated that health and wellness trend has grown rapidly in Italy, and consequently it has led to people's orientation in high quality products and domestic products.

Economic situation caused a decline in number of outlets and a decrease in value of sales within consumer food service; however, it is evaluated to be an important and competitive

sector of the Italian economy. Italian foodservice industry is estimated as growing and competitive sector, but it is also diverse and fragmented sector. The majority of Italian restaurants, hotels and other food service establishments are located in north part of the country, followed by those situated in south and center of the country. Also, coffee bars continue to be an important segment of the consumer foodservice, and coffee is among leading products consumed in Italy. Moreover, Italy is one of the main touristic destinations in Europe, therefore, restaurant chains, also including local small restaurants and hotels gain market share, and they are expected to continue growing (USDA, 2015)

Main competitors of company worldwide are: Ecolog International - a provider of supply chain, construction and facility management; Ligabue S.p.A-whose main business activities are ship supply services on shore and off shore, food and catering services management and hospitality services; Pellegrini Catering Overseas- whose business scope involves catering, housekeeping, and cleaning activities; KBR-a global provider of various kinds of services and technologies across the asset and program life cycle management within governmental services sector. According to Besanko et al. (2007, p. 314) firms can compete on pricing and non-pricing basis.

Pricing dimension of the competition can affect company's profits by driving down price-cost margins, but profits can erode also by driving up the fixed costs (non-price competition). Changes in fixed costs result from company's decisions to invest in transportation means to maintain its competitive advantage. The increase in fixed costs can also be affected by investments made in reaction to competitor's contracts with their suppliers for specific relationship investments. High bargaining power of suppliers persuades buyers to account for a possible price increase in supply of their products.

However, if buyers cannot rise their sales prices in order to cover higher costs associated with increase of supply prices, then they need to account for an adjustment of their projected incomes. Restaurants and catering companies depend on their suppliers for qualitative products supply, flexible payment terms and discounts. However, the bargaining power of suppliers in food and catering services sector is not evaluated to be sufficiently strong, to reduce profits. It is estimated that a well-established company can substitute suppliers of food products and beverages. Large sales base allows company to purchase high amounts of goods; therefore suppliers have incentives to offer lower prices to those large purchasers.

The large number of food products' producers and wholesales in supply chain persuades suppliers to intensify their attempts to create the loyalty of large buyers and lessen the importance of prices increase. The list of company's suppliers incorporates, but it is not limited to the number of the following suppliers: Coca-Cola Italia SRL; Rauch Italia SRL; Bosman, Eindhoven, Netherlands; Vicenzi SPA, Italy; La Donatella SRL, Italy; Sammontana SPA, Italy; Acqua Minerale San Benedetto SPA, Italy; Carlsberg Breweries

AS, Denmark; Amica Chips SRL, Italy; Nestle Italiana SPA; Barilla SPA, Italy; Bayernland SRL, etc.

Well established buyers can use their bargaining power to require from suppliers to provide high quality products, better customer service and lower prices. Company serves military authorities in Italy and abroad by providing catering services, store management services and duty free shops. Moreover, its business scope includes supply of vessels' equipment, facility management and logistic services including transportation of goods. The high level of competition in national and international dimension, and having to serve such "influential" buyers increases their bargaining power. Therefore, the ability of company to negotiate the increase of service price is seemingly quite difficult, because strong buyers can exert pressure on suppliers to reduce prices, resulting in diminished profit. Intending to improve the performance in all projects, company's management monitors the performance by reviewing weekly reports and by conducting on-site audits for every contract. The primary level of oversight takes place directly at unit level, but further performance review implies the performance evaluation in terms of time delivery, quality assurance and consistency, compliance with specification and project costs.

## **2 BUSINESS PERFORMANCE ANALYSIS**

Performance evaluation analysis examines trends in company's long-term growth relative to its historical performance, and/or its main competitors. Kennerley and Neely (2003) explained that an effective performance management system is designed to help company to manage effectively its business operations and to adapt this behavior within its organizational structure. Moreover, there are two important issues regarding the performance measurement system such as: (1) factors which affect changes in measurement system over time and (2) how the company can adjust its measurement systems to new circumstances. The process of business performance review comprises an essential process, where owners and managers of firms should be able to access the level of the business performance by identifying its strengths and areas that could be improved.

### **2.1 Revenue Growth and Profitability Analysis**

Business performance analysis evaluates the current and past performance in order to assess the sustainability of competitive advantage and build forecasting. The long-term growth in the value of a company and cash flow is directly related to long term-growth in revenues. Liu, Nissim and Thomas (2007, p.1) suggested that the choices for value drivers include various measures for free cash flow, book values, earnings and revenues, but earnings and discounted free cash flows are the most commonly used methods. . Estimation of future growth based on analysis of historical revenue growth is a straightforward method that could lead towards misleading projection (Koller, Goedhart & Wessels, 2010, p.173).

Analysis of future growth helps to improve valuation and forecasting, but before the forecast begins, it should be determined how many years the forecasting period will be, and how detailed the forecast should be. The forecasting period must be long enough for the company to reach a constant growth rate, defined by the following characteristics:

- company's revenue grows at constant rate by reinvesting a constant proportion of its operating profits into the business each year;
- company should earn a constant rate of return on both existing capital and new invested capital (Koller, Goedhart & Wessels, 2010, pp.187-188).

Profitability measures the ability of a firm's management to generate profit by efficiently using its available resources. Hirshleifer (1993) argued that although long-term profitability matters to the managers, but not as much as to shareholders, because if the firm plans to issue common equity, good reputation will allow it to issue stock at higher prices, and increase the wealth of current shareholders. Moreover, except revenue growth, companies can achieve profit growth by cutting costs; however, costs cutting are likely to ensure improvements in earlier years. But budget reductions in marketing and product development to maintain the rate of profit growth has its shortcomings, because afterwards company has to go through a process of rebuilding them (Koller, Goedhart & Wessels 2010, pp.14).

Customer profitability analysis (CPA) focuses on analysis of revenues and costs for customers or projects. From revenue point of view, contribution margin is the amount remaining from sales revenue after variable expenses have been deducted. Whereas in terms of profit, CM is the amount of profit available to cover fixed expenses and then whatever remains goes toward profit. However, if remained amount of revenues after deducting variable expenses is not sufficient to cover the fixed expenses, a loss occurs for period. The contribution margin as percentage of total sales can be computed as follows:

$$CM \text{ Ratio} = \text{Contribution margin}/\text{Sales} \quad (2.1)$$

Moreover, the break-even analysis can be computed by using either equation method or the contribution margin method. Therefore, the break-even point can be computed by finding the point where sales just equal to total variable expenses plus fixed expenses (Seal, Garrison & Noreen, 2009, pp. 231-239).

The break-even point according to the contribution margin method can be computed as follows:

$$\text{Break even point in units sold} = \text{Fixed expenses}/\text{Unit contribution margin} \quad (2.2)$$

$$\text{Break even point in units sold} = \text{Fixed expenses}/(\text{Price} - \text{Unit variable cost}) \quad (2.3)$$

The calculation of break-even point in units sold or sales volume can be calculated as the following:

$$\text{Break – even point (sales)} = \text{Units sold} \times \text{Sales price per unit} \quad (2.3a)$$

## **2.2 Analysis of Financial Statements**

Financial statements present the amount of tangible and intangible assets, liabilities and equity, sales and expenses. However, the numbers are absolute values, thus we can evaluate them only when those figures are benchmarked against some standards.

One standard of benchmarking is to compare company's current performance towards results of its own historical performance. Second method of benchmarking is to compare company's performance against that of other companies, but there can be some difficulties to make such comparisons, as the size among these companies differs, and they also run various types of business activities.

Annual reports contain two types of financial information, as following: the letter presented by chairman and four financial statements. First, letter presented by the chairman summarizes firms' performance during last year and presents projections about future course of action and expected results. Second, the annual report consists of four basics financial statements: the balance sheet, the income statement, the statement of retained earnings and the statement of cash flow. These financial statements show accounting profitability of the firm's operations and its cash flow position, the structure of assets and liabilities too. Detailed data is usually provided for the three last years, along with historical summaries of key financial ratios for the past years (Brigham & Daves, 2007, p. 215).

### **2.2.1 Income Statement**

Income statement is usually prepared on quarterly and annual basis, but income statement can be prepared on monthly basis as well. Income statement shows a company operating performance during a certain period of time. When subtracting costs of goods sold and cost of services from total sales gross profit is obtained. Net operating profit or EBIT is obtained when total operating expenses are deducted from gross profit, whereas net income available to common shareholders is the amount of EBIT less financial expenses, taxes and preferred dividends (but before paying common dividends). Income statement also presents earnings per share, which is calculated by dividing net income by the number of shares outstanding (Brigham & Daves, 2007, pp. 217-218). Moreover, based on accrual accounting principles revenues are recognized in the period in which goods are sold or services are performed, and expenses are recorded when they occur. Based on cash flow principle, unlike accounting principle, revenues are recognized when payment from sales of goods is received and expenses are recorded when they are paid.

### 2.2.2 Balance Sheet

Balance sheet lists tangible and intangible assets, short-term and long term liabilities, preferred stock and common equity. In order of liquidity or length of time it takes to convert assets to cash, assets are categorized into two groups of assets: current or short-term assets, and long term assets. Current assets comprise of: cash, short-term investments, accounts receivable and inventories, because those types of assets are expected to be converted into cash within a year. Likewise, on left side of balance sheet long-term assets are listed, and include: property, plant (i.e., land, buildings, etc.), machinery and equipment. Intangible assets include goodwill, software, patents and trademarks. The amounts of assets or liabilities presented on the balance sheet are basically book values of assets or liabilities as registered by bookkeepers when assets were purchased or liabilities were issued. When the value of assets of two companies is compared, it is important to recognize the significant effect that used inventory valuation method has.

For example, if FIFO method is used to define the value of inventory, then FIFO method will present a higher balance sheet inventory value, but lower costs of goods sold in the income statement, if compared to LIFO method. When estimating the inventory value by using FIFO method, old or low –cost inventory is taken, and leave-in new or high-costs inventory, therefore it causes the increase of inventory value in balance sheet and decrease of the cost of goods sold in income statement. Although, preferred stock is a hybrid or a cross between common stock and debt, preferred dividend is fixed, therefore, preferred stockholders will not benefit from any growth in company's earnings. In addition, retained earnings are the cumulative amount of earnings that have not been paid out as dividends. The sum of common stock and retained earnings is called common equity or just equity (Brigham & Ehrhardt, 2005, pp.94-95).

### 2.2.3 Statement of Cash Flows

The statement of cash flow helps to identify whether the balance of free cash flow increased or decreased. Thereby, the statement of cash flow completes the income statement and balance sheet by providing information about changes in a company's cash position, as result of changes in cash inflows and cash outflows. Unlike accounting principle used in income statement, the statement of cash flow is based on cash principle, thus, it includes only cash sales and expenses for which cash was paid during the year. The difference between net cash flow and net income is expressed using the following equation:

$$\text{Net cash flow} = \text{Net Income} - (\text{Noncash revenues} + \text{Noncash charges}) \quad (2.4)$$

Depreciation and amortization decreases net income, but are not paid out in cash, so they are added back to the net income when calculating net cash flow. Also, deferred taxes are not immediately paid in cash, as companies are allowed to defer payment of taxes to later

date, although the amount taxes due for payment is presented in income statement. Therefore, the amount of deferred taxes can be added to net income when the net cash flow is being calculated. Likewise, the amount of revenues that was not collected during the year is subtracted from net income when calculating net cash flow.

Changes in net working capital and security transaction including dividend payment have also their impact on business's net cash flow. Increase in current assets rather than cash, such as inventories and receivables, decrease cash balance, whereas decreases in these accounts increase cash balance. On the other hand, if payables increase, it means that firm received additional credit from its suppliers, but if payables decrease this implies that it used its cash to pay off its suppliers. Likewise, if a company issues new stocks or bonds, funds raised by issuing such debt securities or issuing common equity will increase its cash balance. On the other hand, if the company uses cash to buy back stock or to pay off debt, or uses cash to pay dividends to its shareholders during the year, then these transactions will reduce its cash balance.

The statement of cash flow separates activities into three categories plus a summary section:

- **Operating activities**- begins with the amount of net income, adds depreciation expenses to net income and reflects changes in cash balance resulting from movements in current assets and current liabilities. In such cash flow activities are not included cash, short-term investments and short-term debt.
- **Investing activities** present changes in cash as result of a company's decisions to make investments in fixed assets or sales some of its fixed assets. For example, if company invests in purchase of fixed assets, then such transaction will reduce its cash position. But if it sells some of fixed assets these transactions will increase its cash balance.
- Cash flow from **financing activities** involves activities of raising cash by selling short-term investments or by issuing short-term and long-term debt or by issuing stock. Also, cash used to make payment of dividends, to buy back outstanding stock or bonds reduce the company's cash position (Brigham&Daves, 2007, pp.219-222)

### 2.3 Financial Ratio Analysis

Ratio analysis is an effective way for evaluation of financial performance of a company, if its ratios are compared with its historical results, other companies or industry standard. Financial ratios analysis enables understanding of relationships among the different financial items of the balance sheet and income statement. Moreover, as mentioned above, financial ratios analysis enables comparison of the company's past performance with current performance using one or more comparative standards like industry standard or other target standards (Angel & Brewer, 2003, p.1).

Financial ratios can be grouped into five broad categories: liquidity ratios, asset management ratios, profitability ratios, debt management and market value ratios. Liquidity ratios comprise cash ratio, quick ratio and current ratio. Asset management ratios consist of inventory turnover ratio, receivables turnover ratio and asset turnover ratio. Profitability ratios comprise of net profit margin, BEP, returns on investment and return on equity. Debt management ratio includes debt- to-asset ratio, debt to equity ratio and EBITDA coverage ratio, while market value ratios incorporate these types of market ratios: price to earnings ratio, price to cash flow and market to book ratio (Bodie, Kane & Marcus, 2009, p. 647).

### 2.3.1 Liquidity ratios

Liquidity ratio is the most commonly used measure of short-term solvency as it measures company's ability to meet its short-term and immediate obligations. Liquidity and interest coverage ratios are of great importance in evaluating the riskiness of firm's securities. They aid in assessing the financial strength of the firm. Liquidity ratios include the current ratio, quick ratio, and interest coverage ratio (Bodie, Kane & Marcus, 2009, p.645).

Two most commonly used liquidity ratios for measuring the liquidity position are current ratio and quick one or acid-test ratio. Although, in general, a quick ratio of 1-to-1 and a current ratio between 1 and 2 are considered acceptable liquidity ratios, it is more useful to compare them with ratios of other companies running similar business activities.

**Current Ratio** is the best indicator of short-term solvency that provides useful information on company's ability to pay off its current liabilities by liquidating its current assets that are readily converted into cash. From the shareholders' point of view, the high current asset ratio value is a signal that company has tied up high amount of money in operating assets, or non-operating assets, such as excess cash, marketable securities and prepaid expenses. On the other hand, if the amount of current liabilities rises faster than current assets, then current ratio will fall and it can implicate company into insolvency trouble (Brigham & Daves, 2007, p. 253).

Current ratio is calculated by dividing current assets by current liabilities as the following:

$$\text{Current Ratio} = \text{Current assets} / \text{Current liabilities} \quad (2.5)$$

**Quick Ratio (acid test ratio)**, is a more rigorous measure of short-term solvency and liquidity position rather than current ratio. When calculating quick ratio, stock is deducted from current assets, because it is considered the least liquid current assets, and then the remainder is divided by current liabilities.

It has got the same denominator as the current ratio, but its numerator includes only cash, cash equivalents and receivables. The quick ratio is a better measure of liquidity than

current ratio for firms whose inventory is not readily convertible into cash (Bodie, Kane & Marcus 2009, p. 644). The quick ratio is calculated by dividing current assets less inventory by current liabilities as shown below:

$$\text{Quick Ratio} = (\text{Current assets} - \text{Inventories}) / \text{Current liabilities} \quad (2.6)$$

**Cash Ratio**, since company receivables are less liquid than its holdings of cash and marketable securities. Therefore, in addition to quick ratio, analysts also compute a firm's cash ratio, defined as:

$$\text{Cash ratio} = (\text{Cash} + \text{marketable securities}) / \text{Current liabilities} \quad (2.7)$$

The decline in liquidity ratios combined with the decline in coverage ratio indicates that its credit rating has been declining as well (Bodie, Kane & Marcus 2009, p. 644).

### 2.3.2 Asset management ratios

Asset management ratios measure how efficiently the firm is managing its operating assets. High investments in operating assets means that company's operating assets and capital are excessively high, therefore, its cash flow balance can be depleted, and its stock price will drop. However, if company does make enough investments in operating assets its sales can decrease and it can have negative impact on profitability.

Therefore, it is important to maintain the right amount of investments in operating assets. The second group of ratios, the asset management ratios usually includes these types of ratios: total asset and fixed assets turnover, inventory turnover ratio and receivables turnover ratio (Brigham & Ehrhardt, 2007, p. 254).

**Inventory Turnover Ratio** indicates the number of times the inventory was converted to sales during one year. Since sales are generated over one year period, whereas inventory figure is taken at one point in time, it is better to take the average of the beginning and end of year inventory. (Brigham & Daves, 2007, p. 255). Moreover, it will be more suitable to use the cost of goods sold instead of sales in formula's numerator when calculating inventory turnover ratio. The reason behind this is due to the fact that sales are presented at market prices, while inventories are recorded at their costs values, thus, if the amount of sales is used in formula's numerator, then the calculated inventory turnover over estimates the true inventory turnover (Jermainis, 2006, p.26).

The calculation of inventory turnover ratio is shown below:

$$\text{Days Sales of Inventory (DSI)} = \text{Inventory} / (\text{Cost of goods sold} / 365) \quad 2.8)$$

$$\text{DSI} = 365 / \text{Inventory turnover ratio} \quad (2.8a)$$

$$\text{Inventory Turnover Ratio} = \text{Cost of goods sold} / \text{Average inventory} \quad (2.8b)$$

**Receivables Turnover Ratio** shows the number of times averagely, during the year accounts receivable are collected by a company. The level of account receivables at any point of time is determined by total amount of credit sales and average collection period. A low or declining receivable turnover ratio can be consequence of management's decision to extend credit sales terms or it may be result of lax receivables collection policy. On the other hand, a high receivable turnover ratio indicates a good receivables management or company's credit policy may be restrictive.

Daily sales outstanding (hereinafter: DSO), also called the "average collection period" (hereinafter: ACP), is used to assess accounts receivable and it can be calculated by dividing accounts receivable by average daily sales to find the number of days that sales are tied up in accounts receivables. It shows the average time interval that the firm has to wait for receiving cash, after the sale of goods or delivery of services has occurred, and it is defined as the average collection period (Brigham & Ehrhardt, 2005, p. 448). DSO can be calculated by using the following formula:

$$DSO = \text{Receivables} / \text{Average sales per day} = \text{Receivables} / (\text{Annual sales} / 365) \quad (2.9)$$

DSO can also be calculating as below:

$$DSO = \text{Days sales outstanding} = 365 / \text{Receivables turnover} \quad (2.9a)$$

$$\text{Receivables Turnover Ratio} = \text{Sales} / \text{Average accounts receivables} \quad (2.9b)$$

**Asset Utilization Ratios**, which is often helpful in understanding a firm's ratio of sales to assets to compute comparable efficiency-of-utilization or turnover, ratios for subcategories of assets (Bodie, Kane & Marcus, 2009, p. 642)

$$\text{Fixed Asset Turnover} = \text{Sales} / \text{Average fixed assets} \quad (2.10)$$

$$\text{Total Asset Turnover} = \text{Sales} / \text{Average total assets} \quad (2.10a)$$

Brigham and Ehrhardt (2005, p.449) points out that when interpreting the fixed asset turnover ratio a potential problem can arise. Fixed assets reflect the historical costs of the assets, so their values always reduced by depreciation. Likewise, inflation might cause the value of some assets that were purchased in the past to be seriously understated. Therefore, if there is a comparison of the value of fixed assets of a firm that acquired most of its fixed assets years ago with another firm that had purchased its fixed assets recently, most probably it will be found that the **first** firm had the higher fixed assets turnover ratio. However, this would be more reflective of the difficulty that accountants have in dealing with inflation, and the effect that depreciation has on value of assets (Brigham & Ehrhardt 2005, p. 449)

### 2.3.3 Profitability ratios

Profitability measures focus on the firm's earnings and rate return on invested capital.

