## Czech University of Life Sciences Prague

 Faculty of Economics and Management Department of Economics and Management (PEF)
# C Z E C H UNIVERSITY OF LIFE SCIENCES PRAGUE 

Diploma Thesis

Financial analysis of "Procter\&Gamble"

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## CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## DIPLOMA THESIS ASSIGNMENT



## Objectives of thesis

The main goal of this diploma thesis is to assess and evaluate financial position of an existing company, based on the data from 2008-2019. Including that, this financial analysis is about to determine vitality of company's operation strategy. This diploma thesis will focus on "Procter \& Gamble" business and economic strategies and will help to define expected company's behavior in the next couple of years.

## Methodology

The methodology will involve trend analysis in order to evaluate financial results of "Procter \& Gamble" during 12-years time period. Trend analysis is attempts to identify major trend changes based on recently observed data. Additionally, the data will be based on financial results from 2008 till nowadays in order to detect general information about company's wealth. The next step is implementing ratio analysis. The main reason why ratio analysis is fulfilled due to comparative data can demonstrate how a company is performing over time and can be used to telegraph likely future performance. Additionally, financial ratio will help to understand several financial processes and weaknesses of "Procter \& Gamble" company and compare them with "Unilever". Finally, company's industrial position will be assessed.

## The proposed extent of the thesis

60-80

## Keywords

Financial analysis, economic decision making, Procter \& Gamble, ratio analysis, viability, trend analysis, comparison.

## Recommended information sources

Helert, Erich A. Financial Analysis Tools and Techniques. New York: McGraw-Hill, 2011. 480p. ISBN-10:
0071378340
Keown, A. J., John D. Martin., William P., Scott, D.F. Financial management: Principle and Application.Virginia:2004, 801 p. ISBN 0-13-145065-4
Lawrence R., Daniel C., Johnson B., Fred M. Financial Reporting and Analysis. New York: McGraw-Hill/Irwin, 2008. 1152 p. ISBN-10:0073527092
Palepu, K. G., Paul, M. H. Business Analysis and Valuation: Using Financial Statements; 4 edition. Mason: South Western Educational Publishing, 2007. 336 p. ISBN-10:0324302924
Vance D. Financial Analysis and Decision Making. New York: McGraw-Hill, 2002. 428 pages. ISBN-10: 0071590064

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## Declaration

I declare that I have worked on my diploma thesis titled "Financial analysis of Procter \& Gamble" by myself and I have used only the sources mentioned at the end of the thesis.

In Prague on date $\qquad$

Signature

Saiyora Kubdasheva

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Financial analysis of "Procter\&Gamble"

Finanční analýza společnosti "Procter \& Gamble"

## Abstrakt

Cílem této diplomové práce je provedení finanční analýzy, na které budou analyzovány výsledky působení firmy na trhu. Kromě toho budou záznamy založeny na finančních výsledcích za poslední konkrétní roky, od roku 2008 do roku 2019, aby bylo možné identifikovat široké informace o pokroku společnosti a dynamice oblasti výkonnosti společnosti.

Hlavní metody, které jsou implementovány pro stanovení důležitosti dat účetního výkaznictví, jsou: vertikální analýza (strukturální) a horizontální analýza (tzv. trend).

Horizontální analýza zkoumá soubor údajů účetní závěrky v průběhu času. Vertikální analýza hodnotí data účetní závěrky tak, že každou položku řádku vyjadřuje jako procento z celkové částky. Vazba mezi vybranými složkami dat účetní závěrky je vyjádřena poměrovou analýzou.

Horizontální analýza se ve velké míře používá pro porovnávání společností. Nejdůležitějšími faktory analýzy trendů jsou časové řady a rozpoznávání. Další analýzou, která bude implementována, je finanční poměrová analýza, která bude v zásadě analyzovat veřejně sdílená data společnosti v jejích finančních výkazech: rozvaze, výsledovce a výkazu peněžních toků.

Po vyčíslení všech potřebných údajů bude porovnáno $s$ finančními výsledky konkurenta, kterým je „Unilever" a bude porovnáno. Na závěr bude na základě získaných dat popsána finanční výkonnost společnosti.