- **Return on equity** (hereinafter: ROE), which measures profitability for contributors of equity capital is defined as (after-tax) profits divided by the book value of equity. Similarly, return on assets (ROA) which measures profitability for all contributors of capital is defined as earnings before interest and taxes divided by total assets. Not surprisingly, ROA and ROE are linked, but as it will be seen shortly, the relationship between them is affected by the firm's financial policies (Bodie, Kane & Marcus, 2009, p. 636).

- **Basic Earning Power** (hereinafter: BEP) ratio is calculated by dividing earnings before interest and taxes (EBIT) by total assets:

$$\text{Basic earning power ratio (BEP)} = \text{EBIT} / \text{Total assets} \quad (2.11)$$

This ratio shows the raw earning power of the firm's assets, before the influence of taxes and leverage, and it is useful for comparing firms with different tax situations and different degrees of financial leverage (Brigham & Ehrhardt, 2005, p. 453).

- **Return on Investment** (hereinafter: ROI) is defined as net operating profit divided by average operating assets:

$$\text{ROI} = \text{Net operating profit} / \text{Average operating assets} \quad (2.12)$$

The higher the return on investment of a business, the greater the profit generated per euro invested in the segment's operating assets. Note that net operating profit rather than profit, is used in the ROI formula. Net operating profit is profit before interest and taxes, also referred to as Earnings before Interest and Taxes (hereinafter: EBIT). The reason for using net operating profit in the formula is that the profit figure used should be consistent with the base to which it is applied. Since the base (i.e., denominator) consists of operating assets, net operating profit in the numerator is used. Moreover, operating assets include cash, debtors, inventory, plant and equipment and all other assets held for productive purposes. Assets that could be excluded from operating assets consist of land that can be used in the future, investments in another company, or a rented building. Also, the operating assets base used in the formula is typically computed as the average of the operating assets between the beginning and the end of the year.

The formula of return on investment can be modified slightly by introducing sales as follows:

$$\text{ROI} = \frac{\text{Net operating profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Average operating assets}} \quad (2.13)$$

Therefore, this equation consists of two components that are margin and turnover, defined as below:

$$\text{Margin} = \text{Net operating profit}/\text{Sales} \quad (2.13a)$$

The **margin** is a measure of management's ability to control operating expenses in relation to sales. The lower the operating expenses per euro of sales, the higher the margin earned.

$$\text{Turnover} = \frac{\text{Sales}}{\text{Average operating assets}} \quad (2.13b)$$

The **turnover** is a measure of the sales that is generated for each euro invested in operating assets. The following alternative form of return on investment (ROI) formula, which is more frequently used combines margin and turnover.

$$\text{ROI} = \text{Margin} \times \text{Turnover} \quad (2.14)$$

Some managers tend to focus more on the margin and to lessen the importance of the turnover. To some extent, the margin can be a valuable indicator of a manager's performance. However, margin overlooks one crucial area of the manager's responsibility; the investment in operating assets. Excessive funds tied up in operating assets depresses turnover, and negatively affect profitability like excessive operating expenses depresses margin. Thereby, ROI is a measure of performance that encourages managers to control investment in operating assets as well as to control the margin.

DuPont pioneered the ROI concept and recognized the importance of looking at both margin and turnover in assessing the performance of a manager. The ROI formula blends together many aspects of the manager's responsibilities into a single figure that can be compared to the returns of other firms in the industry, and to the past returns of the company itself. Likewise, a manager can increase a business return on invested capital (ROI) basically in three ways: by increasing sales and by reducing expenses and assets (Seal, Garrison & Noreen, 2009, pp.588-590).

- **Return on Equity (ROE)** - The DuPont analysis decomposes the return on equity (ROE) into a set of 3-factors and 4-factors. The three factors are used to measure two particular area of operating profitability and the effect of financial leverage (i.e., as measured by Assets/Equity). This model helps to evaluate what might be considered to be a proper or inappropriate measure of these three aspects of performance. The 3-factor model is a frequently used method in extended DuPont Equation, which contains three components. The components of 3-factors model are as following: (1) asset utilization, (2) relative profitability and (3) financial leverage. The extended DuPont equation, consisting of three factors is shown below:

$$NI/E = (S/A) \times (NI/S) \times (A/E) \quad (2.15)$$

$$Net\ Income/Equity = \frac{Sales}{Assets} \times \frac{Net\ Income}{Sales} \times \frac{Assets}{Equity} \quad (2.16)$$

Although, 3-factor equation is regarded to be a useful model it has its obvious drawbacks. The 3-factors are not independent, and this equation mainly presents the positive effect that the increase of debt proportion in financing firm's assets. However, due to increased financial leverage, usually referred to as the Equity Multiplier (EM), a firm has to bear higher financial charges incurred with the increase in debt proportion. Therefore, the increase of financial leverage (i.e., Assets/Equity) reduces the net profit margin (Net Income/Sales), but 3-factor model does not adequately measure the negative impact of debt financing in firm's net profit margin. In order to avoid the overestimating effect of higher financial leverage on ROE, as measured by equity multiplier is used the 4-factor model. The 4-factor model is estimated to be a better measure, because it takes into account the positive and negative effects of increased financial leverage. The definition of return on equity (ROE) based on 4-factor model is presented in the below equation form.

$$ROE = \frac{Sales}{Assets} \times \frac{[1-T] \times [EBIT]}{Sales} \times \frac{Net\ income}{[1-T] \times [EBIT]} \times \frac{Assets}{Equity} \quad (2.17)$$

Where EBIT is earnings before interest and taxes, while (1- T) is 1 minus tax rate. A commonly used method and a better model are estimated to be revised DuPont equation or the 4-four factor model. Thus, the above equation enables performance evaluation in terms of three measures: (1) efficient asset utilization, measured by Sales/Assets; (2) relative profitability of sales, which is measured by [1-T]x[EBIT]/Sales and (3) use of financial leverage, which is measured by the product of Net Income / [1-T]x[EBIT] and (Assets/Equity).

Therefore, in the 4-four model the component of equity multiplier (Assets/Equity) is replaced by the product of Net Income / [1-T]x [EBIT] and (Assets/Equity), whereas relative profitability is measured in terms of after-tax profit or [1-T] x[EBIT]/Sales. The capital structure among firms obviously differs; therefore, firms with higher level of debt proportions in their capital structure are expected to generate lower net income. The use of [1-T] x[EBIT]/Sales instead of Net Income/Sales is estimated to be a better measure of operating profitability, because firms with similar capital resources is expected to have similar operating performance (Angell & Brewer, 2003, pp.1-2).

Thereby, the new measure of financial leverage, referred to as Net Leverage Multiplier (NLM) is estimated a more adequate proxy of relative operating performance. We refer to this new term as Net Leverage Multiplier (hereinafter: NLM).

$$NLM = \frac{Net\ income}{[1-T] \times [EBIT]} \times \frac{Assets}{Equity} \quad (2.18)$$

For a company that does not use debt, the ratio term of  $\text{Net Income}/[1-T] \times [\text{EBIT}]$  will be 1.0, and also  $\text{Assets}/\text{Equity}$  ratio will be 1. Therefore, the product of the two terms will be 1 for the company which does not use debt to finance its assets. On the other hand, whether or not ROE has increased sufficiently to justify additional financial expense is dependent upon investor's risk aversion level. Moreover, if a firm's earnings before interest and taxes (EBIT) are zero or negative, then it is not so beneficial to compute the value of its NLM. If EBIT is zero the value of NLM will be undefined, and it will be negative when EBIT is negative. (Angell & Brewer, 2003, pp.1-2).

- **Return on Assets** (hereinafter: ROA) The profit margin times the total assets turnover is called the Du Pont equation, and it gives the rate of ROA:

$$\begin{aligned} \text{ROA} &= \text{Profit margin} \times \text{Total assets turnover} = \\ &= (\text{Net income}/\text{Sales}) \times (\text{Sales}/\text{Total assets}) \end{aligned} \quad (2.19)$$

If the company was financed only with common equity, then the ROA and the ROE would have the same values, because the total assets would equal the common equity:

$$\text{ROA} = \text{Net income}/\text{Total assets} = \text{Net income}/\text{Common equity} = \text{ROE} \quad (2.20)$$

This equality holds true only if total assets = common equity and it means that company does not use debt. Otherwise for a company that uses debt its common equity will be less than its total assets. To find the ROE, multiply the rate of return on assets (ROA) by the equity multiplier, which is the ratio of assets to common equity:

$$\text{Equity multiplier} = \text{Total assets}/\text{Common equity} \quad (2.21)$$

Firms that use a large amount of debt financing will necessarily have a higher equity multiplier. The larger the debt portion, the less the equity capital, and therefore the equity multiplier will be higher.

$$\begin{aligned} \text{ROE} &= \text{ROA} \times \text{Equity multiplier} = \\ &= (\text{Net income}/\text{Total assets}) \times (\text{Total assets}/\text{Common equity}) \end{aligned} \quad (2.22)$$

The return on equity (ROE) of a company depends on its ROA and the use of financial leverage (Brigham & Ehrhardt, 2005, pp. 460-462).

### 2.3.4 Debt management ratios

Leverage ratios measure the relative proportion of funds supplied by equity and debt holders. The higher the amount of debt financing relative to equity financing, the more leveraged the firm and the greater risk exposure. Therefore, creditors during the process of decision making look at the owner-supplied funds to evaluate the risk, they can be faced by financing company's investments.

The extent to which a company uses debt financing, or financial leverage has three important implications: (1) by raising funds through debt financing, stockholders can maintain the control of firm without increasing their capital investments; (2) if the firm's earnings from investments financed with borrowed funds are more than interest payments, then shareholders' returns are magnified or "leveraged," but their risks are also magnified; 3). Creditors look to the equity or owner supplied-funds to provide the margin of safety, so the higher the stockholders' proportion of supplied funds the lesser the risk creditors face(Brigham&Ehrhardt, 2005, pp.449).

- **Debt to Equity (Leverage) Ratio** - The ratio of assets to equity is a measure of firm's degree of financial leverage. It is called the **leverage ratio**, and it is equal to 1 plus the total debt-to-equity ratio.

$$\text{Assets/Equity} = (\text{Equity} + \text{Debt})/\text{Equity} = 1 + (\text{Debt}/\text{Equity}) \quad (2.23)$$

$$\text{Leverage} = \frac{\text{Assets}}{\text{Equity}} = 1 + \left(\frac{\text{Debt}}{\text{Equity}}\right) \quad (2.23a)$$

To measure the full impact of leverage in this framework, the analyst must take the product of the interest burden (EBIT- interest expenses/EBIT) and leverage called compounded leverage. The compounded leverage factor usually remains a constant 1.0. But compounded leverage factor is greater than 1 in normal and in good years, indicating a positive contribution of financial leverage to ROE. It is less than 1, in bad years, reflecting the fact that when ROA falls below the interest rate, ROE falls with increased use of debt. The summarized relationship is as following:

$$ROE = \text{Interest burden} \times \text{Margin} \times \text{Turnover} \times \text{Leverage} \quad (2.24)$$

Where

$$ROA = \text{Margin} \times \text{Turnover} \quad (2.25)$$

and

$$\text{Compounded leverage factor} = \text{Interest burden} \times \text{Leverage} \quad (2.26)$$

The comparison of profit margin and turnover usually is meaningful only in evaluating firms in the same industry. Cross-industry comparisons of these two ratios are often meaningless and can even be misleading (Bodie, Kane&Marcus, 2009, pp. 640-641)

- **Ability to Pay Interest: Times-Interest-Earned Ratio** (hereinafter: TIE) is determined by dividing earnings before interest and taxes by interest charges.

$$\text{The times – interest – earned ratio (TIE)ratio} = \frac{\text{EBIT}}{\text{Interest expenses}} \quad (2.27)$$

The TIE ratio measures the extent to which operating income can decline before the firm becomes unable to pay its interest charges on outstanding debt. Since interest is paid with

pre-tax profit, the firm's ability to pay annual interest charges is not affected by taxes (Brigham & Ehrhardt, 2005, pp.450-451).

A high coverage ratio indicates that the likelihood of bankruptcy is low, because annual earnings are significantly greater than annual interest obligations. It is widely used by both lenders and borrowers in determining the firm's debt repayment capacity and is a major determinant of the firm's bond rating (Bodie, Kane & Marcus, 2009, p.640)

- **Ability to Service Debt: EBITDA Coverage Ratio** - The TIE ratio is useful measure for assessing a company's ability to pay interest charges on outstanding debt, however, this ratio has two flaws: (1) Interest is not the only fixed financial charge, because companies have to repay also the outstanding debt, and those firms that have leased assets has to make lease payments; 2) By deducting depreciation and amortization from gross profit, the amount of operating profit or EBIT is reduced. Since EBIT does not represent all the cash flow available to repay debt, then bankers and others users developed the **EBITDA Coverage Ratio**, defined as follows:

$$EBITDA \text{ Coverage Ratio} = \frac{EBITDA + Lease \text{ payments}}{Interest + Principal \text{ payments} + Lease \text{ payments}} \quad (2.28)$$

The EBITDA coverage ratio is a useful ratio for relatively short-term lenders such as banks, which usually make loans with maturity of about 5 years. Over longer period of time, depreciation funds cannot be used to repay scheduled debt. However, in longer perspective, those funds have to be used for reinvestment in plant and equipment; otherwise a company cannot normally run its business. Therefore, banks and other relatively short-term lenders focus on the EBITDA coverage ratio, whereas long-term bondholders focus on the TIE ratio (Brigham & Ehrhardt, 2005, p.451)

### 2.3.5 Market value ratios

Market value ratios present the firm's stock price in relation to its earnings, cash flow and book value per share. These ratios give management an indication of investors' perception about the company past performance and its future prospects. If the liquidity, asset management, debt management and profitability ratios are at acceptable level, then the market value ratios will be high, and the stock price presumably will be high (Brigham & Ehrhardt, 2005, p.454)

- **Market/Book-Value Ratio (P/B)** - Two important market price ratios are the market-book-value ratio and the price-earnings ratio. The market-book-value ratio (P/B) equals the market price of a share of the firm's common stock divided by its book value that is shareholders' equity per share. Analysts presumably view book value as the level below which market price will not fall, because the firm always has the option to liquidate or sell its assets for their book values. However, this view is questionable. Nevertheless, low

market-book-value ratio is seen by some as providing a “margin of safety” and some analysts will screen out or reject high P/B firms in their stock selection process (Bodie, Kane & Marcus, 2009, p. 644).

$$\text{Book value per share} = \text{Common equity}/\text{Shares outstanding} \quad (2.29)$$

$$\text{Market to book value ratio} = \text{Market price per share}/\text{Book value per share} \quad (2.29a)$$

- **Price/Earnings Ratio** (hereinafter P/E) - Another measure used to place firms along a growth versus value spectrum is the P/E ratio. Many analysts argue that low P/E stocks are more attractive than high P/E stocks, because low P/E stocks have generally been positive-alpha investments using the CAPM as benchmark. Before leaving the P/B and P/E ratios, it is worth pointing out the relationship among these ratios and ROE:

$$\begin{aligned} \text{ROE} &= \frac{\text{Earnings}}{\text{Book value}} \\ &= (\text{Market price}/\text{Book value}) + (\text{Market price}/\text{Earnings}) \end{aligned} \quad (2.30)$$

By rearranging the equation, the ratio of earnings to price can be computed by dividing price per share to earnings per share:

$$\text{Price – earnings ratio} = \text{Price per share}/\text{Earnings per share} \quad (2.30a)$$

Thus a company with a high ROE can have a relatively low earnings yield because its P/B ratio is high (Bodie, Kane&Marcus, 2009, pp. 645-647).

- **Price /Cash Flow Ratio** - If price/cash flow ratio is estimated to be below industry average it could mean that its growth prospects will be below average and risk could be above average. Industry multiple is an estimated “average” ratio, defined as stock price relative to value driver. An example of a value driver can be the firm’s price cash flow ratio relative to average ratio of other companies operating in the same industry. Predicted values based on multiples will be close to traded stock price, if companies in the industry are relatively similar in terms of the price-to-value driver (Liu, Nissim & Thomas 2007, p.2). The price/cash flow ratio can be computed as the following:

$$\text{Price/Cash Flow} = \text{Price per share}/\text{Cash flow per share} \quad (2.31)$$

## 2.4 Company’s Financial Statements and Ratio Analyses

Revenue and profitability growth analyses are used to evaluate the past performance of company Ciano which is driven by growth in sales and decline in profit margins, weakening its operating performance over that period. Thus, high investments in operating capital have resulted in higher sale volume generation, but in lower profitability, whether it

is presented as numeric value or as percentage. Table 1 present revenue and profitability analysis of company Ciano.

Table 2: Revenue and Profitability Analysis of Company  
Ciano Trading & Services S.R.L (in EUR)

Years	2010	%	2011	%	2012	%	2013	%
Total revenues from sales and services	37,831,422	100	37,884,601	100	40,551,586	100	50,397,691	100
Total costs of goods sold and services	32,029,752	85	31,970,879	84	34,358,377	85	42,585,900	84
Gross profit	5,801,670	15	5,913,722	16	6,193,209	15	7,811,791	16
Total operating expenses	3,870,267	10	4,018,635	11	4,920,869	12	6,806,102	14
Earnings before interest and taxes ( EBIT)	1,931,403	5	1,895,087	5	1,272,340	3	1,005,689	2
Total interest expenses and extra proceeds	308,706	1	528,506	1	868,401	2	836,855	2
Earnings before taxes ( EBT)	1,622,697	4	1,366,581	4	403,939	1	168,834	0.34
Net income	1,020,093	3	850,733	2	168,754	0.42	152,148	0.30

Source: CIANO (official website), *Ownership structure*, retrieved December 15, 2016 from

<http://cianointernational.com/meet-ciano/ciano.html>

Figures presented in table 2 indicate that although the revenue growth of company is a positive signal, but earnings growth is more important. The company's decline in profit margins for the period of time 2010 to 2013 has been related to management's inability to control operating and financial expenses in relation to sales. Sales increased annually from 0.14% in 2011 to 24% in 2013, but most of the profit margins notably declined. For example in 2012, company experienced an annual sales growth of 7%, but its EBIT decreased by 33%. Also in 2013, despite the high growth in sales, its EBIT and net income were considerably lower in comparison with the previous years. Therefore, in the case of company Ciano, higher sales volume has not positively affected its profitability, because the business has not been capable of increasing its earnings only by increasing sales. Analysis of revenue and profitability growth blends together many aspects of operating performance, so clarification of their causes is significantly important. The factors that have affected the profit decline of company are: 1) excessive increase in operating expenses, 2) higher interest expenses and financial charges and 3) negative balance from extra proceeds such as: currency exchange transactions, extraordinary income and charges. A more specific pattern of opposed relationship between sales growth and net profit margin occurred in 2013, when annual sales growth was 24%, but high increase in sales and in the amount of gross profit was offset by higher operating expenses. As numeric value the amount of gross profit generated by company in 2013 was €1,618 million higher than in 2012 and €1,898 million higher than in 2011, however, it has encountered a high decline in its EBIT and net income.

Current assets of company comprise of bank and postal deposits, cash on hand, accounts receivables which include: trade receivables, receivables from subsidiaries, tax receivables and other receivables. Tangible assets of company incorporate plant and machinery, industrial and commercial equipment, long-term investments in subsidiaries and other

companies. Intangible assets consist of concessions, licenses, trademarks and other similar rights. Short-term debts consist of debt payables to banks, debt payables to suppliers, debts payables to subsidiaries, tax and other liabilities (i.e., taxes and employees' wages, social security obligations). Company's net worth or equity consist of capital, legal reserves, shareholder's capital contributions, profit brought forward, and net profit. Company's total equity (net worth) for 2013 was €4,910 million, where shareholder's capital contributions for this year were only €1,193 million. Company's total assets for 2013 were €24,368 million, while its total liabilities were: €19,458 million. Thus, if company were able to sell its assets at their book values and if liabilities were estimated close to recorded book values, then in such case company would have been able to sell its assets, pay off its liabilities and the remaining cash would have belonged to common stockholders.

Table 3: The Statement of Cash Flows of Company  
Ciano Trading & Services S.R.L (in EUR)

<b>CASH FLOW FROM OPERATING ACTIVITIES</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Net Income	850,733.00	168,754.00	152,148.00
Non cash adjustment (Depreciation)	303,477.00	281,533.00	595,105.00
<b>Changes in working capital</b>			
Changes in accounts receivables from clients	(492,599.00)	(1,857,834.00)	(232,803.00)
Changes in accounts receivables from subsidiaries	1,004,887.00	388,366.00	7,966,466.00
Changes in tax receivables	105,540.00	(89,532.00)	-
Changes in other receivables	(8,944.00)	(29,264.00)	(131,724.00)
Changes in inventories and raw material	(133,105.00)	(3,911,182.00)	(3,899,692.00)
Changes in trade payables	(1,247,919.00)	1,103,382.00	(727,503.00)
Changes in payables to subsidiaries	49,949.00	(39,370.00)	(28,948.00)
Changes in tax and social security obligations	(136,825.00)	(199,102.00)	47,680.00
Changes in other payables	11,992.00	421,203.00	(227,651.00)
Changes in accrued liabilities	(43,462.00)	(6,842.00)	(41,735.00)
<b>Net cash flow from operating activities</b>	<b>263,724.00</b>	<b>(3,769,888.00)</b>	<b>3,471,343.00</b>
<b>INVESTING ACTIVITIES</b>			
Cash flow from sales of fixed assets	293,241.00	(278,131.00)	(1,710,496.00)
Equity investments in subsidiaries	(80,108.00)	16,174.00	127,622.00
<b>Net Cash flow from investing activities</b>	<b>213,133.00</b>	<b>(261,957.00)</b>	<b>(1,582,874.00)</b>
<b>FINANCING ACTIVITIES</b>			
Changes in debt payables to banks	666,770.00	1,875,322.00	1,055,579.00
Changes in debt payables to other lenders	1,176,723.00	(1,160,680.00)	(5,945.00)
<b>Net cash flow from financing activities</b>	<b>1,843,493.00</b>	<b>714,642.00</b>	<b>1,049,634.00</b>
<b>Net change in cash</b>	<b>2,320,350.00</b>	<b>(3,317,203.00)</b>	<b>2,938,103.00</b>
Cash at the beginning of year	193,410.00	1,872,505.00	224,732.00
<b>Cash at end of year</b>	<b>2,513,760.00</b>	<b>(1,444,698.00)</b>	<b>3,162,835.00</b>

Source: CIANO (official website), *Ownership structure*, retrieved December 15, 2016 from  
<http://cianointernational.com/meet-ciano/ciano.html>

**The statement of cash flows** presents a summarized report regarding the company's cash flows from operating activities, investing activities and financing activities. This statement enables company's management, financial analysts and other users to understand how exactly the cash was generated and invested. The joint use of cash flow statement in conjunction with income statement and balance sheet enables a better understanding of changes in net working capital, fixed assets and in financing decisions.

Table 3 presents the statement of cash flows of company Ciano. Cash flow from operating activities enables the reconciliation of the results from income statement with changes in current assets, and current liabilities from balance sheet. Cash flow from operating activities begins with net income, but when preparing the statement of cash flow, the amount of depreciation and amortization are added back to net income. Net cash flow from operating activities generated by company during the year 2011 and 2013 was positive, while the balance of net cash flow from operating activities during the year 2012 was negative.

Reasons that caused the balance of net cash flow from operating activities to become negative in 2012 were: decrease of net income from 850,733€ to 168,754€, increase in accounts receivables from clients in amount of 1,857,834€, increase of inventory in amount of 3,911,182€ and decrease in tax and social security as well as other obligations in amount of 199,102€. This could mean that during 2012, company used cash to finance its customers, purchase inventory, and pay off tax and social security obligations. On the other hand, increase in accounts payables and other payables were not sufficient to offset negative cash flow from operating activities. The additional needed operating capital was supplied by shareholders, banks, and other lenders. Also, some funds came from increase of accounts payables (supplier's financing), increase of noncash charges including accrued wages, called current operating liabilities. In 2013, even though, company used €3,899million for purchase of inventories, the balance of net cash flow from operating activities was positive, because company received €7,966 million from collection of accounts receivables from subsidiaries. Likewise, during the year 2012 and 2013, balance of cash flow from investing activities was negative due to additional investments in fixed assets. Company's cash flow from financing activities for the year 2011 and during two consecutive years was positive due to increased debt financing from banks, despite the fact that debt financing from other lenders was reduced from year to year.

#### **2.4.1 Liquidity ratios**

Liquidity ratios measure the ability of company to meet its short-term and immediate obligations (i.e., current liabilities), if they fell due for payment. However, in reality the situation differs quite because inventories are the less liquid item and practically prepaid expenses cannot be converted into cash. Also, accounts receivables cannot be converted into cash whenever we need cash to pay immediate obligations.

Table 3 presents calculations and values of liquidity ratios of company Ciano

Table 4: Liquidity Ratios of Company Ciano Trading & Services S.R.L (in EUR)

Years	2010	2011	2012	2013
Current ratio = Current assets/Current liabilities	1.10	1.13	1.22	1.13
Quick Ratio = (Current assets-Inventories)/Current liabilities	1.04	1.08	0.96	0.67
Cash ratio = (Cash + marketable securities)/Current liabilities	0.01	0.11	0.01	0.13

**Current ratio** provides relevant information on company's ability to pay off its liabilities due within one year by liquidating its current assets. Current ratio is calculated by dividing current assets by current liabilities as following:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \quad (2.32)$$

$$\text{Current ratio (2013)} = 21,154,777/18,641,176 = 1.13$$

During the period of time 2010 to 2013, company's current ratio has changed over time from 1.10 to 1.22 with an average current ratio of 1.15. An average current ratio value of 1.15 or around 1-to-1 can be estimated as relatively low ratio, especially from point of view of investors, creditors, and other users. The relatively low current ratio could have implicated company into insolvency.

**Quick ratio (acid test ratio)** is deemed to be the best measure of the extent to which company's short-term liabilities are covered by relatively more liquid current assets. The quick ratio is calculated by deducting inventories from current assets, and then the remainder is divided by current liabilities.

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}} \quad (2.33)$$

$$\text{Quick ratio (2013)} = (21,154,777 - 8,755,975)/18,641,176 = 0.67$$

The average quick ratio of company over period of time from 2010 to 2013 was 0.94, which is approximately 1-to-1, can be considered to some extent as an acceptable quick ratio. However, quick ratio has deteriorated from 1.08 in 2011 to 0.67 in 2013. Therefore, it would have been more important if we could have been able to compare quick ratio of company with that of other companies running similar business activities.

- **The cash coverage ratio** measures the company's ability to pay off its current and immediate obligations relying only on cash balances and cash equivalents. Cash ratio is defined as cash plus marketable securities divided by current liabilities.

$$\text{Cash ratio} = \frac{\text{Cash} + \text{marketable securities}}{\text{Current liabilities}} \quad (2.34)$$

$$\text{Cash ratio (2013)} = 2,448,053/18,641,176 = 0.13$$

Quick ratio indicates that company hasn't consistently maintained sufficient cash balance to pay off its current liabilities, especially to meet immediate obligations. The company's cash coverage ratios varies from 1% to 13% with an average ratio of 7%, indicating high changes in company's cash balance over given period of time.

#### 2.4.2 Asset management ratios

The company's credit policy objective was to sett of a good credit management policy. However, during that period company was not able to maintain an acceptable level of accounts receivables and inventory. A declining inventory and receivables turnover ratio clearly signals that company invested excess funds in operating assets such as inventory and accounts receivables.

Current asset turnover (which is part of asset management ratios) will be presented in a separate section, when discussing the working capital management. Table 5 presents calculations and values of asset management ratios of company Ciano.

Table 5: Asset Management Ratios of Company Ciano Trading & Services S.R.L (in EUR)

Years	2010	2011	2012	2013
Inventory turnover ratio = Cost of goods sold /Average inventory	39.45	36.39	11.84	6.26
DSI = Average inventory/(Cost of goods sold /365)	9.25	10.03	30.81	58.33
Total receivables turnover ratio = Sales /Average accounts receivables	2.29	2.39	2.52	4.00
Receivables turnover ratio from trade receivable	7.31	6.68	5.39	6.49
DSO= Average accounts receivables /(Annual sales /365)	159.67	152.86	144.93	91.18
DSO only from trade receivables	49.95	54.62	67.75	56.20
Fixed Asset Turnover = Sales /Average fixed assets	46.39	56.63	61.31	30.44
Total Asset Turnover = Sales /Average total assets	2.00	1.95	1.84	2.08

**The inventory turnover ratio** measures how well the company has managed its inventory. It indicates the number of times that company's inventory was converted to sales during the year. When calculating the inventory turnover ratio, the cost of goods sold instead of sales will be used, otherwise the calculated inventory turnover will overstate the true inventory turnover ratio.

The calculation of inventory turnover ratio and days sales inventory (DSI) is shown below:

$$\text{Inventory turnover ratio} = \frac{\text{COGS}}{\text{Average inventory}} \quad (2.35)$$

$$\text{Inventory turnover ratio (2013)} = 42,585,900/6,806,129 = 6.26 \text{ times}$$

$$\text{Days sales of inventory (DSI)} = \text{Average inventory}/(\text{Cost of goods sold}/365)$$

$$\text{Days sales of inventory (2013)} = 6,806,129/116,674 = 58.33 \text{ days}$$

The high inventory turnover ratio during the years 2010 and 2011 is an evidence of company's good inventory management. On the other hand, a low inventory turnover ratio during the years 2012 and 2013 could be an indication that company held excess inventory level for given level of sales. The average number of times it took the company to convert inventories to sales during that period was 23 times per year. The inventory turnover ratio has changed from 39.45 times per year in 2010 to 6.26 times per year in 2013. Likewise, the number of days it took the company to convert inventories to sales has increased very much, from 9.25 days in 2010 to 58.33 days in 2013, with an average days sales in inventory of 27 days.

- **The receivable turnover ratio** measures how many times, averagely, during the year the company has collected its accounts receivables. This ratio enables company to analyze how efficiently its accounts receivables were managed. When calculating receivables turnover ratio and days sales outstanding (hereinafter: DSO) of company, receivables due after following financial year are deducted from total amount of receivables. Receivables turnover ratio and days sales outstanding (DSO) can be calculated using the following formulas:

$$\text{Receivables turnover ratio} = \text{Sales}/\text{Average accounts receivables} \quad (2.36)$$

$$\text{Trade receivables turnover ratio (2013)} = 50,397,691/7,760,090 = 6.49 \text{ times}$$

$$\text{Total receivables turnover ratio (2013)} = 50,397,691/12,589,829 = 4 \text{ times}$$

$$\text{DSO} = \text{Average accounts receivables}/(\text{Annual sales}/365)$$

$$\text{DSO (trade receivables 2013)} = 7,760,090/138,076 = 56.20 \text{ days}$$

The value of average trade receivables turnover ratio of 6.5 times per year over that period of time is estimated to be a low ratio for a company that deals with trade service business activities. The low trade receivable turnover ratio is likely a result of applied relaxed receivable collection policy. Thus, company's management is either indulgent on their efforts to collect receivables or they are not writing off a certain amount of receivables that are unlikely to be collected within a year. Likewise, total receivable turnover ratio, including receivables from subsidiaries and other receivables is very low with an average ratio of 2.80 times per year. A very low total receivables turnover ratio indicates that company applied a relaxing credit policy towards its customers, particularly towards its subsidiaries. Daily sales outstanding (DSO) measures the number of days that sales were tied up in receivables. The company's average collection period of 56 days for trade receivables is estimated to be a high collection period for a trade service company.

$$\text{Fixed asset turnover} = \text{Sales}/\text{Average fixed assets} \quad (2.37)$$

$$\text{Fixed asset turnover (2013)} = 50,397,691/1,655,709 = 30.44$$

$$\text{Total asset turnover} = \text{Sales}/\text{Average total assets}$$

$$\text{Total asset turnover (2013)} = 50,397,691/24,233,746 = 2.08$$

The average fixed assets utilization ratios of the company during that period of time was 48.70. It indicates that company has averagely generated 48.70 euro of sales for each euro invested in fixed assets. While the average total assets turnover ratio of company over that period was 1.97, meaning that company has generated 1.97euro of sales for each euro investment in total assets.

### 2.4.3 Profitability ratios

Profitability ratio analysis provides useful information regarding the operating efficiency of the company. In some cases terms profit and profitability are used alike, but a difference between them exists. Profit refers to the amount of profit earned by a company during a certain period of time, usually during a given year, whereas profitability is a broader term used to measures the performance of company's assets or return on equity. Table 5 presents calculations and values of profitability ratios of company Ciano.

Table 6: Profitability Ratios of Company Ciano Trading & Services S.R.L (in EUR)

Years	2010	2011	2012	2013
<b>Basic earning power ratio (BEP) = EBIT/Average total assets</b>	<b>10.19</b>	<b>9.74</b>	<b>5.77</b>	<b>4.15</b>
<b>ROI = Net operating profit (EBIT)/Average operating assets</b>	<b>10.50</b>	<b>10.26</b>	<b>6.12</b>	<b>4.47</b>
Margin = Net operating profit (EBIT)/Sales	5.11	5.00	3.14	2.00
Turnover = Sales/Average operating assets	2.06	2.05	1.95	2.24
<b>ROI = Margin x Turnover</b>	<b>10.50</b>	<b>10.26</b>	<b>6.12</b>	<b>4.47</b>
Sales/Average total assets	2.00	1.95	1.84	2.08
Net income/Sales	2.70	2.25	0.42	0.30
Average total assets/Common equity (financial leverage)	8.21	6.99	4.61	4.94
<b>Return on Equity (ROE) based on 3-factor model</b>	<b>44.19</b>	<b>30.55</b>	<b>3.53</b>	<b>3.10</b>
Sales/Average total assets	2.00	1.95	1.84	2.08
After-tax profit measured by $[1-T] \times \text{[EBIT]}/\text{Sales}$	3.32	3.25	2.04	1.30
Net income/ $[1-T] \times \text{[EBIT]}$	0.81	0.69	0.20	0.23
Financial leverage = Net income/ $[1-T] \times \text{[EBIT]} \times (\text{Assets}/\text{Equity})$	6.67	4.83	0.94	1.15
<b>Return on Equity (ROE) based on 4-factor model</b>	<b>44.19</b>	<b>30.55</b>	<b>3.53</b>	<b>3.10</b>

- **Basic Earning Power (BEP) ratio** measures the earning power of the company's assets before the effect of taxes and financial leverage. BEP is calculated by dividing earnings before interest and taxes (EBIT) by total assets:

*Basic earning power ratio (BEP) = EBIT/Average total assets*

$$BEP (2013) = 1,005,689/24,233,746 = 4.15$$

The company's BEP for the year 2013 was 4.15, but average BEP for the period of time which is defined in above table was 7.46. It means that over that period company, averagely, has managed to earn 7.46 euro of operating profit (EBIT) for each euro invested in total assets.

- **Return on Investment (ROI)** is defined as net operating profit divided by average operating asset. Company's operating assets consists of sum of current assets and long-term or fixed assets, less long-term investments in subsidiaries and financial receivables from subsidiaries due after following financial year. For this reason company's ROI is bit higher than its BEP.

*Return on investment (ROI) = Net operating profit/Average operating assets*

$$ROI (2013) = 1,005,689/22,514,994 = 4.47\%$$

The company's return on investment (ROI) in 2010 and 2011 is estimated, to some extent at acceptable level as it was roughly equal to the implied rate of return for Italian market of 12%, but afterwards during two consecutive years ROI has declined. High decline of return on investments (ROI) was caused by a considerable drop in earnings before interest and taxes (EBIT), and by a relative increase in average operating assets. The return on investment (ROI) can also be calculated using the equation consisting of two components that are margin and turnover:

*Return on investment (ROI) = Margin x Turnover*

$$Return on investment (ROI - 2013) = 2\% \times 2.24 = 4.47\%$$

*Margin = Net operating profit/Sales*

$$Margin (2013) = 1,005,689/50,397,691 = 2\%$$

The company's decline in margin from 5.11% in 2010 to 2% in 2013 (average margin: 3.81%) is mainly result of higher operating expenses rather than it was effected by increase of financial expenses, and higher operating expenses in relation to sales depressed margin, and accordingly reduced company's profitability. Therefore, the higher the operating expenses per euro of sales, the lower the margin earned by company for euro of sales. Earnings before interest and taxes (EBIT) are considered to be a better measure than net profit, because it shows the earning power of company before the influence of taxes and financial leverage.

$$\text{Turnover} = \text{Sales} / \text{Average operating assets}$$

$$\text{Turnover (2013)} = 50,397,691 / 22,514,994 = 2.24$$

Turnover measures units of sales that are generated for each euro invested in operating assets. In 2013, company managed to generate 2.24euro of sales for each euro invested in operating assets, whereas the average sales generated for each euro invested in operating assets over period of time from 2010 to 2013 was 2.07euro. In 2012, company's turnover (Sales/Average operating assets) was 1.95 (compared to 2.24 in 2013), despite the fact that it's operating assets in 2012 was for around €1million higher than in 2013. Therefore, this leads to conclusion that not only excessive funds tied up in operating assets have positive effect on sales growth, and profitability.

- **There turn on equity (ROE)** of company will be decomposed using the 3-factor model and the 4-factor model. The 3-factor model decomposes the return on equity (ROE) into a set of 3 factors that incorporates: (1) asset utilization; (2) relative profitability; (3) and financial leverage. The company's return on equity (ROE) is calculated using extended DuPont Equation:

$$\text{Net Income/Equity} = \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Assets}}{\text{Equity}}$$

$$\text{ROE (2013)} = \frac{50,397,691}{24,233,746} \times \frac{152,148}{50,397,691} \times \frac{24,233,746}{4,910,191} = (2.08) \times (0.30\%) \times (4.94) = 3.10\%$$

As mentioned above in this chapter, the 4-factor model enables measurement of performance in terms of three measures that are:

- (1) efficient asset use as measured by Sales/Assets;
- (2) after-tax profitability of sales as measured by  $[1 - T] \times [\text{EBIT}] / \text{Sales}$ ; and
- (3) use of financial leverage as measured by the product of Net income/ $[1 - T] \times [\text{EBIT}]$  and (Assets/Equity).

$$\text{ROE} = \frac{\text{Sales}}{\text{Assets}} \times \frac{[1 - T] \times [\text{EBIT}]}{\text{Sales}} \times \frac{\text{Net income}}{[1 - T] \times [\text{EBIT}]} \times \frac{\text{Assets}}{\text{Equity}}$$

$$\text{ROE (2013)} = \frac{50,397,691}{24,233,746} \times \frac{653,698}{50,397,691} \times \frac{152,148}{653,698} \times \frac{24,233,746}{4,910,191} = 3.10\%$$

The average amount of total assets is issued in the above equation. High return on equity (ROE) in 2010 and 2012 was consequence of higher net profit margin (Net income/Sales) and lower degree of finical leverage. Afterwards, during two consecutive years, company's ROE hugely declined. Although, financial leverage (Average total assets/Equity) used by company to finance its assets has decline over that period, but high decline in net profit margin induced the decline of company's ROE.

$$\text{ROE} = \text{EBIT} (1 - T) / \text{Book value of equity}$$

$$ROE (2013) = 653,698/4,910.191 = 13.31\%$$

The effect of financial leverage on ROE can be readily recognized by using net operating profit after-taxes (NOPAT) instead of net profit in formulas' numerator.