Keywords - : ekonomické rozhodování, Procter Gamble, poměrová analýza, finanční analýza, analýza trendů, srovnání

## Abstract

The goal of this diploma thesis is to implement a financial analysis on which outcomes of the company's performance in the market will be analyzed. Furthermore, the records will be based on financial results from the last particular years, from 2008 to 2019, in order to identify broad information about the company's progress and the dynamics of the company's performing area.

The main methods which are implemented for determining the importance of financial reporting data are: vertical analysis (structural) and horizontal analysis(so-called trend).

A horizontal analysis examines a set of financial statement data over time. The vertical analysis assesses financial statement data by expressing each line item as a percentage of the total amount. The link between selected components of financial statement data is expressed through ratio analysis.

Horizontal analysis is largely used for comparing companies. Respectively, the most important factors of trend analysis are time series and recognition. Another analysis that will be implemented is financial ratio analysis, which basically will analyze the publicly shared data of the company in their financial statements: balance sheet, income statement, and cash flow statement.

After calculating all the necessary data, it will be compared to the financial results of the competitor, which is "Unilever" and will be compared. As a final touch, the company's financial performance will be described based
on the obtained data.
Keywords-: economic decision making, Procter Gamble, ratio analysis, financial analysis, trend analysis, comparison

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## Chapter 1

## INTRODUCTION

### 1.1 INTRODUCTION

An economic system which can only expand or expire must be false to all that is human. Edward Abbey, Desert Solitaire

In a global market economy, which is determined by its constant uncertainty, businesses are facing difficult economic conditions. They are exposed to constant environmental changes as well as uncompromising pressure from competitors trying to improve the quality of the products and services day by day and constantly progressing ahead. This fact negatively affects the efficiency of the company's business model.

The business subject in order to be able to maintain a stable and competitive position in the market, to provide material for management, make important strategic decisions and achieve their economic goals, are forced to constantly analyze and control their financial situation, which includes financial subjects and surrounding situation. Financial analysis is used exactly for these purposes. With financial analysis, the business subjects are capable of preventing the crisis, which directly could lead to bankruptcy.

The main goal of this diploma thesis is to assess and evaluate the financial position of an existing company, based on the data from 2008-2019 and to compare the current financial performance. Including that, this financial analysis is about determining vitality of a company's operation strategy. This diploma thesis will focus on "Procter \& Gamble" business and economic strategies and will help to predict expected company's behavior in the next couple of years.

Tasks of the thesis:

- To analyze the essence, types and outcomes of the financial analysis
- To evaluate the company's financial health and stability according on the basis of the obtained results
- To determine the vitality of "Procter \& Gamble" company operation strategy according analyzed financial analysis
- To summarize overall ratio trend of "Procter \& Gamble" company and compare with "Unilever" ratio trend in order to understand company's financial processes and main weaknesses
- To formulate suggested recommendations for enhancing "Procter \& Gamble" company's economic and financial proficiency considering all obtained results

The object of this study is financial analysis, and the subject is analyzing financial performance of Procter \& Gamble company in 2008-2019 years.

The theoretical part of master's degree diploma thesis is to focus on general information based on financial strength of the company with the help of the Income statement, Cash flow statement and Balance Sheet. The practical part of the diploma thesis used to analyze financial stability of profitability and liquidity. The following objective is to find out and evaluate a company's prospects of making business decisions. Finally, provided data encourages the development of economic decision-making.

## Chapter 2

## OBJECTIVES AND METHODOLOGY

### 2.1 Objectives

The objective of this diploma thesis is to provide basic knowledge about financial analysis and subsequently evaluate the company's progress in the financial and economic area the company should rely on. Additionally, it also aims to determine weaknesses and threats that could lead to fallings into difficult situations and based on results assess the company's business intentions. The purpose of the thesis is to examine the essence of financial analysis, the characteristics of its types, the functions of financial analysis and the main methods. The diploma thesis includes several main parts of the research. The first part includes all methods, which will be used by the author, while analyzing a particular company. In the first part three analyses will be described: common-size analysis, trend analysis and financial-ratio analysis. Next chapter will include the financial portfolio of the "Procter \& Gamble" company: general information, including history, product classification and company structure and so on. Therefore, the author will be able to gain general information about the "Procter \& Gamble" company. The last part will include financial analysis of the company and main outcomes of the research.