#### 2.4.4 Debt management ratios

Debt management ratios measure the degree of company's leverage. It shows that the percentage of debt used by company to finance its assets was 83%. It means that during that period of time (i.e., from 2010-2013), 83% of company assets were "averagely" financed by debt and the remainder of 17% was financed by shareholders' equity. Table 6 presents calculations and values of management ratios of company Ciano.

Table 7: Debt Management Ratios of Company Ciano Trading & Services S.R.L (in EUR)

Years	2010	2011	2012	2013
Total assets/Equity = Leverage Ratio	8.21	7.17	5.04	4.96
Debt ratio =Total debt/Total assets	0.88	0.86	0.80	0.80
Leverage ratio = (Equity +Debt)/Equity =1+ (Debt/Equity)	8.21	7.17	5.04	4.96
(TIE) ratio = EBIT/Interest expenses	6.23	4.61	1.74	1.21

- **Debt-to-equity ratio** measures leverage by dividing company's total debt by total assets or by shareholder's equity plus total debt. The ratio of total assets to equity is a measure of company's degree of financial leverage. The leverage ratio is equal to 1 plus the total debt-to-equity ratio.

$$Leverage = Assets/Equity = 1 + (Debt/Equity)$$

$$Leverage (2013) = 24,368,773/4,910,191 = 1 + (19,458,582/4,910,191)$$

$$Leverage (2013) = 4.96 = 4.96$$

$$Debt Ratio(2013) = Total debt / Total assets = 19,458,582/24,368,773 = 0.80$$

Above results indicates that in 2013 company's assets were financed 80% by debt holders and 20% by shareholder's equity. The figure 4.96 means that total assets of company during that year was 4.96 times higher than shareholder's equity capital.

A relatively lower or declining debt ratio in 2012 and 2013 indicates that company relied less on debt financing and more on shareholders' capital to finance its assets. The amount of total debt increased during that period, but the lower debt ratio means that shareholders invested additional capital. However, the increase on equity contribution do not guarantee that company's shareholders will earn the expected incomes as it was proved in the year 2012 and 2013.

- **The times-interest-earned (TIE) ratio** is determined by dividing earnings before interest and taxes by interest charges.

*The times interest earned ratio (TIE) ratio = EBIT/Interest expenses*

$$TIE \text{ ratio (2013)} = 1,005,689/833,356 = 1.21 \text{ times}$$

The average interest coverage ratio of company was 3.45, indicating that averagely company's operating profit covered interest payments 3.45 times. However, the company's interest coverage ratio has declined from 6.23 times in 2010 to 1.21 times in 2013. The company ratio in 2013 is estimated as a low coverage ratio, because a ratio below 1 implies that company is not generating enough profit to pay interest on outstanding debt.

### **3 FINANCIAL STRUCTURE**

The key role of financial strategy is to implement the best financial course of action which maximizes the financial value of company. Generally, a proper capital structure consists of a low level of debt and high level of equity, because an increase in debt financing might increase default risk. Based on hypothesis of static tradeoff theory the firm's optimal debt ratio is usually regarded as determined by a tradeoff between costs of using debt; that is costs of adjustment and costs of financial distress, and benefits of interest tax shield from borrowing money. The definition of target optimal capital structure and increase in a firm's value can be reached by substituting debt for equity or equity for debt, until the firm's value is maximized. Moreover, if the firm doesn't have to pay costs of adjustment and if assumptions of trade off theory are correct, then firm's target debt ratio should be its ratio. However, firms can not immediately offset internal or external factors which do not allow them to reach the optimum (Meyer, 1984, p. 577).

High profitable firms prefer to use internally generated funds to finance their investments, but if external financing is required they prefer debt to equity financing. That is, firms can use bank loans and can issue debt securities such as bonds, and finally firm's management and/or owners can decide to issue common equity. Therefore, financial intermediaries such as banks and other similar financial institutions are specialized in collecting information about the credit worthiness of borrowers and their historical payment behavior. Credit relationships are estimated to be important, because financial institutions can use available information from their previous credit decisions. Anyway, Stiglitz and Weiss (1981), assumes that all lenders have asymmetric information, thus in absence of more detailed information, lenders cannot easily evaluate market conditions, and payment behavior of borrowers. They further explain that the expected returns to a financial institution depend on the capability of debt repayment from borrowing firms.

This is the main reason why financial institutions always seek to identify those borrowers with estimated higher repayment capacity. Moreover, financial institutions should take into

consideration the impact that interest rate has on borrowers' repayment behavior. Obviously, an increase in interest rates might lead borrowers to act in a manner inconsistent to that anticipated by financial institutions when evaluating the potential risk, resulting from their credit decisions. In addition, Hatfield, Cheng and Davidson (1994) argue that definition of capital structure and volatility of earnings might be to some extent industry related, but it also might affect firm's behavior and the relationship among them.

### **3.1 Capital Structure and Leverage Theories**

According to Shenoy and Koch (1996, p. 308), signaling theory and pecking order behavior present inconsistent relationships between the increase of firm's financial leverage and its expected cash flow. Signaling theory implies a positive relationship, where firms with higher level of leverage are expected to generating more cash flow and achieve a better performance. Supports of signaling models suggest that a firm can increase its value by using a higher proportion of debt financing since debt payments are tax deductible (Ross, 1977). The hypotheses of pecking order theory asserts that: 1) firms usually prefer internal financing, 2) if external financing is required, firms mostly begin with issuing debt securities such as convertible bonds, but afterwards they can decide to issue common equity and 3) Firms intend to apply a policy of gradual adaption of target dividend payout ratios to their investment decisions (Meyer, 1984, p.581).

The degree of financial leverage is not always determined by firm's management willingness to increase the use of debt (the demand side), but some firms are constrained by lenders as to the level of debt they can use (the supply side). The lack of ability to choose the source of their borrowed funds as result of not having access to financial markets can be reflected in form of low debt ratios (Faulkender & Petersen, 2006, p.2).

The access to financial markets and monitoring time needed to be devoted by financial institution to monitor firm's behavior might impact its financial leverage and capital structure composition. Titman at al., (2001) argues that there is enough evidence that over time the firm's size and its degree of financial leverage have been positively related. Apparently, more profitable firms, those firms with higher operating earnings (EBIT) can consistently use their earnings to repay debt. Titman and Wessels (1988) found a positive relationship between expected growth rate and degree of financial leverage. They base their statement on the assumption that large firms have lower volatility of earnings, so it makes them more sustainable in report to high level of used leverage. Moreover, lenders of large firms are more likely to receive regular repayments from their debtors than lenders of smaller firms, thus, reducing their monitoring costs. Moreover, the definition of capital structure and the value of its debt ratios might be related to firms' size (Wald, 1999).

## 3.2 Estimating the Cost of Capital

The most important principle when estimating the cost of capital is the consistency among the cost components of the WACC and free cash flow. As the free cash flow is the cash flow available to all investors, the company's WACC has to include also the required return for each investor, including opportunity cost of equity capital. In order to insure consistency among these components, the cost of capital has to be estimated based on the following criteria:

- It has to weight each security's required return by its target market-based weight, not by its historical book value.
- Any financing-related benefits or costs, such as interest tax shield, not included in free cash flow has to be incorporated into the cost of capital or it should be evaluated separately using adjusted present value.
- It has to be computed after corporate tax (since free cash flow is calculated in after-tax terms (Koller, Goedhart & Wessels, 2010, pp. 235-236).

Moreover, the weighted average cost of capital has to be recomputed in each determined period in order to present the effect of changing leverage over time (Kaplan & Ruback 1995, p.5).

### 3.2.1 The Weighted Average Cost of Capital (WACC)

Each firm has a capital structure, defined as mix of debt, preferred stock and common equity, intending to maximize its stock price. In order to maximize its value, the firm will establish a target capital structure, and then raise new capital in a manner that will keep the actual capital structure as target over time. The target proportions of debt, preferred stock, along with component costs of capital are used to calculate the firm's WACC. Most firms use various types of capital due to variation in degree of their riskiness and because of different expected rates of return on these securities. The required rate of return on each capital component is called its **component cost**, and the cost of capital used to analyze capital budgeting decisions should be weighted average of various components' cost. The weighted average cost of capital or WACC can be calculated as follows:

$$WACC = w_d \times r_d \times (1 - T) + w_{ps} \times r_{ps} + w_{ce} \times r_s \quad (3.1)$$

Where,  $w_d$  is debt weight,  $r_d \times (1 - T)$  is after-tax cost of debt,  $T$  is tax rate,  $w_{ps}$  is preferred stock weight,  $r_{ps}$  is component cost of preferred stock,  $w_{ce}$  is common equity weight, and  $r_s$  is cost of common stock.

The first step in estimating the cost of debt is to determine the rate of return debt holders require. Although, estimating  $r_d$  is conceptually straight forward some problems might

arise in practice. Companies use both fixed and floating rate debt, convertible debt and debt with and without sinking funds, and each type of debt has different cost.

The **after-tax cost of debt**,  $r_d \times (1 - T)$ , is used to calculate the weighted average cost of capital and it is the interest rate on debt  $r_d$ , less the tax savings that result because interest is tax deductible. This is the same as  $r_d$  multiplied by  $(1 - T)$ , where  $T$  is the firm's marginal tax rate.

$$\begin{aligned} \text{After - tax component cost of debt} &= \text{Interest rate} - \text{Tax savings} \\ &= r_d \times (1 - T) \end{aligned} \quad (3.2)$$

Therefore, the required return to debt holders  $r_d$  is lower than company's cost of debt since interest payments are deductible; the government in effect pays part of the total cost. As a result of corporate tax effect, the cost of debt to the firm is less than the rate of return required by debt holders.

The **component cost of preferred stock** used to calculate the weighted average cost of capital  $r_{ps}$  is the preferred dividend  $D_{ps}$ , divided by the net issuing price  $P_n$ , which is the price the firm receives after deducting flotation costs:

$$\text{Component cost of preferred stock} = r_{ps} = D_{ps} / P_n \quad (3.3)$$

Preferred dividends are not tax deductible thus, company bears their full costs and no tax adjustment is made when calculating the cost of preferred stock. Finally, although it is not mandatory that preferred dividends be paid, firms generally have every intention of doing so, because otherwise (1) they cannot pay dividends on their common stock, (2) they will find it difficult to raise additional funds in the capital markets, and (3) in some cases preferred stockholders can take control of the firm.

Companies can raise common equity in two ways: (1) directly, by issuing new shares and (2) indirectly, by retained earnings. Capital raised indirectly by retained earnings has an estimated cost, because retained earnings could have been reinvested by stockholders in other investment opportunities and likely earn a higher rate of return. Likewise, the amount of earnings could have been paid out as dividends or used to repurchase stock, in which case stockholders will expect to receive interest payments and capital gains. Likewise, a company has to earn more than  $r_s$  on new external equity to provide this rate of return to investors, because there are commission and fees, called flotation costs, when a firm issues new equity (Brigham & Ehrhardt, 2005, pp.307-311).

### 3.2.2 Factors affecting the WACC

There are two types of important factors which affect the cost of capital: factors that are beyond a firm's direct control and factor that firm can control them. The three most important factors that are beyond a firm's direct control are (1) the level of interest rate, (2)

the market risk premium, and (3) tax rates. Nevertheless, a firm can affect the cost capital through (1) its capital structure policy, (2) its dividend policy, and (3) its investment (capital budgeting) policy.

The cost of debt increases if interest rates in the economy rise as firms will have to pay to bondholders a higher interest rate to obtain new debt capital. Moreover, individual firms have no control over market risk premium, but this factor affects the cost of equity and through a substitution effect the cost of debt, and thus the WACC. Tax rates which are largely beyond the control of an individual firm have an important effect on the cost of capital. Tax rates are used in the calculation of the cost of debt as used in WACC, and obviously tax policy affects the cost of capital. For example, lowering the capital gains tax rate relative to the rate on ordinary income would make stocks more attractive, which would reduce the cost of equity relative to that of debt.

The firm can change its capital structure policy, and such a change can affect its cost of capital since the after-tax cost of debt is lower than cost of equity. Therefore, if a firm decides to use more debt and less common equity, this change in the weights of WACC will tend to lower the WACC. However, an increase in the use of debt will increase the riskiness of both the debt and the equity holders, and increases in component costs will tend to offset the effect of the change in the weights. Dividend policy is another factor under firm's control. If a firm's payout ratio is so high, then the firm has to issue new stock to raise fund, and this will affect the increase of its cost of capital. Likewise, when a firm defines its investment policy, it intends to use as starting point the required rates of return on the firm's outstanding stock and bonds, so it's assumed that firm will invests in assets with same degree of riskiness. In general, this proposition might be correct, but if the firm invests in new different business line, then its marginal cost of capital should reflect the riskiness of that new business line (Brigham & Ehrhardt, 2005, pp.323-324).

### 3.3 The CAPM Approach

According to Brigham and Ehrhardt (2005, p.312), to estimate the cost of common stock using the Capital Asset Pricing Model (CAPM), we have to proceed through 4 steps, as follows:

- estimate the risk-free rate,  $r_{RF}$
- estimate the current expected market risk premium,  $RP_M$ , which is the expected market return minus the risk-free rate,
- estimate the stock's beta coefficient,  $b_i$ , and use it as an index of the stock's risk; this signifies the company  $i$ 's beta,
- substitute the preceding values into the CAPM equation to estimate the required rate of return on the stock in question:

$$r_s = r_{RF} + (RP_M)b_i \quad (3.4)$$

Where  $r_s$  is expected rate of return,  $r_{RF}$  is risk-free rate of return, and  $RP_M$  is risk premium on the market, and  $b_i$  is beta coefficient on  $i$ th stock; the average company's beta is  $b_A = 1.0$ . Market risk premium,  $RP_M = (r_M - r_{RF})$ , is the additional return over the risk-free rate required to compensate an average investor for assuming an average amount of risk. Average risk means a stock with  $b_i = b_A = 1.0$ .

Although estimating beta is conceptually straightforward approach, complications quickly arise in practice for the following reasons: First, there is no theoretical guidance as to the correct holding period over which to measure returns. The returns for a company can be calculated using daily, weekly or monthly time periods, and the resulting estimates of beta will differ. Second, in practice it is common to use only one index of common stocks such as the *S&P 500*, the *NYCE Composite*, etc. Even though these indexes are highly correlated with one another, using different indexes in the regression will often result in different estimates of beta. Third, some organizations modify the calculated historical beta in order to produce what they deem to be a more accurate estimate of beta, the one that reflects the risk perceptions of the marginal investor. One modification, called an adjusted beta, attempts to correct a possible statistical bias by adjusting the historical beta to make it closer to average beta of 1.0. Another modification, called a fundamental beta, incorporates information about the company, such as changes in its product lines and capital structure. Fourth, even the best estimates of beta for an individual company are statistically imprecise. The average company has an estimated beta of 1.0, but the 95 percent confidence interval ranges from about 0.6 to 1.4 (Brigham & Ehrhardt, 2005, p.316).

### **3.4 The Relationship between Leverage and Profitability**

Although, the tradeoff theory indicates that profitability and capital structure are positively related, in some cases was demonstrated theoretically and empirically that beta increases with financial leverage. The firm's access to public debt markets might notably influence the degree of financial leverage. However, some firms might have access to financial market but they might choose to finance their projects by using internally generated funds, such as shareholders equity and retained earnings. Moreover, Titman et al., (2001) argues that historically leverage has been found to be positively correlated with firm's size. Clearly, more profitable firms, those firms with higher earnings (EBIT) consistently use their earnings to pay off debt. Faulkender and Petersen (2006) suggest that larger firms are less leveraged and the magnitude of this effect increases the value of the firm and lowers the firm's leverage. Although, in most of the literature, leverage is treated in terms of debt-to-assets ratio, but measuring leverage on the basis of a debt-to-assets ratio has its shortfalls. In this context, they further explains that the leverage of firms that expects to generate growing future cash flows seems to be low when measured on a debt-to-asset ratio basis, but high leverage when measured as an interest coverage ratio. Titman and Wessels (1988) found a positive relationship between growth opportunity and leverage. They base their statement on the assumption that large firms have lower variance of

earnings, making them to be able to sustain high debt ratios. Moreover, lenders to large firms are more likely to get regular repayments than lenders to smaller firms, reducing the agency cost associated with debt monitoring.

### **3.5 Empirical Analyses of Capital Structure and Profitability**

The capital structure of company for the period of time 2010 to 2013 consists of high level of debt and low level of shareholder's equity. The high debt to equity ratio indicates that assets of company were largely financed by debt, although, it is theoretically assumed as an inappropriate capital structure. As discussed above in this chapter, a capital structure consisting of high level of debt and low level of equity is estimated to be not a proper capital structure. Our estimation is based on hypotheses of pecking order behavior, which assumes that, that debt is a residual of cash flow, and cash flow and debt are negatively related. In some cases, it was empirically proved that high financial leverage either measured on the basis of debt-to-asset ratio or as interest coverage ratio does not have any positive effect on profitability.

Company was not able to meet working capital needs and investments in fixed assets only by using internally generated funds. Thus, it has used borrowing of funds from banks and other lenders, shareholders capital contribution, and bank deposits. This means that company was not able to rise enough capital to fund additional capital needs since high level of leverage was not associated with higher amount of earned profit. There was a positive relationship between cash flow and high level of financial leverage in 2011 and 2013, consistent with signaling theory, but a negative relationship in 2012, consistent with pecking order behavior.

However, in the case of company Ciano the definition of relationship between profitability and financial leverage is presumably more complex issue. Its profitability was not affected only by high level of financial leverage, but also by other factors related to its operational efficiency. Over that period company's earnings dropped mostly due to increase in operating expenses rather than from the use of financial leverage. Likewise, company did not generate growing future cash flows, but its cash flow was mainly financed by bank loans, and receivables from subsidiaries, especially in 2013 when company received €7,966 million from its subsidiaries. Trade (supplier's financing) as well as other payable share an important source of financing, but their balance was positive only in 2012. It implies that in 2011 and 2013, company used cash to reduce obligations towards suppliers and to pay off other obligations. The likely effect of debt payoffs on cash flows, as result of management's decisions to increase the portion of debt financing, is expected to occur in the future when company begins to reduce outstanding debt.

### 3.5.1 The Weighted Average Cost of Capital (WACC)

The component cost of debt and component cost of common equity along with their weights are used to calculate company's weighted average cost of capital (WACC). In order to determine the company's WACC, we have to estimate the costs and weights of these two components: 1) the after-tax cost of debt and its weight and 2) the cost of common equity and its weight. The required rate of return on the component cost of debt and the component cost of shareholders' capital is calculated using available information regarding lending interest rates ( $r_d$ ) and required rate of return ( $r_s$ ) for Italian market. The interest rate on debt is the after-tax cost of debt or  $r_d \times (1 - T)$  used to calculate the weighted average cost of capital of company.

Table 8 presents calculations of weighted average cost of capital (WACC) of company Ciano.

Table 8: Weighted Average Cost of Capital for Company Ciano Trading & Services S.R.L  
(in EUR)

Years	2010	2011	2012	2013
Lending interest rate for Italian market	4.00%	4.50%	4.90%	4.90%
After-tax cost of debt $r_d \times (1 - \text{Tax rate})$	2.60%	2.93%	3.19%	3.19%
Percentage of used debt	68%	71%	61%	63%
<b>Component cost of debt <math>w_d \times r_d \times (1 - \text{Tax rate})</math></b>	<b>1.77%</b>	<b>2.07%</b>	<b>1.94%</b>	<b>2.02%</b>
Required rate of return ( $r_s$ ) on Italian market	10.25%	12.00%	10.00%	8.00%
Percentage of used equity	32%	29%	39%	37%
<b>Component cost of common equity (<math>w_{ce} \times r_s</math>)</b>	<b>3.28%</b>	<b>3.57%</b>	<b>3.93%</b>	<b>2.93%</b>
<b>Component cost of preferred stock (<math>w_{ps} \times r_{ps}</math>)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Weighted average cost of capital (WACC)</b>	<b>5.05%</b>	<b>5.64%</b>	<b>5.87%</b>	<b>4.95%</b>

The debt interest rate ( $r_d$ ) and required rate of return ( $r_s$ ) for Italian market used in above table is taken from (<http://www.market-risk-premia.com/it.html>). The weighted average cost of capital or WACC can be calculated as following:

$$WACC = w_d \times r_d \times (1 - T) + w_{ps} \times r_{ps} + w_{ce} \times r_s$$

$$WACC (2013) = 0.63 \times 4.90\% \times (1 - 0.35) + 0.37 \times 8\% = 2.02\% + 2.93\% = 4.95\%$$

The weighted average cost of capital (WACC) is recomputed for each of these four years to include the effect of changing leverage overtime. The two most important factors that affected the cost of capital of company during that period were 1) small increase in interest rates, which is the rate of return debt-holders require ( $r_d$ ) and 2) relative changes in percentage of common equity component and required rate of return ( $r_s$ ) in 2011 and 2012, because also the capital risen by retained earnings and shareholders' contribution has opportunity cost. The cost of debt increased as interest rate in the economy rose, and higher

interest expenses and other financial charges were affected more by increase in the use of debt every year.

$$\text{WACC (target)} = 0.67 \times 4.75\% \times (1 - 0.35) + 0.33 \times 7.95\% = 2.07\% + 2.62\% = 4.69\%$$

The company's WACC based on its (assumed) target capital structure is calculated using available data for Italy's highest interest rate on debt, and used interest rate on debt is around 4.75% and based on available data for implied return on Italian market, which is 7.95% .

The after-tax cost of debt is lower than lending interest rate since interest payments on debt charged by lenders are tax deductible. This is the interest rate required by debt holders, less the tax savings.

### 3.5.2 The CAPM approach

As mentioned above in this chapter for estimating the cost of common stock using the Capital Asset Pricing Model (CAPM) we have to proceed through four following steps:

- estimate the risk-free rate,  $r_{RF}$ .
- estimate the current expected market risk premium,  $RP_M$ , which is the expected market return minus the risk-free rate,
- estimate the stock's beta coefficient,  $b_i$ , and use it as an index of the stock's risk,
- substitute the preceding values into the CAPM equation to estimate the required rate of return on the stock in question:

When estimating the risk-free rate of company the available figures regarding the risk-free rate on Italian market will be taken from Market Risk Premia (official website). The average risk-free rate of 2% for the period of time 2010 to 2013 is used as proxy to calculate the CAPM. The market risk premium  $RP_M = (r_M - r_{RF})$ , shows the difference between the expected market rate of return and the risk-free rate. The average risk premium on Italian market over that period of time was 8%, but it changed from 10.28% in 2011 to 6.13% in 2013.

The market risk of a stock is measured by its beta coefficient, which is an index of stock's relative volatility. The stock is about risky as the market, if held in diversified portfolio (Brigham & Ehrhardt, 2005, p.151). Therefore, an average risk means a stock with beta  $(b_i) = b_A = 1.0$ , where  $(b_i)$  presents beta of an average risky stock and  $b_A$  is average beta of a company. Although, the best estimates of beta for an individual company are estimated to be statistically imprecise, we will try to estimate company's beta based on Hamada's formula. It is assumed that an average risky company has a stock with beta  $(b_i) = b_A = 1.0$ . The estimation of Ciano's  $b_i = 1$  is based on its long-term operation, since 1885 in Italy and worldwide, relative sales growth over reviewed period, and high

diversification of its business activities. Business diversification enables company to manage the risk of project investments in many countries. The company's beta of equity ( $\beta_e$ ) based on 35% tax on profit adjusted to the Italian market will be calculated as follows:

$$\beta_e = \beta_i [1 + (1 - T)(D/E)] = 1 [1 + ((1 - 0.35)(8,507,868/4,910,191))] = [1 + 1.13] = 2.13$$

$\beta_e$ -is beta of company's equity

$\beta_i$ -is a company's beta without debt

$D$ -is the sum of short and long-term debt towards banks and other lenders as on 31.12.2013

$E$ -is total company's equity

$T$ -is tax rate of 35% as it is used in company's income statement

Beta in the range 1.5 to 2 will be used to calculate the CAPM. The estimation of company's cost of common equity using the Capital Asset Pricing Model (CAPM) equation will be calculated as below:

$$r_s = r_{RF} + (RP_M)b_i$$

For beta coefficient ( $b_i$ )= 2, the estimated rate of return will be:

$$r_s = 2 + (6) \times 2 = 2 + 12 = 14$$

For beta coefficient ( $b_i$ ) = 1.5, which in my opinion gives a more likely result of required rate of return on Italian market, because the implied average rate of return for Italian market over that period of time was 10.15%

$$r_s = 2 + (6) \times 1.5 = 2 + 9 = 11$$

For beta coefficient ( $b_i$ ) =1.5, using the average figures of risk-free rate and market risk premium over that period of time, the estimated required rate of return will be:

$$r_{s(average)} = 2 + (8) \times 1.5 = 2 + 12 = 14$$

## **4 COMPANY VALUATIONS: THE CORPORATE VALUATION MODEL**

In valuation literature there are some methodologies that form the basis for discussion of company evaluation. But in this case the value of company will be analyzed focusing on three basic value drivers: return on invested capital (hereinafter: ROIC), discounted free cash flow (hereinafter: DCF) and economic value added (hereinafter: EVA). Those companies pursuing creation of long-term value take into account the long-term interest of all the stakeholders in the company, not just the shareholders. The basic principles of value creation applied by these companies make them more sustainable, which can build stronger

competitive advantage and can offer more opportunities for individuals (Koller, Goedhart &Wessels 2010, p.3).

They also assert that companies can create value by investing capital at higher rates of returns than the cost of their capital, because it means the positive difference between expected cash flows and the cost of invested capital for the given period is achieved. Since shareholders will assess the potential earnings from alternative investments of equal risk, then the core concept of value creation links the revenue growth with the rate of return on these investments.

The value of a company is equal to the present value of its expected future free cash flows from its business operations, which are discounted at its weighted average cost of capital, (WACC),and the value of available non-operating assets is added too (Brigham & Ehrhardt, 2005, p.510). The following equation is used to calculate the value of operations:

$$\text{Value of operations (Vop)} = \text{PV of expected future cash flow} \\ FCF1/(1 + WACC)^1 + FCF2/(1 + WACC)^2 + \dots FCFt/(1 + WACC)^t \quad (4.1)$$

$$\text{Value of operations (at time N)} = FCF_N (1 + g) / WACC - g \quad (4.2)$$

Where

*g*-is growth rate in sales, and

*N*-shows the year when free cash flow occurred

To find the value of operation as going concern is used an approach similar to the non-constant dividend growth model for stocks, proceeding as follows (Brigham & Ehrhardt, 2005, pp.509-511):

- assume the firm will experience non-constant growth for *N* years, after which it will grow at some constant rate;
- calculate the expected free cash flow for each of the *N* non-constant growth years;
- recognize that after year *N* growth will be constant, so we can use the constant growth formula to find the firm's value at year *N*;
- find the PV of the free cash flows for each of the *N* non-constant growth years. Also, find the PV of the firm's value at year *N*;
- now sum all the PVs, those of the annual free cash flows during the non-constant period plus the PV of the year *N* value, to find the firm's value of operations.

#### **4.1 Valuation of Cash Flows Forecasts**

The discounted cash flow method is estimated to be a useful measure as well as comparable methods. However, the discounted cash flow methods and comparable firm's methods contain a degree of impreciseness related to the accuracy of cash flow projections and estimation of risk measures. The reliability of the discounted cash flow (DFC)

valuation method despite the level of leverage, the composition of capital structures, and overall implication of these transactions has raised concerns about the accuracy of its estimation.

The primary concern is that cash flows might easily be affected by internal factors, which causes the DFC valuations to make an imprecise estimation of transaction value. For example, tendency to move the cash flow forecasts upward can happen when the estimated value of expected cash flows are below the level required to be qualified for financing. On the other hand, the probability to bias the forecasts of expected cash flows value downward may occur when expected cash flows are significantly above the level needed to obtain financing (Kaplan & Ruback 1995, pp.1061-1067)

Free cash flow is often defined as net operating profit after taxes (NOPAT), decreased by earnings that are retained and paid out as dividends, and increased by capital issues. However, a company might have negative free cash flow balance, although its NOPAT is positive, because the required investments in operating assets are higher than its generated profit. A negative free cash flow balance could be signal that company has to obtain new funds from potential investors or to increase the level of short or long-term financing, and debt securities. Free cash flow is calculated using the following equations:

$$FCF = (NOPAT + Depreciation) - \text{Gross investment in operating capital} \quad (4.3)$$

$$\text{Gross investment} = \text{Net investment} + \text{Depreciation} \quad (4.3a)$$

The future free cash flow (FCF) is defined as after-tax operating profit minus the amount of new investment in operating capital necessary to maintain the business successfully running (Brigham & Ehrhardt, 2005, pp.106-107).

## 4.2 Capital Budgeting Decisions

There are six key methods which are used to rank projects and to decide whether or not they should be accepted for inclusion in the capital budget. These methods are: (1) pay back, (2) discounted payback period, (3) net present value (NPV), (4) internal rate of return (IRR), (5) modified internal rate of return (MIRR) and profitability index (PI).

**Payback Period** is defined as the expected number of years required to recover the investment. This method was firstly used by managers to make decisions about capital budgeting and project investments. The shorter is the payback period, the better (Brigham & Ehrhardt 2005, p.347). The payback period can be found as follows:

$$\text{Payback Period} = \text{Year before full recovery} + \frac{\text{Uncoverd cost at the start of the year}}{\text{Cash flow during the year}} \quad (4.4)$$

**Discounted Payback Period** is similar method with above mentioned payback period, but this method discounts expected cash flows at project's cost of capital. Thus, the discounted

payback period is defined as the number of years required to recover the investment based on discounted cash flows. Unlike payback period, discounted payback method accounts for costs of invested capital. It shows the number of years needed to cover the cost of debt and cost of equity, referred to as breakeven year (Brigham & Ehrhardt 2005, p.348)

**Net Present Value (NPV) method** promotes and uses discounted cash flow principle, where the value of all project's cash inflows and cash outflows is discounted by project's cost of capital. This approach can be applied based on following principles (Brigham & Ehrhardt 2005, p.349):

- find the present value of each cash flow, including all inflows and outflows, discounted at the project's cost of capital,
- sum these discounted cash flows; this sum is defined as the project's NPV,
- if the NPV is positive, the project should be accepted, while if the NPV is negative, it should be rejected; if two projects with positive NPVs are mutually exclusive, the one with higher NPV should be chosen

$$NPV = CF_0 + CF_1 / (1 + r)^1 + CF_2 / (1 + r)^2 + \dots + CF_n / (1 + r)^n \quad (4.5)$$

### 4.3 Return on Invested Capital (ROIC)

Return on invested capital measures operating profitability or earnings and the return earned on invested capital over a period of time. Firms that cannot earn a greater return on their projects than the cost of invested capital, then their value will decline (Koller, Goedhart & Wessels 2010, p. 17). Therefore, only those firms whose ROIC is greater than WACC are expected to increase their shareholders' value.

Return on invested capital (ROIC) is estimated to be a better evaluation method for analyzing the company's operating performance than return on equity (ROE) or return on assets (ROA). Return on invested capital (ROIC) is mainly used to measure the rate of return earned by a company on the invested operating capital. Unlike it, ROE relates the evaluation of operating profitability or net profit with equity capital, making peer group analysis, and trend analysis less significant. Return on assets (ROA) is estimated to have its drawbacks too, because it does not account for funds raised from the increase of operating liabilities such as: account payables and accrual.

$$ROIC = \text{Net Operating Profit after Taxes (NOPAT)} / \text{Operating Capital} \quad (4.6)$$

$$ROIC = EBIT (1 - T) / \text{Capital} = \text{NOPAT} / \text{Operating Capital} \quad (4.6a)$$

Therefore, ROA measures the degree of profitability earned by utilizing company's assets, including operating assets and fixed assets, but it exclude operating current liabilities. ROIC is defined as net income from company's operations (NOPAT), divided by the sum of operating capital (Koller, Goedhart & Wessels 2010, p, 166).

## 4.4 Economic Value Added (EVA)

Economic value added (EVA) measures firm's real economic profit for a given year, but it is quite different from accounting profit presented in income statement. Unlike accounting profit, EVA deducts all costs of capital, including the costs of debt and equity from operating profit. The amount of earnings remained after deducting cost of capital from operating profit is called residual income or excess returns. Firm's excess returns present the difference between operating earnings (NOPAT) generated during the given year and cost of operating capital. The cost of invested capital is defined by multiplying the value of operating capital by its weighted average cost of capital (Brigham & Daves, 2007, p.233).

EVA promotes the principle of cash operating measure of profit that unlike accounting profit it is consistent with shareholder's value creation objective. The theory of economic value added mainly relies on two principle assertions: 1) a company is not really profitable unless its earnings are higher than costs of invested capital and 2) that value of the firm is added if its managers invest in projects with positive NPV. From accounting perspective, EVA is calculated as the difference between the firm's net operating profit after taxes (NOPAT) for a given year and its weighted average cost of capital. On the other hand, profit margins like EBIT (earnings before interest and taxes), and net income are used to measure the operating profitability of the firm, however, these measures does not account for all cost of capital. (Grant, 2003, pp.3-4). The basic formulas used to calculate EVA are as follows:

$$\begin{aligned} EVA &= \text{Net operating profit after taxes (NOPAT)} - \text{After tax cost of capital} \\ &= EBIT (1 - \text{Tax rate}) - (\text{Operating capital}) \times (\text{WACC}) \end{aligned} \quad (4.7)$$

Operating capital or invested capital is the sum of net operating working capital, fixed assets, and intangible assets. Excess cash and marketable securities are excluded from operating capital, because excess cash represents temporary imbalances in the company's cash balances.

EVA, can also be calculated in terms of ROIC:

$$EVA = (\text{Operating capital}) \times (\text{ROIC} - \text{WACC}) \quad (4.7a)$$

This equation shows that a firm adds value only when it has a positive EVA, thus, its ROIC is greater than its WACC. Otherwise, if WACC exceeds ROIC, then new investment in operating capital will reduce the firm's value. When calculating EVA of a company, back depreciation is not added as well. Although it is not a cash expense, depreciation assets have to be replaced; therefore, it is deducted when the net income and EVA of a company is calculated (Brigham & Ehrhardt, 2005, p.110)

**Market Value Added (MVA)** The finance interpretation of EVA, referred to market value added (MVA) and is defined as present value of firm's expected EVA. Moreover, market value added (MVA) presents the difference between firm's total market value and its total

capital, or investors supplied capital. The market value of firm equals to market value of preferred and common stocks plus the market value of debt. This relationship clearly shows that MVA essentially depends on market value of firm's debt outstanding and equity capital invested by shareholders (Grant, 2003, p.5). Likewise, Abateet al. (2004), explains that the finance interpretation of EVA relates to the firm's market value added. Below written equations are used to calculate the market value added (MVA):

$$MVA = \text{Total market value of firm} - \text{Total capital} \quad (4.8)$$

$$MVA = (\text{Market value of stock} + \text{Market value of debt}) - \text{Total capital} \quad (4.8a)$$

$$MVA = (\text{Market value of stock} + \text{Market value of debt}) - \text{Total capital} \quad (4.8a)$$

Thus, firm's shareholders' value is notable added by increasing the positive difference between the market value of firm's stock and equity capital invested by shareholders. Moreover, the market value of common equity is estimated to be easily found, because stock prices are readily available. However, what concerns to debt value usually is taken the value of debt reported in financial statements as it is not always easy to define the market value of debt (Brigham & Daves, 2007, p.231-232).

## 4.5 Empirical Analysis of Company Valuation

The valuation methods are based on estimation of present value of free cash flow and return on invested capital less the weighted average cost of invested capital. The negative value of its FCF does not always mean that company operations are unprofitable, but it might indicate that a company is making large amount of investments in operating assets, or its profit margins are declining.

Moreover, it is estimated that company has added value since the ROIC over that period has exceeded its WACC, consistent with the assertions of economic value added theory. Operating capital or invested capital includes the amount of net operating working capital plus the amount of long- term operating assets less equity investments in subsidiaries, and other companies. Likewise, the current portion of debts payable to banks is included in operating current liabilities of balance sheet, because it is treated as capital invested by debt holders.

### 4.5.1 Analysis of free cash flow and capital budgeting

Analysis of FCF relies on NOPAT since it is estimated to be a better measure of profitability evaluation. NOPAT shows the amount of profit that company earned before the influence of interest payments on debt or the effect of financial leverage.

The amount of operating capital contains only current portion of debt payables to banks or the half amount of total banks' debt. Generally, loans for financing working capital requirements have an average maturity of two years. Table 8 presents results and figures used to calculate FCF of company Ciano.

The free cash flow of company for the year 2013 and two previous years is calculated based on the following equation:

$$(FCF) = (NOPAT + Depreciation) - (Net investment + Depreciation)$$

$$FCF (2013) = 1,248,803 - 1,280,015 = - 31,212$$

NOPAT generated by company during all these three years was positive, but insufficient to finance investments in operating capital. In 2012, company has made a net investment of €2,486 million in operating capital to support sales growth, but its free cash flow balance during that year was negative. Consequently, free cash flow is considered more important to company's shareholders than net income since FCF contains funds available to owners that can be withdrawn (i.e., dividend payments, etc.) or they can be used for investments.

Table 9: Free Cash Flow of Company Ciano Trading & Services S.R.L (in EUR)

Years	2010	2011	2012	2013
Operating profit or EBIT	1,931,403.00	1,895,087.00	1,272,340.00	1,005,689.00
Used tax rate (35%)	675,991.05	663,280.45	445,319.00	351,991.15
Net operating profit after taxes (NOPAT)	1,255,411.95	1,231,806.55	827,021.00	653,697.85
Depreciation	368,382.00	303,477.00	281,533.00	595,105.00
NOPAT+Depreciation	1,623,793.95	1,535,283.55	1,108,554.00	1,248,802.85
Net investments in operating capital	0	1,311,131.00	2,486,370.00	684,910.00
Net investment+Depreciation	0	1,614,608.00	2,767,903.00	1,280,015.00
<b>Free cash flow (FCF)</b>	<b>0</b>	<b>(79,324.45)</b>	<b>(1,659,349.00)</b>	<b>(31,212.15)</b>

Even though its NOPAT is positive, company has generated negative free cash flow, because the required investments in operating assets were higher than its net operating profit. Due to the negative free cash flow balance, company obtained additional funds from shareholders, and from its subsidiaries (i.e., decrease of financial receivables from subsidiaries), and it increased the level of short-term liabilities from banks. Although, large investments in operating capital had negative effect on FCF and ROIC, it is difficult to conclude that the company is experiencing operating problems.

#### 4.5.2 Capital budgeting decision

Among many branches that company Ciano Trading & Services Italy has throughout the world is its branch in Kosovo, or Ciano's Kosovo branch. The capital budgeting is a process that creates performance measurability of management's success concerning

returns' viability of their project investments in Kosovo. Moreover, it indicates the operating profitability of Kosovo's branch by presenting its main operating profit margins, such as EBIT, and NOPAT. Capital budgeting decision for Kosovo branch incorporates evaluation of free cash inflows and cash outflows, and deciding whether company should have accepted or rejected those project investments. The decision of whether company had to accept or to reject already undertaken investments to support sales and profit growth is evaluated based on two capital budgeting methods: discounted payback period and NPV method.