### 2.2 Methodology

The methodology will involve following several analyses: horizontal and vertical analysis, financial ratio analysis. After careful analyzing and utiliz-
ing the mentioned analysis methods, below aspects of the company will be studied:

- Revenue and its growth
- Profitability
- Efficiency
- Liquidity
- Capital structure - Debt - Equity
- Solvency

Additionally, the records will be based on financial results from the last couple years from 2008 till 2019 in order to detect general information about the company's wealth and indicate the company performing area's current dynamics. As the main information base, the financial reports of the company will be taken into consideration to get a detailed look over particular years. The next step is implementing financial ratio analysis .

The main reason why ratio analysis is fulfilled due to comparative data can demonstrate how a company is performing over time and can be used to telegraph likely future performance. Additionally, financial ratios will help to understand several financial processes and weaknesses of "Procter \& Gamble" company and compare them with "Unilever" company's financial ratio analysis. Finally, the overall ratio trend will be analyzed.

The practical part will be about analyzing and summarizing financial activities of the company and gaining information about the company's economic and industrial position.

There are different criteria which can set the path of financial analysis. Additionally, in this diploma thesis two main methods will be utilized by the author. The first one, technical financial analysis which is based on mathematical and statistical methods.

In the field of elementary methods, it is a vertical analysis (structural), within which the evaluation of the development of the individual elements, and horizontal analysis (trend), which are presented in 3.7 and 3.8 chapters, respectively.

The most important tools of horizontal analysis include the time series and recognition, relatively. Comparative financial analysis is usually complementary to technical financial analysis. Comparison may be based on a comparison with the so-named standard data indicators. We can easily conclude that this method is convenient, provided that the analyst always keeps in mind the specifics of the economic environment, sectoral specificities, respectively sector and corporate. The standard values may contribute to the creation of the basic concepts of the economic and financial situation of the company when assessing the size of the indicators.

It may also be used when comparing different companies with a comparative base and according to such a base is chosen the methodology and evaluation of results. A special "offshoot" of comparative financial analysis is so called benchmarking, when the company compares itself with the best subject in its field, in order to strengthen their merits and eliminate its weaknesses compared with the "best" firm that represents this "benchmark". Three most commonly tools which are used to assess the significance of the financial reporting data are:
Horizontal analysis evaluates a series of financial statement data over a period of time Vertical analysis evaluates financial statement data by expressing each item in a financial statement as a percent of base amount Ratio analysis expresses the relationship between selected items of the financial statement data Horizontal analysis is used primarily for inter-company comparisons.

This analysis is also called trend analysis, which is a technique for evaluating a number of financial statements for a certain period of time. Its purpose is to determine if the increase or decrease that took place. This change can be expressed either as an amount or as a percentage.

Vertical analysis is used for both intra-firm and inter-firm comparisons. Additionally, vertical analysis as well as common-size analysis is a method that expresses each line item in the financial statements as percent of the base amount. On the balance sheet, total assets might be considered as the base amount. Or, in the income statement, net sales are the base amount. Vertical analysis shows the relative size of each category in the balance sheet / income statement.

Ratio analysis expresses the relationship between selected items of financial reporting data. A ratio expresses the mathematical relationship between one quantity and another. Relationships are expressed in terms of either a percentage, a rate, or a simple proportion. Various relationships are dis-
cussed later in chapter 3.9 Financial-ratio analysis.
In order to obtain the information for the diploma thesis the author analyzed the following economical statements as the default and basic source for the financial analysis of "Procter \& Gamble" company. For instance, financial accounting statements that might otherwise be marked as external reports providing information primarily to external users.

The reports provide an overview of the status and structure of asset sources of its coverage (balance sheet), the creation and use of income (profit and loss) and, finally, cash flow flow processes (cash flow statement). In general, data for financial analysis, which was mainly used in the analysis can be summarized as it follows:
Quantifiable non-financial information - containing business statistics mainly used by production volume, sales, employment, brochures, consumption standards, internal directives.

Information that cannot be quantified. This information can not be quantified, but it might be the area of financial management's major impact.

This information includes, in particular, reports of the managers of individual divisions of the company, comments of managers; Financial information includes financial statements and annual reports, inside information, forecasts of financial analysts and company management, etc., so it is clear that inside information is not the only one falling under financial information, and external information belongs to such an area as well.