Table 10 presents results and figures used to calculate FCF of company Ciano-Kosovo Branch.

Table 10: Free Cash Flow of Ciano Trading & Services-Kosovo Branch (in EUR)

Years	2013	2014	2015
Operating profit or earnings before interest and taxes (EBIT)	1,741,565.34	2,436,063.22	2,249,196.39
Used tax rate for Italian market (35%)	609,547.87	852,622.13	787,218.74
Net operating profit after taxes (NOPAT)	1,132,017.47	1,583,441.09	1,461,977.65
Depreciation	73,200.00	84,170.00	83,800.00
NOPAT+Depreciation	1,205,217.47	1,667,611.09	1,545,777.65
Net investments in operating capital	370,000.00	481,200.00	418,800.00
Net investment+Depreciation	443,200.00	565,370.00	502,600.00
<b>Free cash flow (FCF)</b>	<b>762,017.47</b>	<b>1,102,241.09</b>	<b>1,043,177.65</b>
Weighted average cost of capital (WACC)	5.00%	5.00%	5.00%
<b>Discounted free cash flow</b>	<b>725,730.92</b>	<b>999,765.16</b>	<b>901,155.54</b>

**Discounted Payback Period** measures the number of years it took the company to recover investments made in fixed assets and working capital from discounted net cash flows, for the period of time from 2013 to 2015

$$D. \text{ Payback Period} = \text{Year before full recovery} + \frac{\text{Uncoverd cost at the start of the year}}{\text{Cash flow during the year}}$$

$$\text{Discounted Payback Period (2013 - 2015)} = 1 + \frac{544,270}{999,765} = 1 + 0.54 = 1.54 \text{ years}$$

**Net Present Value (NPV)** is more effective method of evaluating project's cash inflows and cash outflows. When calculating the NPV of a project, discounted cash inflows and cash outflows are used. Therefore, the present value of each cash flow is discounted by cost of capital used to finance that project (Brigham & Ehrhardt 2005, p.349).

$$NPV = CF_0 + CF_1 / (1+r)^1 + CF_2 / (1+r)^2 + \dots + CF_n / (1+r)^n$$

$$NPV(2013 - 2015) = -1,270,000 + 762,017 / (1.05)^1 + 1,102,241 / (1.05)^2 + 1,043,178 / (1.05)^3$$

$$NPV(2013 - 2015) = -1,270,000 + 725,731 + 999,765 + 901,155 = 1,356,652€$$

The company's weighted average cost of capital for 2013 is used to discount free cash  $CF_n(1+r)^n$ . As the company's NPV for that period was positive, the project investments should have been accepted for inclusion in capital budgeting.

#### 4.5.3 Analysis of Return on Invested Capital (ROIC)

ROIC measures how much NOPAT were generated by company during that period of time for each euro invested in operating capital. By calculating the ROIC of company, we found that new investments in operating capital positively affected sales growth, however, additional investments in operating capital was not profitable.

Table 11 presents results and figures used to calculate return on invested capital of company Ciano.

Table 11: Return on Invested Capital (ROIC) for Company Ciano Trading & Services Italy S.R.L (in EUR)

Years	2010	2011	2012	2013
Operating current assets	17,578,714.00	18,782,030.00	22,633,703.00	21,154,777.00
Operating current liabilities	13,598,788.00	13,197,732.00	14,841,166.00	14,387,826.00
Net operating working capital	3,979,926.00	5,584,298.00	7,792,537.00	6,766,951.00
Operating long-term assets	815,571.00	522,330.00	800,461.00	2,510,957.00
Total net operating capital	4,795,497.00	6,106,628.00	8,592,998.00	9,277,908.00
Net operating profit after taxes (NOPAT)	1,255,412.00	1,231,807.00	827,021.00	653,698.00
<b>Return on invested capital (ROIC)</b>	<b>26.18%</b>	<b>20.17%</b>	<b>9.62%</b>	<b>7.05%</b>
<b>Weighted average cost of capital (WACC)</b>	<b>5.05%</b>	<b>5.64%</b>	<b>5.87%</b>	<b>4.95%</b>

The ROIC can be calculated using below written formula:

$$ROIC = \text{Net Operating Profit after Taxes (NOPAT)} / \text{Operating Capital}$$

$$ROIC (2013) = 653,698/9,277,908 = 7.05\%$$

ROIC during that period was higher than rate of return required by investor, or ROIC exceeded WACC, indicating that company created value. However, company was not able to maintain profit margins, and its ROIC has sharply declined towards the value of weighted average cost of capital. The contemporaneous relationship between decline in ROIC associated with negative free cash flow was affected by decrease of NOPAT, and additional investments in net operating working capital. Apparently, investments in total operating assets were to some extent above the required level for normal operation of company.

Operating current assets of company consist of those assets: cash on hand and bank deposits, accounts receivables (i.e., receivables from clients, subsidiaries and other receivables), and inventories (finished goods and merchandise).

Current liabilities comprise of accounts payable (i.e., debt payables to suppliers), accruals (i.e., tax liabilities and other payables), and the current portion of debt payables to banks.

Debt payables to banks are incorporated into current liabilities when calculating net working capital of company.

Usually, loans for financing working capital has an average maturity of two years, therefore, the current portion of debt payables to banks used to calculate its ROIC equals to the half amount of total banks' debt.

#### 4.5.4 Analysis of Economic Value Added (EVA) and Market Value Added (MVA)

EVA presents the real economic profit earned by company and the degree of its managerial performance over that period. The difference between operating earnings and cost of invested capital in each period is referred to as company's excess returns. The value of EVA in 2010 and 2011 is entirely consistent with company's shareholders' value creation objective since its earnings are quite higher than cost of capital.

Table 12 presents figures and formulas used to define economic value added (EVA) of company Ciano.

Table 12: EVA Calculation of Company Ciano Trading & Services Italy S.R.L (in EUR)

Years	2010	2011	2012	2013
NOPAT = EBIT x (1-Tax Rate)	1,255,411.95	1,231,806.55	827,021.00	653,697.85
Total net operating capital	4,795,497.00	6,106,628.00	8,592,998.00	9,277,908.00
Weighted average cost of capital (WACC)	5.05%	5.82%	5.87%	4.97%
Cost of capital = Operating capital x (WACC)	242,172.60	355,405.75	504,408.98	461,112.03
<b>EVA = NOPAT - Cost of capital</b>	<b>1,013,239.35</b>	<b>876,400.80</b>	<b>322,612.02</b>	<b>192,585.82</b>
ROIC = NOPAT/Operating capital	26.18%	20.17%	9.62%	7.05%
ROIC - Cost of capital = ROIC - WACC	21.13%	14.35%	3.75%	2.08%
<b>EVA = (Operating capital) x (ROIC-WACC)</b>	<b>1,013,239.35</b>	<b>876,400.80</b>	<b>322,612.02</b>	<b>192,585.82</b>

EVA is defined as the difference between company's NOPAT and its weighted average cost of capital

$$EVA = EBIT \times (1 - \text{Tax rate}) - (\text{Operating capital}) \times (\text{WACC}) = \text{NOPAT} - \text{Cost of capital}$$

$$EVA (2013) = 1,005,689 \times (1 - 0.35) - (9,277,908) \times (4.97\%) = 653,698 - 461,112 = 192,585\text{€}$$

In 2010 and 2011, company was really profitable since its earnings and return on invested capital significantly exceeded the cost of capital. Although, during all these four years company's ROIC exceeded WACC, the spread between ROIC and WACC was consistently diminishing due to the high decline in ROIC.

The company cost of capital is defined by multiplying the value of total net operating capital by weighted average cost of capital (WACC).

EVA, can also be calculated in terms of ROIC:

If  $ROIC > WACC$ , then EVA will be positive and If  $ROIC < WACC$ , then EVA will be negative.

$$EVA = (\text{Operating capital}) \times (ROIC - WACC)$$

$$EVA (2013) = (9,277,908) \times (7.05\% - 4.97\%) = 192,585\text{€}$$

Market value (MVA) of company is calculated as the difference between company's market value of stock and equity capital supplied by shareholders.

$$MVA = \text{Market value of stock} - \text{Equity capital supplied by shareholders}$$

$$MVA (10/2016) = 4,000,000.00 - 3,185,783.49 = 814,217\text{€}$$

## 5 WORKING CAPITAL MANAGEMENT

Every business needs a certain amount of working capital in order to be capable of sustaining its business activities on daily business. However, net working capital is broader term; because it shows available funds needed to meet working capital requirements and maintain its liquidity position. Net operating working capital shows the difference between the operating current assets and operating current liabilities.

Deloof (2003) conducted analysis of relationship between profitability and liquidity for a sample of 1009 large Belgian non-financial firms. He found a negative correlation between corporate profitability and liquidity, measured by cash conversion cycle, number of days in account receivables and day's sales in inventory. On the other hand, Bolek (2013) suggested a negative relationship between liquidity and profitability, but at some point of time the relation between them can change. An increase in liquidity ratios might cause decline in profitability since company might be over liquid and generate a low rate of return.

According to Gill (2011) firm's management should be able to understand the impact of working capital requirements and liquidity. This means that an effective management of working capital and business stability is dependent on the firm's management ability to bring non-optimal levels of current assets and current liabilities toward their appropriate levels. Filbeck and Krueger (2005) suggest that if cash becomes more quickly available, the need for additional financing decreases. Therefore, firms can reduce costs of financing or interest payments on debt, and can increase funds available for investment by maintaining a proper level of funds tied up in current assets.

Moreover, the modification of traditional accounting framework begins by dividing total assets into two groups of assets, operating assets and non-operating assets. Operating assets include those assets that are necessary for business operation, while non-operating assets are those assets that are not directly used in conducting of business activities. Non-operating assets may include investments in subsidiaries, other companies, and land held for future use.

Some funds needed to finance running of business are provided as a normal consequence of business activities, which are regarded as short-term loans from workers and tax authorities. For example, a certain amount of funds might come from suppliers, registered as account payables, while other funds might come from accrued wages and accrued taxes. These additional funds are called operating current liabilities, whereas current assets used in operations are called operating current assets. Net operating working capital is the sum of operating current assets less operating current liabilities. Here are definitions of net operating working capital and total net operating capital in equation form:

$$\text{Net operating working capital} = \text{Operating current assets} - \text{operating current liabilities} \quad (5.1)$$

$$= (\text{Cash} + \text{Accounts Receivables} + \text{Inventories}) - (\text{Accounts Payable} + \text{Accruals}) \quad (5.1a)$$

$$\begin{aligned} & \text{Total net operating capital} \\ &= (\text{Net operating working capital}) + (\text{Operating long term assets}) \end{aligned} \quad (5.2)$$

Likewise, net operating working capital can also be calculated by adding up the funds provided by investors, including notes payables, long-term bonds, preferred stock, and common equity (retained earnings plus common stock) less short-term investments. This means that we can calculate total net operating capital either from net operating working capital and operating long-term assets, or from the investor-supplied funds. The only distinction is that based on the first definition it is possible to perform the calculation for a division, while it is not possible to make this calculation using the definition based on investor-supplied capital (Brigham & Ehrhardt 2005, pp. 104-105).

## 5.1 Cash Management

Firms need to hold sufficient cash balances to be able to meet unexpected cash needs, pay daily expenses and pay short term obligations. Richards and Laughlin (1980) presented the idea that cash conversion cycle is an important measure of working capital management as it shows the turnover in days. They suggested that cash conversion cycle analysis complement liquidity ratio analysis, because it provides more useful information about liquidity position of a company. The definition of cash conversion cycle can be made by breaking down cash conversion cycle into three components such as inventory conversion period, receivables collection period, and payables deferred period. The cash conversion cycle (hereinafter: CCC) can be computed by the following equation:

$$\begin{aligned}
 CCC &= \text{Inventory Collection Period} + \text{Receivables Collection period} - \text{Payable Deferred period} \\
 &= \text{DSO (Days Sales Outstanding)} + \text{DSI (Days Sales in Inventory)} - \text{DPO (Days Payable Outstanding)} \\
 &\hspace{15em} (5.3)
 \end{aligned}$$

Figure 1 describes the simple cash conversion cycle for a production company and Figure 2 describes the simple cash conversion cycle for a trade company.

Figure 1: Simple Cash Conversion Cycle for a Production Company

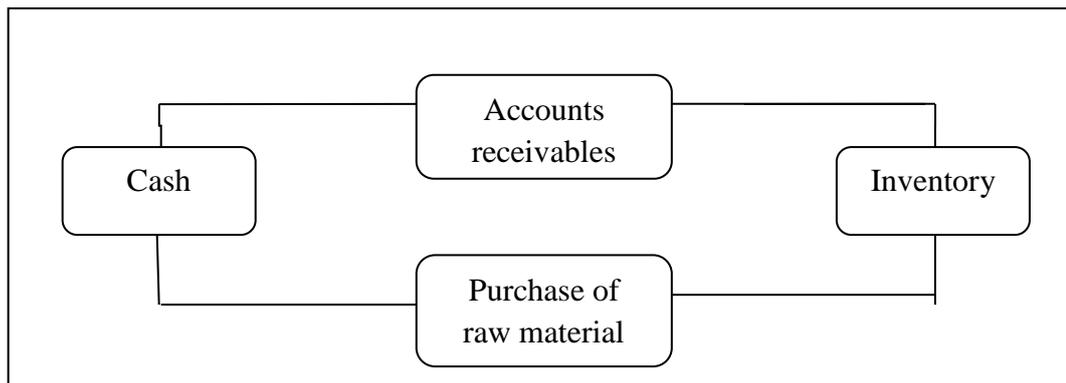
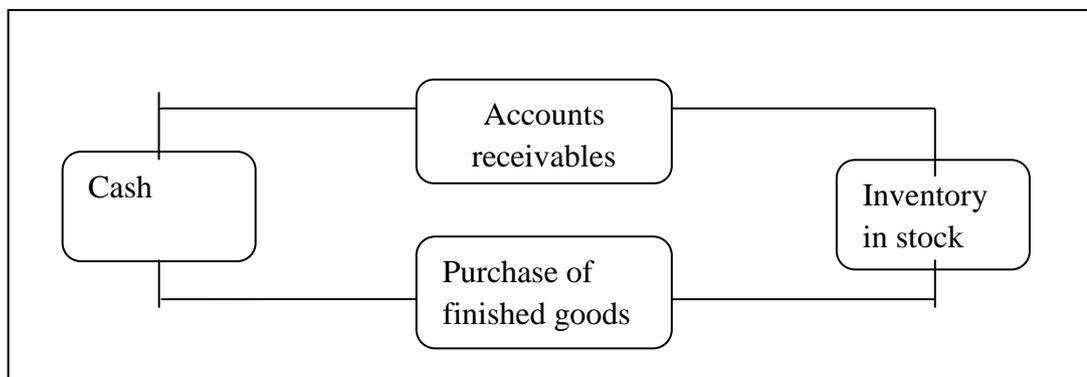


Figure 2: Simple Cash Conversion Cycle for a Trade Company



Cash budgeting analysis estimates future inflows and outflows of cash over the projected period of time. The main sources of these flows are listed below:

Main sources of cash inflows are:

- Cash Sales
- Cash received from debtors (collection of accounts receivables)
- Cash received from sales of investment or assets
- Cash received from other revenue income
- Cash received from positive foreign exchange rate differences, etc

Main sources of cash outflows are:

- Cash payment for purchase of goods
- Cash outflows for payment of operating expenses, taxes, etc

- Cash payment for acquisition/purchase of assets
- Cash withdrawals and repayment of loans
- Cash payment for other revenue expenditure.

## **5.2 Receivables Management**

Receivables management requires excellent understanding of the receivables management policy, and metrics. A business can deliberately extend credit sales due to factors like sales promotion or prevailing market conditions, but firm have to control the risk inherent in the extension of the credit terms. By extending credit sales to their customers firms will undertake two types of risk: 1) the risk of delayed payment, which means that payments will be received beyond agreed payment term and 2) firm can face the risk of delinquency as the firm will not be able to collect some payments and its profit will drop by writing off a certain amount of bad debt.

The critical task of managing credit risk is to balance the need for credit sales and the profit margin on these sales, against the perceived risk of extending the credit sales to a customer. Likewise, another important dimension of receivables management is contract administrations. Usually, contract managed customers are buyers who look for ensuring larger amount of supply or receiving regular services over a period of time, thus they require better prices and lower prices. Commercial terms and conditions in contract signed by contractual parties must not be ambiguous and agreed by both buyer and seller in order to avoid disputes. Thereby, goods and services are delivered to customers with expectation that payments will be made according to payment terms stipulated in contract, but before extending credit to customers' firms should establish a detailed credit policy (Salek, 2005, p. 23).

The main benefits on an effective management of accounts receivables are:

- Increase of cash flow from sales,
- By effectively managing receivables, bad debt losses reduces,
- Lower administrative cost in the entire revenue and cash cycle,
- Decreased deductions and concessions losses,
- Enhanced customer service,
- Decrease administrative burden on sales force.

When a credit sale is made, these transactions occur: (1) inventories are reduced by the cost of goods sold, (2) accounts receivables are increased by the sales price and (3) the difference is profit, which is added to retained earnings. If the sale is made on cash, then the cash from that sale has been received by the firm, but if the sale is on credit, the firm will not receive the cash unless receivables from that sale are collected. The total amount of accounts receivable at any given period of time is determined by two factors: (1) the volume of credit sales and (2) the average length of time between sales and its cash

collections. Average collection period (DSO) is a measure of the average length of time it takes company to collect its credit sales or the average time it takes a customer to pay off for their credit purchases. DSO is often compared to industry average DSO's (Brigham & Ehrhardt 2005, pp. 758-759). Moreover, Fazzari and Petersen (1993) suggested that firms can also reduce the level of accounts receivables by intensifying their efforts to collect delayed payments, or by applying a more restrictive credit sales policy.

### **5.3 Account Payables and Accruals**

Firms generally make purchases from other firms on credit, recording it as an account payable from business transactions. Accounts payable or **trade credit** is estimated the largest financial item of operating current liabilities, representing about 40 percent of current liabilities of the average corporation. The percentage of accounts payable is somewhat larger for smaller firms because small companies often do not meet criteria's for financing from other available sources.

Firms generally pay the employees on biweekly or monthly basis, so the balance sheet will show the amount of accrued wages. Similarly, the firm's own estimated income taxes from sales or service activities, social security and income taxes withheld from employee pay rolls are generally paid on monthly or quarterly basis, hence the balance sheet shows the amount of these accrued taxes along with accrued wages. The amount of such accruals or current operating liabilities increase automatically as the volume of firm's transactions expands. Thus, firms use all accruals they can, but they have little control over the levels of these accounts (Brigham & Ehrhardt 2005, p. 761).

### **5.4 Financing Working Capital**

Working capital policy involves two basic principles, which are: to maintain an appropriate level of working capital and to apply a proper financing policy. According to Filbeck and Krueger (2005) firms can reduce financing costs and increase the funds available for expansion by maintaining a minimal level of funds tied up in current assets. As if the amount of FCF decreases, then the need for additional financing increases and vice versa. Accruals, and advances received from buyers have their impact on liquidity, but main sources of financing working capital needs are considered to be supplier's credit and bank's loan. Short-term loans granted by banks is a source of financing the lack of cash resulting from credit sales increase, purchase of goods, and payment of daily operating expenses. The risk of bad debt loss from credit sales has got a worst impact on company's operation than the borrowing of money to finance liquidity. However, interest payments on debt will increase cost of financing, and the risk of bankruptcy as measured by times-interest-earned (TIE) ratio.

## 5.5 Empirical Analysis of Working Capital Management

Liquidity position of company is particularly important since it indicates the company's ability to meet its short-term obligations by liquidating assets that are considered readily convertible into cash. High volume of company's credit sales for that given period (i.e., period of time 2010 to 2013), was determined by two factors: 1) relatively high length of time between sales generation and collection of trade receivables and 2) very high level of accounts receivables from subsidiaries.