Among the most important financial analysis documents are financial statements. Financial statements are the standard and primary source of information for financial analysis for all stakeholders inside and outside the company. They are part of financial statements, which must be prepared by all companies in accordance with the Act. Financial statements include: the cash flow statement, the income statement and balance sheet.

The cash flow statement is a reaction in a certain period of time (for example, monthly, quarterly or annually) business, investment and financing activities arising from the influence of cash and cash equivalents in the financial statements. This report shows the balance sheet and income statement of cash and cash equivalents to influence and conduct an analysis in accordance with the company's business, investments and financing perspective.

As an analytical tool, the main function of the cash-flow statement is to determine the short-term survival ability, most importantly the ability to pay the bill.

The income statement is a report of the certain period of time (most probably, one year) of the sales revenue or income received, goods sold at reasonable cost, and the remaining after costs profit (net income). Income statement items according to profit allocation and structure divided into two parts. Part of the profits listed first of sales revenue, cost, and then subtract out sales minus profits from sales; the entire cost is obtained after the operating profit (loss). plus or minus operating income and expenses, this is the total profit (loss).

The balance sheet is a detailed presentation of the assets, liabilities and equity of a company in monetary equivalents at a specific point in time. Since the balance sheet is tied to a specific date (beginning or end of the corresponding period), in order to assess the changes that have occurred, it is necessary to carry out such "photography" periodically (for example, once a month, quarter, half a year, year).

Thus, the balance sheet is static and cumulative in nature and reflects the results of the economic activities of the enterprise since its inception.

## Chapter 3

## LITERATURE REVIEW

### 3.1 Goal of financial analysis

Financial position of an economic entity is considered to be a complex result of its whole performance. This result is illustrated in the form of activity coefficients, profitability, liquidity, indebtedness and market value. These indicators are based on synthetic indicators of financial accounting and they demonstrate the complexity of the business interpretation of the subject's work (Baran and Pastýr, 2014).

To have a qualitative picture of a company's financial position, there is a qualitative and relative method of analysis of its financial position. The company's management wants to have information about the enterprise's financial position:
whether the company is solvent, has obligatory monetary means, what are its current and long-term liabilities, how effectively are current and fixed assets used, what is the value of its equity capital, its structure and profitability. Based on a true and fair view of the current financial position of the company, the management can make correct management decisions.

Mackevičius points out that a correct analysis of the financial position aids to define whether the management decisions made in the past were correct and current management decisions are reasonably grounded, whether there is any possibility of making management decisions in the future, which would be logical and argumentative (Baležentis, Vijeikis, Gimžauskiené, Kloviené, 2010).

The main purpose of financial analysis is to express assets and the fi-
nancial position of the company and to prepare the inputs for internal management decision making. The complexity and continuous execution are the essential requirements of the correct financial analysis (Hrdý, 2009).

### 3.2 Essential principles of the financial analysis

Financial analysis aims at assessing and evaluating the financial health of the company by identifying the strengths and weaknesses of the primary processes taking place in the company.

Although the terms "financial situation", "position" and "health" are used interchangeably, it is very important to distinguish the differences between them. Financial position of the enterprise depends on financial efficiency, measured mainly by profitability indicators.

The concept of financial health reflects a satisfactory financial situation of the company. It is based on the company's long-term ability to pay duties and obligations (liquidity ratios) and the ability to generate sustainable profits (profit metrics).

Financial position also depends on the liquidity measurement, as this is indicated by the financial risk associated with the ability to settle financial obligations and regulate sources of financing. In other words, the company's decision on the capital structure may become a fundamental factor in the future performance.

The fundamental objective of financial analysis is to obtain the most important and relevant financial indicators that provide the management of the company with objective, reasonable and the company's complex financial picture. The procedure of the financial analysis of an enterprise includes:

- representation of the preceding development of financial performance
- identification of changes in financial performance over time
- determination of the major factors causing changes in the financial indicators
- preparation of appropriate actions for strengthening processes in the company, develop its financial position and situation


### 3.3 Methods of the financial analysis

There are different criteria that can determine the way and further perspective of financial analysis. There are several methods of financial analysis. The most popular and commonly used are the following (Růžičková, 2011):

- vertical (structural)
- horizontal (dynamic)
- comparative
- integral (factorial)
- method of coefficients

Vertical analysis is the presentation of financial indicators in the form of relative values (specific weights) that characterize the structure of the summarizing final financial indicators. The purpose of vertical analysis is to calculate the proportion of individual items in the total balance sheet.