Over that period of time, company's trade receivables average collection period or DSO was 57 days, whereas its average collection period from total accounts receivables was 137 days. By extending credit sales to its customers, company undertook the risk of delayed payments from credit sales. Thereby, if company will not be able to collect some payments within agreed payment term, then it has to write off a certain amount of bad debt and reduce its profit, or it has to borrow additional funds. Company should consistently monitor the quality of credit sales and make sure that average credit sales period offered to its customers is not much longer than average payment period towards its suppliers (i.e., DPO).

Otherwise, it will need additional financing from lenders, or shareholders have to invest new capital in order to maintain a proper level of working capital and be able pay off short-term obligations. When analyzing liquidity position of company the main focus will be on net operating working capital, cash conversion cycle and sources of cash inflows and cash outflows. Net operating working capital and total net operating capital of company can be found using the following equation form:

$$\text{Net operating working capital} = \text{Operating current assets} - \text{operating current liabilities}$$

$$\text{Net operating working capital (2013)} = 21,154,777 - 14,387,826 = 6,766,951\text{€}$$

$$\text{Total net operating capital} = (\text{Net operating working capital}) + (\text{Operating long term assets})$$

$$\text{Total net operating capital (2013)} = 6,766,951 + 2,510,957 = 9,277,908\text{€}$$

The cash conversion cycle measures the average length of time that company tied up cash in working capital. The cash conversion cycle of company will be computed by breaking down cash cycle into three components that are: inventory conversion period (DSI), receivables collection period (DSO) and payables deferred period (DPO) as shown below:

$$\text{Cash Conversion Cycle} = \text{DSO} + \text{DSI} - \text{DPO}$$

$$\text{Cash Conversion Cycle (2010)} = 49.95 \text{ days} + 9.25 \text{ days} - 118 \text{ days} = - 58.90 \text{ days}$$

The negative result of cash conversion cycle in 2010 gives the impression of a good working capital management since a short cash conversion cycle means that cash becomes more quickly available for investments. Although, a very high inventory turnover ratio (39.45 times per year) and long payables deferral period (only 3 times per year) this result does not present the real cash conversion cycle of company. This result is affected more by exclusion of receivables from subsidiaries rather than company has such a short inventory conversion period. The company's cash conversion cycle for 2010 including total amount of accounts receivables is calculated as following:

$$\text{Cash Conversion Cycle (2010)} = 159.67 \text{ days} + 9.25 \text{ days} - 118 \text{ days} = 50.83 \text{ days}$$

The cash conversion cycle of company for the year 2013 without the amount of receivables from subsidiaries is calculated as following:

$$\text{Cash Conversion Cycle (2013)} = 56.20 \text{ days} + 58.33 \text{ days} - 84.49 \text{ days} = 30 \text{ days}$$

The cash conversion cycle of company for the year 2013, but including total amount of accounts receivables is calculated as following:

$$\text{Cash Conversion Cycle (2013)} = 91.18 \text{ days} + 58.33 \text{ days} - 84.49 \text{ days} = 65 \text{ days}$$

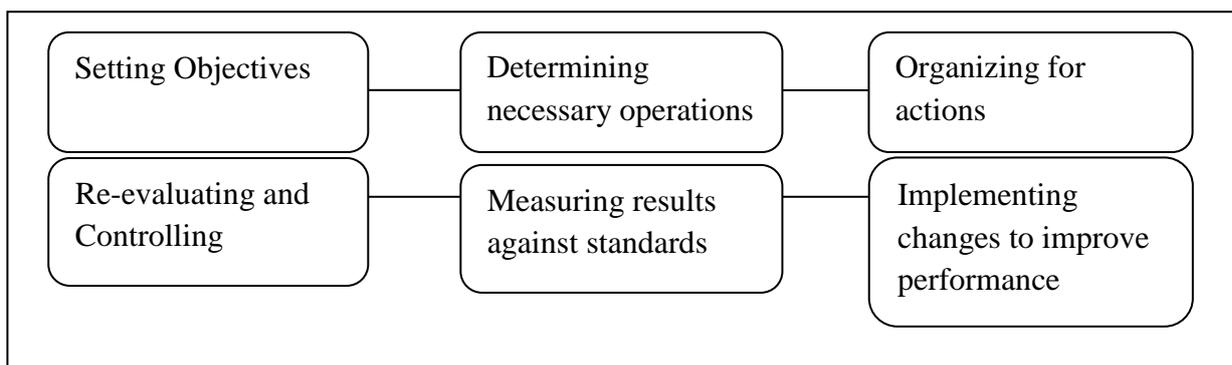
A long and increasing cash conversion cycle leads to conclusion that company supports its sales growth by applying a lax credit sales policy, and by holding a high amount of inventories in stock. However, the long and extending cash conversion cycle of company over that period of time is consequence of low receivable turnover ratio (i.e., averagely 2.80 times per year), and declining inventory turnover ratio. The inventory turnover ratio declined from 39.45 times per year in 2010 to 6.26 times per year in 2013, extending the inventory conversion period from 9.25 days in 2010 to 58.33 days in 2013.

Filbeck and Krueger (2005) argue that firms can reduce financing costs and increase the funds available for investments by maintaining a proper level of current assets. In contrary to their statement, company has tied up a high level of funds in operating current assets and fixed assets. Therefore, company had to borrow funds to finance its investments in operating capital, and the need for additional financing increased financial costs or interest expenses. Suppliers' credit, company own accrued taxes, employee's wages, and social security obligations have also their impact on liquidity position, but in 2013 company spent €1,033 million to reduce those obligations. The result of working capital analysis indicates that managers can improve company's profitability by reducing days sales outstanding (DSO) as well days sales in inventory (DSI). Therefore, maintaining an optimal level of working capital can result in improvement of company's profitability.

## 6 SALES MANAGEMENT

Sales management process is a summary of activities a company should implement according to sales plan and within certain period of time. Many companies train their sales managers to enhance their sales skills, but it is important those trainings to be associated by learning experience and accountability. Jobber and Lancaster (2009), explain that the primary role of a sales manager is to ensure that the sales function is aligned in a manner consistent that helps company to achieve effectively its sales objectives. Nowadays, sales managers are expected to play much more strategic role by increasingly being involved in planning, organizing, and controlling. Moreover, they should be more oriented to maintain profitability growing rather to focus only on sales increase, because the decrease in profitability negatively affects the overall performance of a company. The sales planning process can be described through mission, objective, strategy and tactics. Figure 3 Describes two main stages of sales planning process.

Figure 3: Stages of Sales Planning Process



### 6.1 The Sales Planning Process

During sales planning process firm's management forecasts the sales growth rate, obtains information about competitors' market share and evaluates their potential reaction to our sales strategy. Since sales planning process is estimated to be an important stage for future results, in terms of sales and profitability growth, not only marketing and sales departments should be involved in this process. Likewise, other departments including production or supply chain management, and other related departments should be involved in order to improve the overall efficiency of sales process. Sales planning process involves identifying of potential alternatives and choosing among them, which requires accurate and timely information. According to Jobber and Lancaster (2009), sales planning process can be summarized into following stages:

- Analysis of current market situation
- Determining sales potential/sales forecasting
- Generating and selecting strategies
- Budgeting, implementation and control.

## **6.2 Market Situation Analysis**

Potential market is the maximum expected market share, which a company could reasonably hope to achieve under the best scenario. To increase market share in the sector where the company operates, first it should be able to maintain current market position in that segment. The long-term growth depends on the company's capability to achieve and maintain its growth trends in sales and profitability. For certain period of time, the market growth can be driven by technological innovations, product development, service quality, improve of operational efficiency, and other related strategies. However, the increase of market growth at expense of established companies is not sustainable strategy; therefore it usually creates value in short term perspective, because established competitors can easily react. Likewise, the increase of sales level which is driven by price increase is not a proper strategy which creates value in long run having into consideration the possibility of customers to retaliate by reducing their purchase level, and searching for new products. However, a certain increase in market share might come by pushing out smaller, not well established competitors out of the market. A relatively better and sustainable strategy in long run is estimated to be the increase of market share at cost of other companies which cannot easily retaliate or might not have sufficient information to which they lose a part of market share (Koller, Goedhart &Wessels, 2010, p.85).

## **6.3 Generating and Selecting Strategies**

Customer retention measures the company's ability to retain new potential and generate incomes from existing customers. In literature we can find evidences that a large number of companies generate around 80 percent of their sales from 20 percent of their customers.

## **6.4 Customer's Retention and Problem Solving Capabilities**

The customer oriented approach requires from companies to pay more attention to customer satisfaction rather than to immediate increase in sales level. Therefore, customer approach should be oriented in terms of long term results rather than to pursue necessary increase in sales volume in short run, because customers can retaliate by substituting the type of product or service that is offered by company (Moutot & Bascoul, 2009).

Moreover, Heiman (n.d) suggests that customer orientation is really long-term and sustainable strategy which enables companies to resist economic crises over time and to remain in business in long run. This business approach is essentially different from the traditional sales strategy where sales employees are more trained to convince customers to buy products or company's services rather than to try to establish relationships with them. Therefore, if sales employees will be able to establish relationships and improve customer satisfaction then they can add value in customer's business approach. Therefore, sales employees are ahead marketing department in terms of customer needs and wants, so they

are expected more practically assess how target customers will respond to new products or services offered and marketing methods used. Storbacka (2009) argues that the role of sales person to act more as a relationship manager in order to improve customer satisfaction and loyalty rather than to persuade the sale of type of product or service.

## **6.5 Customer Approach**

At Ciano they work to establish the trust of their partners as their customers are governmental institutions and organizations. They consider putting all their efforts in order to reach acceptable standards of corporate governance and business ethics. The corporate governance and ethics responsibility code serve as guideline for the actions and behavior of their employees, directors and affiliates as they aim to build relationships worldwide. Every year the company attempts to expand network of their business operations, and acquire more customers.

They are organized in centralized teams of purchasing in order to offer good services and delivery goods on time. They also aim to build strong relationships with producers, manufacturers and distributors seeking for best products and reasonable prices. To maintain the course of stable business operation they seek to establish and adapt the environmental, safety procurement, health security and quality assurance policies. When Ciano accepts a certain project, they try to act with a commitment and transparency and they take any measures necessary to ensure that all of their projects comply with undertaken commitments.

Ciano group has a team of over 2,000 trained staff, serving hundreds of customers and impacting millions of people through their services on a daily basis. Moreover, Ciano group is committed to provide their staff active training and development programs, and opportunities for career development. Therefore, they are focused on maintaining their reputation in all of business lines by simultaneously acknowledging their employees for making this possible. Also, they believe that they adopt industry health and safety guidelines to ensure that all of their staff operates in safe environments, in accordance to international standards. Moreover, company has developed comprehensive food supply chains to support customers around the world engaged in activities demanding safe, qualitative and fresh food items (<http://cianointernational.com/ciano-services/food-beverage/food-beverage-services.html>)

The cash budget is a detailed plan showing how cash resources will be acquired and allocated over specified time period for sales, transport and marketing, and for providing other services. Budget is a detailed plan regarding the usage of available financial resources over a period of time. On the basis of the sales forecast, the sales and procurement managers determine what level of expenditures will be required to achieve the forecasted level of sales.

The company's economic and financial budget is prepared for evaluation of opportunities of participations in tenders or acquisition of new contracts. Participation in tenders and accordingly entering into contractual agreements implies implementation of terms and conditions of contracts for ongoing projects.

## **CONCLUSION**

The business performance of company has recently been characterized by sales growth and decline of its earnings. Therefore, the assumption that the projection of potential future growth by analyzing historical revenue growth is a straightforward holds true in this case. Company has reached a higher level of sale each year consistent with their hypotheses, but it is associated with a decline in profitability.

Also, except revenue growth, a company can achieve profit growth by cutting costs, but growth in sales combined with the maintaining the proper level of operating and financial expenses can be evaluated as more sustainable business strategy.

Inventory turnover ratio of company in 2010 and 2011 was estimated to be at acceptable level, but the decline of inventory turnover ratio in 2012 and 2013 or the decline from 39.45 times in 2010 to 6.26 times in 2013 is a drawback. The low inventory ratio could be an indication that the excess inventory levels are being held for given the level of sales. Therefore, excessive funds tied up in operating assets depressed the turnover ( $\text{Turnover} = \text{Sales}/\text{Assets}$ ), but profitability was affected more by lower and declining margin ( $\text{NOPAT}/\text{Sales}$ ). Another potential concern is efficiency in managing operating assets due to high receivable turnover ratio, either trade or total receivables turnover ratio.

The extended credit policy of company incurs the greater the risk of losses from bad debts, and company has to bear high costs of financing accounts receivable. Long daily sales outstanding (DSO) is a signal for company to consider the revise of its credit policy, however, suppliers credit terms (DPO) are yet quite longer than its DSO. In my opinion, for a company whose activity is trade of various kinds of equipment, transport activities, food and catering services, average DSO should not exceed 30 days; however, company's DSO over period of time from 2010 to 2013 changed from 50 days in 2010 to 68 days in 2012.

Likewise, liquidity position of company as measured by current, quick and cash ratio deteriorated during that period. On the other hand, fixed assets turnover ratio of company was very high, but when interpreting the fixed asset turnover ratio it should be taken into consideration the effect of depreciation on fixed assets. Thus, depreciation caused the value of fixed assets that were purchased in the past to be significantly understated, resulting in a high turnover ratio.

Generally, a lower debt ratio means less risk is incurred, because of lower interest and principal payments that company has to pay, but the degree of financial leverage varies across industries and companies. Financing decisions of company's management is reflected in the level of financial leverage, profit and free cash flow. According to Titman et al., (2001) more profitable firms can generate higher earnings (EBIT) necessary for paying off debt.

However, company earnings (EBIT) and simultaneously the capability of debt repayment have consistently declined during that period. Faulkender and Petersen (2006) suggest that larger firms are less leveraged and their significant effect might increase the value of the firm. In contrary to their statement, company's leverage is high either it is measured in terms of debt-to-assets ratio or interest coverage ratio. Its average debt ratio was 83%, while its interest coverage ratio declined from 6.23 times in 2010 to 1.21 times in 2013.

Also, Titman and Wessels (1988) found a positive relationship between growth opportunity and financial leverage. However, in the case of company Ciano, high leverage had positive effect only in terms of sales growth. During that period all profitability ratios (i.e., ROE, ROI, and BEP) and earnings as measured by EBIT and net income notably declined. Return on investment (ROI) declined from 10.50% in 2010 to 4.47% in 2013, whereas return on equity (ROE) declined from 44% in 2010 to 3% in 2013.

EVA is estimated as a better measure of financial performance and true economic profit, because a positive EVA means that company added value. However, the value of EVA or "economic profit" has continually decreased, in respect to increase of cost of capital, and as consequence of lower NOPAT. Higher cost of invested capital incurred derives from new investments in operating capital rather than the increase in WACC.

Although, ROIC during that period was greater than its WACC, the spread between the ROIC and the WACC was consistently reduced during that period. Likewise, NOPAT was not sufficient to cover investments in operating capital, resulting in the negative balance of free cash flow. Hence, company had to use other sources of financing to support its investments and to maintain its liquidity position. There is an exception with Kosovo's subsidiary where the balance of free cash flow over those three years (i.e., from 2013 to 2015) has sufficiently been positive.

Inconsistent with Deloof (2003) assertion that liquidity and profitability are negatively related, company's liquidity and profitability, to some extent, was positively related during that period. Company's liquidity position measured by cash conversion cycle, daily sales outstanding (DSO) and daily sales in inventory (DSI) was diminishing, but its profitability was exceptionally declining. Its profitability mainly declined due to high amount of operating expenses in relation to sales. These results are more compatible to Gill (2011) suggestions that it is more important to maintain an optimal balance between each of the working capital components. Moreover, such results prove the proposition that business

viability is dependent on company's management ability to bring non-optimal levels of current assets and current liabilities toward appropriate level.

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## **APPENDICES**

## **LIST OF APPENDICES**

Appendix A: List of Abbreviations.....	1
Appendix B: Consolidated Balance Sheet as of 31.12.2010.....	2
Appendix C: Consolidated Income Statement from January 01, 2010 to December 31, 2010.....	6
Appendix D: Auditor's Report – Financial Statement at 31 <sup>st</sup> December 2011.....	8

## **Appendix A: List of Abbreviations**

Average collection period (ACP)  
Basic earning power ratio (BEP)  
Capital Asset Pricing Model (CAPM)  
Contribution margin (CM)  
Customer profitability analysis (CPA)  
Daily sales outstanding (DSO)  
Days payable outstanding (DPO)  
Days sales of inventory (DSI)  
Discounted free cash flow (DCF)  
Earnings before interest and taxes (EBIT)  
Earnings before interest taxes depreciation and amortization (EBITDA)  
Economic value added (EVA)  
Equity multiplier (EM)  
First in-first out method (FIFO)  
Free cash flow (FCF)  
Internal rate of return method (IRR)  
Last in- last out method (LIFO)  
Market value added (MVA)  
Market/book-value ratio (P/B)  
Modified internal rate of return method (MIRR)  
Net leverage multiplier (NLM)  
Net operating profit after taxes (NOPAT)  
Net present value method (NPV)  
Price/earnings ratio (P/E)  
Profitability index method (PI)  
Return on assets (ROA)  
Return on equity (ROE)  
Return on invested capital (ROIC)  
Return on investment (ROI)  
Times-interest-earned ratio (TIE)  
Weighted average cost of capital (WACC)

## Appendix B: Consolidated Balance Sheet as of 31.12.2010



**Ciano Trading & Services Srl**  
 Registered Office. Via Dell'Ecologia loc. Vallinbuio  
 Company Capital €800.000 subscribed to and paid up - € 580.000  
 Company Register n.0123243 049 4 - ReaLI 111640  
 Tax Ref: 0123243 049 4

FINANCIAL STATEMENT AT 31.12.2009

### BALANCE SHEET

	31/12/2011	31/12/2010
<b>ASSETS</b>		
A Share capital not paid up (A)	0	0
B Fixed Assets:		
I Intangible Assets		
1) Incorporation costs		
2) Research, development and advertising costs		
3) Industrial patents and intellectual property rights		
4) Concessions, licenses, trademarks and similar rights	580	580
5) Goodwill		
6) Work in progress and advances		
7) Others	4.562	84.006
<b>Total Fixed Assets</b>	<b>5.142</b>	<b>84.586</b>
II Tangible Assets		
1) Land and buildings		
<amortisation reserve>		
<b>Total Land and Buildings</b>		
2) Plant and machinery	264.600	390.181
<amortisation reserve>	-175.957	-248.590
<b>Total Plant and Machinery</b>	<b>88.643</b>	<b>141.591</b>
3) Industrial and commercial equipment	1.909.481	2.206.719
<amortisation reserve>	-1.502.125	-1.559.593
<b>Total Industrial and commercial equipment</b>	<b>407.356</b>	<b>647.126</b>
4) Other assets	627.269	456.224
<amortisation reserve>	-600.938	-429.370
<b>Total Other assets</b>	<b>26.331</b>	<b>26.854</b>
5) Work in progress and advances		
<amortisation reserve>		
<b>Total Work in progress and advances</b>		
<b>Total Fixed Assets</b>	<b>522.330</b>	<b>815.571</b>
III Financial Assets		
1) Equity investments in:		
a) subsidiaries	401.281	366.714
b) associates	16.175	6.500
d) other companies	102.395	66.396
2) Receivables from:	<b>519.851</b>	<b>439.610</b>
a) subsidiaries		
within the next tax year		
beyond the next tax year		
b) associates		



within the next tax year		
beyond the next tax year		
c) mother companies		
within the next tax year		
beyond the next tax year		
d) other companies		
within the next tax year		
beyond the next tax year	26.284	26.417
<b>3) Other equity</b>		
<b>4) Company shares</b>		
<b><u>Total financial assets</u></b>	<b>546.135</b>	<b>466.027</b>
<b>TOTAL FIXED ASSETS ( B )</b>	<b><u>1.073.607</u></b>	<b><u>1.366.184</u></b>
<b>C Current Assets</b>		
I Inventories		
1) Materials, derivatives and consumption materials		
2) Goods being processed and semi-worked goods		
3) Contract work in progress		
4) Finished goods and merchandise	945.101	811.996
5) Advances		
<b>Total Inventories</b>	<b>945.101</b>	<b>811.996</b>
II Receivables from		
1) Trade		
within the next tax year	5.669.453	5.176.854
beyond the next tax year		
2) subsidiaries		
within the next tax year	9.401.997	11.165.040
beyond the next tax year	758.156	
3) associates		
within the next tax year		
beyond the next tax year		
4) mother companies		
within the next tax year		
beyond the next tax year		
4-bis) crediti taxes	59.320	164.860
within the next tax year		
beyond the next tax year		
4-ter) for advance taxes		
within the next tax year		
beyond the next tax year		
5) others		
within the next tax year	51.965	43.021
beyond the next tax year	23.533	23.533
<b>Total Receivables</b>	<b>15.964.424</b>	<b>16.573.308</b>
III Financial Assets not entered as Fixed Assets		
1) Investments in subsidiaries		
2) Investments in associates		
3) Other investments		
4) Company shares		
5) Other securities		
<b>Total Financial Assets not entered as Fixed Assets</b>		
IV Cash and Cash Equivalents		



1) Bank and Post Office deposits	1.834.914	87.661
2) Cheques		
3) Cash on hand	37.591	105.749
<b>Total Current Assets</b>	<b>1.872.505</b>	<b>193.410</b>

**C TOTAL CURRENT ASSETS ( C )** 18.782.030 17.578.714

**D ACCRUED INCOME AND PREPAID EXPENSES ( D )** 118.670 2.517

**TOTAL ASSETS ( A+B+C+D )** 19.974.307 18.947.415

**MEMORANDUM ACCOUNTS**

Guarantees to third parties	1.154.734	
Guarantees to third parties	2.959.264	2.531.864
Third party assets	753.001	641.237
<b>Total Memorandum Accounts</b>	<b>4.866.999</b>	<b>3.173.101</b>

31/12/2011 31/12/2010

**LIABILITIES AND SHAREHOLDERS' EQUITY**

**A Equity**

I Capital Stock	1.180.000	580.000
II Share premium reserve		
III Revaluation reserve		
IV Legal reserve	133.929	82.924
V Company share reserve		
VI Statutory reserves		
VII Other reserves:		
a) Indivisible reserve ex art.2426 Italian Civil Code		
b) Shareholder capital contribution		
c) Reserve for earnings not paid out		
d) Extraordinary reserve		
e) Reserve for advance amortisation		
VIII Profit / Loss brought forward	619.647	625.558
IX Profit / Loss on the year	850.733	1.020.093
<b>Total Net Equity ( A )</b>	<b>2.784.309</b>	<b>2.308.575</b>

**B Provisions for Risks and Charges**

1) Retirement benefits and similar		
2) Tax provisions		
a) Not deferred		
b) Deferred	5.125	10.250
3) Others	0	1.603
<b>Total Provisions for Risks and Charges ( B )</b>	<b>5.125</b>	<b>11.853</b>

**C Employee termination indemnities ( C )** 386.268 305.610

**D Accounts payable**

1) Bonds

within the next tax year		
beyond the next tax year		
2) Convertible bonds		
within the next tax year		
beyond the next tax year		
3) Payables to shareholders for investments		
within the next tax year		
beyond the next tax year		
4) Payables to banks	4.577.524	3.753.132
within the next tax year	989.345	1.146.967
beyond the next tax year		
5) Payables to other financing entities	1.154.734	
within the next tax year	21.989	
beyond the next tax year		
6) Advances		
within the next tax year		
beyond the next tax year		
7) Trade	9.115.263	10.363.182
within the next tax year		
beyond the next tax year		
8) Payables in the form of bills of exchange		
within the next tax year		
beyond the next tax year		
9) Payables to subsidiaries	68.318	18.369
within the next tax year		
beyond the next tax year		
10) Payables to associates		
within the next tax year		
beyond the next tax year		
11) Payables to mother companies		
within the next tax year		
beyond the next tax year		
12) Taxes	343.675	466.783
within the next tax year		
13) Social Security	98.085	111.802
within the next tax year		
beyond the next tax year		
14) Other payables	200.595	188.603
within the next tax year		
beyond the next tax year		
<b>D Total Payables ( D )</b>	<b><u>16.569.528</u></b>	<b><u>16.048.838</u></b>
<b>E Accrued Liabilities and Deferred Income ( E )</b>	<b><u>229.077</u></b>	<b><u>272.539</u></b>
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY ( A+B+C+D+E )</b>	<b><u>19.974.307</u></b>	<b><u>18.947.415</u></b>
<b>MEMORANDUM ACCOUNTS</b>		
Guarantees to third parties	1.154.734	0
Guarantees to third parties	2.959.264	2.531.864
Third party assets	753.001	641.237
<b>Total memorandum accounts</b>	<b>4.866.999</b>	<b>3.173.101</b>

## Appendix C: Consolidated Income Statement from January 01, 2010 to December 31, 2010

<u>INCOME STATEMENT</u>		31/12/2011	31/12/2010
<b>A) REVENUES</b>			
1) Revenues from sales and services		37.586.149	37.586.149
2) Change in contract work in progress			
5) Other revenues and income			
a) Other revenues and income		298.452	350.205
5 TOTAL Revenues and Income		298.452	350.205
<b>A TOTAL REVENUES</b>		<b>37.884.601</b>	<b>37.831.422</b>
<b>B) OPERATING COSTS</b>			
6) Materials, derivatives and consumption materials		24.486.308	26.687.779
7) Services		7.617.676	5.600.927
8) Leasings, rentals and third party property		413.329	398.480
9) Personnel:			
a) salaries and wages		2.625.421	2.424.801
b) social security charges		519.206	476.468
c) severance pay		130.334	126.507
e) other costs			
9 TOTAL personnel costs		3.274.961	3.027.776
10) amortisation and depreciation:			
a) amortisation intangible assets		14.276	14.630
b) amortisation tangible assets		209.201	271.752
c) other depreciation on assets			
d) depreciation on current assets		80.000	82.000
e) other provisions			
10 TOTAL amortisation and depreciation		303.477	368.382
11) Variations on inventory, derivatives, consumption goods and merchandise		-133.105	-258.954
14) Various operating costs		26.868	75.629
<b>B TOTAL OPERATING COSTS</b>		<b>35.989.514</b>	<b>35.900.019</b>
<b>A - B OPERATING INCOME (EXPENSES)</b>		<b>1.895.087</b>	<b>1.931.403</b>
<b>C) FINANCIAL INCOME AND EXPENSE</b>			
<b>16) OTHER FINANCIAL INCOME</b>			
a) income from non-current receivables			
b) interest revenues from non-equity investment securities recognized as fixed assets which do not constitute shares			
c) from securities held as current assets that do not constitute shares			
d) financial income different from the above		428	46.068
d TOTAL financial income different from the above		428	46.068
16 TOTAL OTHER FINANCIAL INCOME		428	46.068
17) interest and other financial charges			



<i>d) payable to others</i>	-411.128	-310.174
<b>17 TOTAL interest and other financial charges</b>	<b>-411.128</b>	<b>-310.174</b>
<b>17-bis) profit (loss) on exchanges. Total (15 + 16 - 17+ - 17 bis)</b>		
a) profit on currency exchange	93.808	68.622
b) loss on currency exchange	-56.618	-159.596
<b>TOTAL 17-bis) profit (loss) on exchanges</b>	<b>37.190</b>	<b>-90.974</b>
<b>C TOTAL FINANCIAL INCOME AND EXPENSE</b>	<b>-373.510</b>	<b>-355.080</b>
<b>D) ADJUSTMENT TO FINANCIAL ASSETS</b>	<b>0</b>	<b>0</b>
<b>E) EXTRAORDINARY INCOME AND CHARGES</b>		
<b>20) income</b>		
<i>b) other extraordinary income</i>	13.526	59.345
<b>20 TOTAL Income</b>	<b>13.526</b>	<b>59.345</b>
<b>21) charges</b>		
a) Losses on disposals	-116.355	
c) other extraordinary charges	-52.167	-12.971
<b>21 TOTAL charges</b>	<b>-168.522</b>	<b>-12.971</b>
<b>E TOTAL EXTRAORDINARY ITEMS</b>	<b>-154.996</b>	<b>46.374</b>
<b>INCOME BEFORE TAXES</b>	<b>1.366.581</b>	<b>1.622.697</b>
<b>22) Taxes due on current year. deferred and advances on taxes</b>	<b>-515.848</b>	<b>-602.604</b>
<b>23) Profit (loss)</b>	<b>850.733</b>	<b>1.020.093</b>



**Appendix D: Auditor's Report – Financial Statement at 31<sup>st</sup> December 2011**

MAZARS

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CIANO TRADING & SERVICE S.R.L.

Financial statement at 31st December 2011 and  
Auditors' Report



 MAZARS



MAZARS

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**CIANO TRADING & SERVICE S.R.L.**

**Financial statement at 31st December 2011 and  
Auditors' Report**



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Date of issue: 23rd April 2012

Report number: RVN7cnz-r.64/12

**Auditors' Report**

To the shareholders of CIANO TRADING & SERVICE S.R.L.

1. We have examined the accounting for the financial statement for Ciano Trading & Service S.r.l. at 31st December 2011. It is the responsibility of Ciano Trading & Service S.r.l. to adhere to the regulations governing the preparation of the financial statement while we have the responsibility of applying our professional judgement on the financial statement and the audit. This report is not issued in compliance with legal requirements given that the audit, carried out in accordance with article 2409-bis and following of the Italian Civil Code, was done by another body, that is not affiliated with this auditing company.
2. Our examination was conducted in accordance with the principles issued by the Consiglio Nazionale dei Dottori Commercialisti e degli Esperti Contabili [National Council of Accountants and Accounting Consultants] and the recommendations of Consob. In compliance with the aforementioned principles the audit was planned and executed with the aim of obtaining all the necessary information to determine that the financial statement has no significant errors and is, overall, a reliable reflection of the company's affairs. The audit process includes a random review of accounting documents as evidence in support of the amounts and information contained in the statement as well as an assessment on the suitability and correctness of the accounting principles used and the reasonableness of the estimates made by the direction. We feel that the work carried out provides a reasonable basis of our professional judgement.

For an assessment of the previous financial statement, whose data is provided for the purposes of comparison, as required by law, we refer you to the report issued by us on 6th June 2011.

3. In our opinion, the financial statement for Ciano Trading & Service S.r.l. at 31st December 2011 conforms to the regulations governing the preparation of said documents; it has been drawn up clearly and is a true and proper reflection of the financial situation and economic performance of the company.

Florence, 23rd April 20102

Mazars S.p.A.  
Raffaella Vanni  
Società - Revisore Legale

MAZARS SPA  
VIA FIUME, 11 - 50123 FLORENCE  
TEL: +39 055 26 54 029 - FAX: +39 055 26 76 232 - WWW.mazars.it

REGISTERED OFFICE: C.SO DI PORTA VICENTINA, 35-20122 MILANO  
SPA- COMPANY CAPITAL VOTED, AND PAID UP €2.803.000,00  
REA N.1059307- -Cod. Fisc.N.01597830489-P. IVA 05902570158- AUTHORIZATION IN ACCORDANCE WITH L.1968139-REGISTER OF AUDITORS GU 6011997  
SPECIAL ROLL OF AUDITORS AS DELIBERATED BY CONSOB N° 17.141 DEL 28/01/2010  
ITALIAN OFFICES: BOLOGNA - BRESCIA - FLORENCE - GENOVA - MILAN - NAPLES - PADOVA - PALERMO - ROME - TURIN

Praxity

R.V.G.N.: 1359/2012  
CRON. N.: 1551/2012

## TRIBUNALE DI LIVORNO

L'anno 2012 il giorno 26 giugno ,

Nel Tribunale di Livorno/Giudice di Pace, davanti al sottoscritto Cancelliere è

personalmente comparso il Sig. Nicolas Nicolaidis

Nato a *Londra (GB)* il 03/03/1964

Residente in *Livorno, Via Verdi, 15*

Identificato con Carta d'Identità n. 1930293AA scadente il 29/07/2018

Che chiede di asseverare con giuramento la *traduzione*

Che precede.

Il comparente presta il giuramento di rito



L.c.s. *Nicolas Nicolaidis*

IL CANCELLIERE



FUNZIONARIO GIUDIZIARIO  
Luisa Lori



CIANO TRADING & SERVICES S.R.L.  
BASED IN LIVORNO - VIA DELL' ECOLOGIA (LOCALITÀ VALLINBUIO)  
CAPITAL SHARE AUTHORISED AND SUBSCRIBED € 2,580,000= PAID UP € 1,180,000=  
ENTRY ON THE BUSINESS REGISTER UNDER No. 01232430494 – ECONOMIC ADMINISTRATIVE (R.E.A.) OF LIVORNO No. 111640  
TAX ID No. AND VAT ID No. 01232430494

BALANCE SHEET AS AT DEC. 31st 2012

STATEMENT OF ASSETS AND LIABILITIES

	Dec. 31 <sup>st</sup> 2012	Dec. 31 <sup>st</sup> 2011
<b>ASSETS</b>		
<b>A Receivables from partners for unpaid contributions</b>		
<b>B Fixed assets</b>		
<b>I – Intangible assets</b>		
4) Concessions, licenses, trademarks and similar rights	580	580
7) Others	3,493	4,562
<b>Total intangible assets</b>	<b>4,073</b>	<b>5,142</b>
<b>II – Tangible assets</b>		
2) Plants and machinery		
< accumulated amortisation >	-195,181	-175,957
<b>Total plants and machinery</b>	<b>99,225</b>	<b>88,643</b>
3) Industrial and commercial equipment		
< accumulated amortisation >	-1,678,510	-1,502,125
<b>Total industrial and commercial equipment</b>	<b>659,857</b>	<b>407,356</b>
4) Other property		
< accumulated amortisation >	-602,683	-600,938
<b>Total other property</b>	<b>41,379</b>	<b>26,331</b>
<b>Total tangible assets</b>	<b>800,461</b>	<b>522,330</b>
<b>III - Long-term investments</b>		
1) Shareholding in:		
a) Subsidiaries	401,281	401,281
b) Associated companies	0	16,175
d) Other companies	102,396	102,395
<b>Total shareholdings</b>	<b>503,677</b>	<b>519,851</b>
2) Receivables		
d) From others		
Due within the following financial year		
Due after the following financial year	26,284	26,284
<b>Total long-term investments</b>	<b>629,961</b>	<b>546,135</b>
<b>TOTAL FIXED ASSETS</b>	<b>1,334,495</b>	<b>1,073,607</b>
	31/12/2012	31/12/2011
<b>Current assets</b>		
<b>I - Outstanding balances</b>		
4) Finished goods and merchandise		
<b>Total outstanding balances</b>	<b>4,856,283</b>	<b>945,101</b>
<b>II - Receivables</b>		
1) From clients		
Due within the following financial year	7,527,287	5,669,453
Due after the following financial year		
2) From subsidiaries		
Due within the following financial year	9,367,126	9,401,997
Due after the following financial year	404,661	758,156
4-bis) Tax receivables		
Due within the following financial year	55,767	59,320
Due after the following financial year	93,085	0
5) From others		
Due within the following financial year	70,912	51,965
Due after the following financial year	33,850	23,533
<b>Total receivables</b>	<b>17,552,688</b>	<b>15,964,424</b>

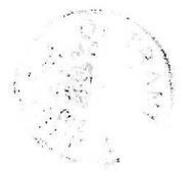


III - Financial assets which do not constitute fixed assets  
**Total financial assets which do not constitute fixed assets**

IV - Cash on hand		
1) Bank and postal deposits	169,622	1,834,914
3) Cash and cash equivalents on hand	55,110	37,591
<b>Total cash on hand</b>	<b>224,732</b>	<b>1,872,505</b>
<b>C TOTAL CURRENT ASSETS</b>	<b>22,833,703</b>	<b>18,782,030</b>
D <b>Accrued income and pre-paid expenses</b>	<b>130,521</b>	<b>118,670</b>
<b>TOTAL ASSETS</b>	<b>24,098,719</b>	<b>19,974,307</b>

	31/12/2012	31/12/2011
<b>LIABILITIES</b>		
<b>A Net worth</b>		
I - Capital	1,180,000	1,180,000
II - Premium reserve		
III - Revaluation reserves		
IV - Legal reserve	176,466	133,929
V - Reserve for treasury shares		
VI - Statutory reserves		
VII - Other reserves:		
a) Shareholders' capital contributions	2,593,359	
VIII - Profit / loss brought forward	665,422	619,647
IX - Operating profit / loss	168,754	850,733
<b>A Total net worth</b>	<b>4,784,001</b>	<b>2,784,309</b>
<b>B Provisions for liabilities and charges</b>		
2) For taxes		5,125
<b>B Total provisions for liabilities and charges</b>	<b>0</b>	<b>5,125</b>
<b>C Employee severance indemnity</b>	<b>622,200</b>	<b>386,268</b>
<b>D Debts</b>		
4) Debts payable to banks		
Due within the following financial year	6,734,322	4,577,524
Due after the following financial year	707,869	989,345
5) Debts payable to other lenders		
Due within the following financial year	0	1,154,734
Due after the following financial year	16,043	21,989
7) Debts payable to suppliers		
Due within the following financial year	10,218,645	9,115,263
Due after the following financial year		
9) Debts payable to subsidiaries		
Due within the following financial year	28,948	68,318
Due after the following financial year		
12) Tax liabilities		
Due within the following financial year	121,025	343,675
Due after the following financial year		
13) Due to social sec. and welfare institutions		
Due within the following financial year	121,633	98,085
Due after the following financial year		
14) Other debts		
Due within the following financial year	440,407	200,595
Due after the following financial year	181,391	0
<b>D Total debts</b>	<b>18,570,283</b>	<b>16,589,528</b>
<b>E Accrued liabilities and deferred income</b>	<b>222,235</b>	<b>229,077</b>
<b>TOTAL LIABILITIES AND NET WORTH</b>	<b>24,098,719</b>	<b>19,974,307</b>

CONTRA ACCOUNTS		
	Dec. 31 <sup>st</sup> 2012	Dec. 31 <sup>st</sup> 2011
Guarantees granted by third parties	0	1.154.734



Guarantees granted to third parties	3,471,451	2,959,264
Third party assets	987,826	753,001
<u>TOTAL CONTRA ACCOUNTS</u>	<u>4,459,277</u>	<u>4,866,999</u>







TRIBUNALE DI TRANI  
SEZIONE DI MOLFETTA  
Cancelleria Civile  
Tel.080/3386455-Fax 080/3386456



N. 158 M cron.

VERBALE DI GIURAMENTO DI TRADUZIONE

L'anno duemila trecento giorno ventiseptte del mese di luglio avanti

il sottoscritto Cancelliere del Tribunale su intestato è comparso il  
sig. MASTROPASQUA SAVERIO nato/a MOLFETTA  
il 30/05/1957 identificato con CI N. A0025802 rilasciata  
dal COMUNE DI MOLFETTA il quale chiede di asseverare l'acclusa  
traduzione dalla lingua ITALIANA alla lingua italiana INVERSE -

Il Cancelliere, previe ammonizioni di legge, invita il traduttore al giuramento di rito,  
che egli presta ripetendo: "Giuro di avere bene e fedelmente adempiuto alle funzioni  
affidatemi al solo scopo di far conoscere la verità".

Letto, confermato e sottoscritto.

IL CANCELLIERE  
(*dr Maria Assunta Tassari*)



Il Traduttore  
*[Signature]*