After that, a comparative analysis is carried out with similar indicators of previous periods. Vertical analysis can be carried out both on the original and on the cumulative reporting.

It allows you to determine the ratio between equity and capital, assets, and also to determine the capital structure for individual elements (Pontiff and Schall, 1998).

Respectively, Pontiff and Schall have also examined that horizontal analysis can be presented as determining the dynamics (changes) of financial indicators, identifying trends in the values of various reporting items for a certain period with the subsequent assessment of these changes.

When carrying out this type of financial analysis, it is required to construct several analytical tables, in which both the absolute balance sheet indicators and the relative growth (decline) rates are entered. Baseline growth (decline) rates for several periods serve as the initial data.

Comparative financial analysis usually is supplementary to the trend analysis. Comparative analysis is the process of identifying relationships between phenomena with the definition of common (uniting) and with the definition of various.

Comparative analysis is used when it is necessary to compare the performance indicators of an enterprise with similar values of indicators of competitors or average results in the industry.

The specific "offshoot" of the comparative analysis is so-called "benchmarking" when a company compares itself to the best entity in its field in order to enhance its merits and eliminate them.

Thereby, comparative analysis can be used within an enterprise to compare specific performance indicators across workshops, departments, divisions, or workers. When using the method, it is necessary to observe the principle of comparability in terms of time, content and structure of indicators. The comparison can be based on so-called standard data metrics.

Integral (factorial) analysis is the process of examining the influence of individual financial indicators (exogenous) on the analyzed (resulting, endogenous) indicator.While implementing this process, deterministic and statistical research methods are used. Ratio analysis is used in all types of comparisons, which were mentioned above. Ratio analysis expresses the relationship among selected items of financial reporting data. A ratio expresses the mathematical relationship between one quantity and another.

Relationships are expressed in terms of either a percentage, a rate, or a simple proportion. In order to carry out the financial analysis, it is not necessary to count and analyze all the indicators.

From the point of view of assessing the financial condition of an enterprise, two of the indexes, such as solvency and efficiency, are of the greatest interest. Each subordinate group of indicators, in turn, contains a set of more detailed coefficients.

### 3.4 Financial analysis of a company

The financial analysis of the company as a method of the company's financial management evaluation, during which the shared data is assorted, aggregated and compared to each other. Furthermore, the relationships between them are quantified, looking for the causal connection between the data and their development.

This increases the explanatory power of data processing and its informative value. Thus, it focuses on identifying problems, strengths, weaknesses and foremost the company's value processes. Information obtained through financial analysis enables us to reach some conclusions about general management and the financial situation of the company and represents a background for management decision-making (Sedláček, 2009).

Sedláček also points out that financial analysis helps to understand the position of the company, both ex-post and possible future development with sustainability.

Financial analysis is used to analyze whether the company is persistent, solvent and to what extent liquid or profitable.

In other words, it examines the company's past performance in order to optimize the ratio of individual items and including that attempt to obtain the company's future. Company management is not the only user of financial analysis. others are, for example, creditors (usually banks), investors, business owners, that's why the data gathered from the financial analysis should be interpreted clearly and accurately due to the fact it's of absolute importance for the effective managing and strategic decision-making.

### 3.5 Limitations of the financial analysis

Financial analysis can be viewed as a multipurpose financial appraisal tool, there are a number of limitations that should be considered when analyzing a company's financial statements.

Intrinsic in the use of financial ratios are limitations that if they are not made up and interpreted correctly could result in drawing incorrect conclusions from the results (Barry and Jamie Elliot, 2006).

The financial ratio consists of a numerator and a denominator. If either the numerator or denominator is misstated, then the financial ratio will be in error. A misinterpretation in the numerator or denominator can be the result of human error. For example, an error may have been made in the collection of data from the financial statements of firms.

Alternatively, firms can use profit management techniques (eg, accrual manipulation) that distort the data itself. In either case, users of financial
statements and scientists will receive the results of their analysis, which may lead to erroneous conclusions (Richard Brealey, 2011).

The financial ratios derived from the financial statements of a particular firm are based on the accounting principles, accounting methods, and accounting classifications chosen by the firm.

These options may not overlap over time or across firms, compromising comparability. Financial statement users and researchers alike need to understand that the availability of accounting choices under generally accepted accounting principles (GAAP) may provide firms with greater flexibility in financial reporting, but it also can lead to a decline in comparability of a firm's financial results over time and between other firms.

Casual discrepancy between numbers can be caused, for example, inflation, which can distort the balance sheet as well as profits over time, by write-offs of assets, which could lead to a discrepancy between the accounting value and real value, by underestimated / overestimated reserves or by accelerated recognition of revenues (overbilling / underbilling of the account).

Likewise, some items may not even be mentioned in financial statements, for example some elusive assets such as R\&D and brands, which are not reflected in the balance sheet, because accounting rules in most countries specifically prevent their capitalization (V. Bocharov, 2007).

Including that, another problem arises from the high dependence on the prevailing situation. One of the main reasons for the creation and interpretation of any financial analysis is predicting and improving future outcomes, in the form of planning, while the sources for this are a matter of the past.

The expectation problem of prevailing situations or at least such a development applies not only to the company itself, but also to the future behavior of markets and political will. The results and forecasts obtained on the basis of any financial analysis largely depend on predictable political stability and, of course, the state of financial markets in general, which must be taken into account when interpreting the results (A. Rice, 2013).

For some specific problems that may arise internally, there is a possibility to name the overall uncertainty of the results. For instance, a company might have some good and bad ratios, which makes it hard to tell if it's good or weak companies or decide which ratio is more relevant and how much.

Also it could be sometimes it is difficult to decide whether a particular ratio is good or bad, for example high cash ratios, which can be interpreted as an advantage, the company generates large cash, but it can also be seen as a lack of investment space, which can lead to devaluation the whole company on time. In addition, each company is unique with many features and what may seem like a good sign for one company can be very problematic for another.

Therefore, it is necessary to always consider all aspects of the company, and not just its accounting figures and figures from financial analysis only. To sum up everything financial analysts should be familiar with the following issues (Barry and Jamie Elliot, 2006):

- The variety of financial reporting standards can cause several issues when comparing a selected company within an industry or with competitors using a different accounting standard. While IFRS or GAAP are becoming the generally accepted accounting model, many countries require their own national standards to be applied. Moreover, companies can aggregate financial information in various ways. This diversity leads to the consequence that sometimes obtained financial results cannot be compared, and the financial analysis should be evaluated carefully.
- The influence of inflation is not displayed in the financial statements. Nevertheless, tall accounts have been affected by this factor. Inflation mainly affects the valuation of long-term tangible assets. In the case of a mature company with a significant proportion of assets written off, the net income is distorted by depretition. Net income is overvalued due to the undervalued depreciation and as the result financial statements show high, but not veracious, profit. In the long run, an external user of financial statements cannot adequately assess the financial condition of the company.
- Accounting is based on historical valuation of assets and liabilities. Since it does not take into account changes in purchasing power, users of the financial statements do not know the fair value of the balance sheet. As a consequence, the market value of assets and liabilities can be both underestimated and overestimated, which leads to a distortion of the results of operations for a particular year.
- Since paying taxes changes the business outcome of a company, it is
important to distinguish between earnings before and after taxes. Apparently, earnings before taxes (EBT) are primarily an economic concept representing the operational efficiency of a company to chase their own financial goals. EBT illustrates the company's profit with the cost of goods sold(COGS), interest, depreciation, general administrative expenses and other operating expenses deducted from gross sales. On the other hand, profit after taxes (EAT) shows the net business result. From this point of view, when comparing firms with dissimilar tax policies, it is preferable to base the comparison on EBIT or even EBITDA instead of EAT, because they are designed to avoid the problem of different interest rates, depreciation and amortization methods in different countries. EBITDA is important to investors and analysts because it is possible to compare companies from different countries with different tax burdens. Analysts look at this metric to analyze the creditworthiness of an enterprise. Owners or large investors can take it into account when launching new products or contemplating mergers and acquisitions.
- Financial analysts evaluate only the financial information of the firm; operational information is not reviewed, which means that some other important issues are not taken into account while making a final conclusion. It can be clearly seen, financial analysis only shows part of the big picture.
- Non-monetary variables such as employee loyalty, customer reputation, quality of workforce, friendly social relationships and high level of leadership are not reflected in the financial statements. However, their nature can change the value of a company in the market. Despite the fact, these elements are not included, these notes are especially relevant to shareholders and prospective investors who are considering investing in a company.


### 3.6 Data sources of the financial analysis

The overview of the company's financial situation is recognized by the system of financial indicators, which have to be designed to reflect all the important aspects of the financial situation.

Therefore, for a description of the financial situation the ratio indicators are used. The ratio indicators enable a comparative analysis of the company with other companies or with indicators for the relevant area. The amount
of ratio indicators could be considered as the sum of representative indicators.
Specifically, these will be the most commonly used indicators of the financial situation characteristics. However, along with the practical application, dozens of indicators are used, and it is not possible to mention all of them (Baran, 2015).

Practically, the usage of several basic indicators has been proven relevant, which can be categorized into groups according to individual areas of management evaluation and the financial health of the company. Mostly these are groups of indicators such as debt, liquidity, profitability, activity and capital market indicators (Knapkvá, 2013, 84).

There are many sources of financial analysis data. Company is the primary source of this data, through its annual report and other information. The annual report will consist of the balance sheet, the income statement, the cash flow statement, and the share shareholders' equity statement.

The company reports indicators providing free data on status and results activities of the enterprise and its structural units for a certain period. Financial statements should be prepared based on data, which are contained in the accounting registers, as well as information defined by federal and industry standards (L.A.Chaikovskaya, 2017)

Financial statements are the most important information bases for financial analysis. The cash flow statement provides an idea of the sources of the company's cash and key areas of their use in the framework of three types of activities: operating, investment and finance.

The cash flow will allow investors and creditors to understand the company's ability to pay bills, as well as the ability to receive money ("generate cash") from operations. For the investor, this report is of key importance, since it reflects only monetary transactions (no non-monetary transactions: acquisitions of assets for shares, option remuneration, exchange of assets), there is no influence of various methods for accounting for cash and there is no way to manipulate the amount of profit.

Information about cash received (or cash used) from operating activities, the cash flow statement contains data about cash received (or used) in the investment and financing activities of the company. This information allows the analyst to answer questions, such as (Lisicina, 2012):

- Is the company generating enough cash from its operations to pay for its new investments, or is it relying on a new debt division to finance them?
- Does the company pay its dividends to ordinary shareholders using cash generated from operating activities, from the sale of assets, or from the issuance of debt securities?


### 3.6.1 Cash flow statement

The cash flow statement has the capacity to modify cash flows in future, provide information about firm's liquidity and solvency; ensure additional statements for evaluating changes in assets, liabilities and equity; improving the different company's operating performances through eliminating the influence on different accounting methods; indicating the amounts, timing and probability of future cash flows (Baran,2015).

The cash flow statement complements the balance sheet and income statement and is a mandatory part of a company's financial reports since 1987 (Summary of Statement No.94, 2020).

The cash flow statement describes the company's cash flows for the reporting period and their balances at the beginning and end of the period. From the cash flow statement, it is understandable where the cash and cash equivalents came from and what they spent on. The study of the cash flow in conjunction with a report on financial results allows one to realize why there is profit and oppositely why there is not.

The cash flow statement is a cash basis of three types: investment activities, operating activities and financial activities. The report contains both current operating results and changes in the balance sheet.

The cash flow statement differs from the income statement and balance sheet because it does not include future income and cash outflows. Hence, cash is different from net profit, which is reflected in the profit and loss statement and balance sheet.

Main roles of the cash flow statement:

- can change cash flows in the future
- provides some information about the liquidity and solvency of the company
- contains additional information to measure changes in assets, liabilities and equity

In addition, a cash flow statement allows investors to understand how the company works, where does his money come from and how the money is spent (Ivanov. A, 2020).

### 3.6.2 Balance sheet

In financial accounting, a balance sheet is a summary of the financial balances of the main Management, business partnership or company. This financial statement is named the balance sheet. That means the company must pay for everything that they own, by either derivation money or receiving it from shareholders. Important assets are listed first and usually in order of liquidity (K.Palepu, P.Healy, 2000).

The American Institute of Certified Public Accountants illustrates balance sheet as "a tabular statement of summary of balances (debits and credits) carried forward after an actual and constructive closing of books of account and kept according to the principles of accounting." The purpose of the balance sheet is to show the resources that the company has, i.e. its assets, and from where those resources come from, i.e. its liabilities and investments by owners and outsiders.

Generally, cash comes first, followed by current assets - accounts and notes receivable - and fixed assets such as land, building and equipment. On the right-hand side, current liabilities - accounts and notes payable - are listed first, followed by long-term liabilities such as mortgage payable. Assets are accompanied by liabilities. The difference between assets and liabilities is known as equity or net worth (K.Palepu, P.Healy. 2000).

Each balance sheet is divided into three major parts - assets, liabilities, and shareholder equity.

- Assets are anything that has value. For instance, a house, car, checking account etc. Companies figure up the value of everything they own and put it under the asset side of the balance sheet.
- Liabilities are the quite opposite of assets. They are anything that costs a company money. Liabilities include monthly rent payments, utility bills, the mortgage on the building, corporate credit card debt, and any bonds the company has issued.
- Shareholder equity is the difference between assets and liabilities; it tells mainly the "book value", or what is left for the stockholders after all the debt has been paid.

According to the accounting equation, the net worth should equal assets and subtract liabilities. In the balance sheet, it sums up the assets, liabilities and equity of the company as a double-entry bookkeeping system.

This section of the balance sheet gives investors an idea of what the company owns and owes, as well as the amount contributed by the shareholders. Each of these three balance segments will have many accounts inside and represent the value of each other. Additionally, the "balance sheet" derived from the fact that two-sides (assets and liabilities) have to be equal and balanced out.

### 3.6.2.1 Assets

Assets are the resources that the company owns or controls as a result of the past business transactions, which are expected to produce future economic benefit with a reasonable degree of certainty. Assets are divided into two different subsections: fixed or non-current (long-term) and current (short-term). An asset which is considered as current asset to be realized within twelve month from the closing day or within the company's operating cycle.

$$
\text { Assets }=\text { Liabilities }+ \text { Equity }
$$

Fixed assets are those that are purchased for use over an extended period. These assets are designed to increase the production capacity of a business. They are not acquired for sale, but used for a significant period of time. Balance sheet prepared to illustrate the financial position of the concern. These assets should be shown in such a way that the balance sheet reflects the true financial position of the business.

Fixed assets are shown separately from each other, for example, goodwill, land building, leased property, furniture, railway sidings, patents, animal hus-
bandry, vehicles etc - those are assets shown at their original cost.
Any additions and deductions during the year are shown separately. Amount of depreciation up to the previous year and during the current year is deducted separately from assets in the current year (Walsh, Ciaran, 2009).

Investments are shown with an indication of their nature and mode of valuation. Investments under various subheadings, such as investments in government or trust securities, in stocks, debentures and bonds, as well as immovable properties are indicated separately in the inner column of the balance sheet.

Current assets are such assets as in the ordinary and natural course of business move onward through the various processes of production, distribution and payment of goods, until they become cash or its equivalent by which debts may be readily and immediately paid. Current assets are either cash in hand and at bank or shortly convertible into cash.The assets like debtors and bills receivables are one step away from cash.

The stock-in-trade is believed to be around the corner from sales, which when the collections will be undertaken. Commonly used method of valuation, that is, cost price, is not strictly used while valuing stock. The stock is used either at cost or at market price, whichever is the low. This is done to avoid anticipating profits during inflationary conditions and taking into account losses if there is any fall in prices of the stock.

The debtors are displayed after the provision for bad and doubtful debts. Amounts which belong to directors etc., if they are part of the debtors, are also mentioned separately (Wall, 2015).

### 3.6.2.2 Liabilities

According to international financing reporting standards, liabilities are the present obligation of the entity arising from past events the settlement of which is expected to result in an outflow from the entity of resources typifying economic benefits. Liabilities include obligations in front of the customers who have paid a certain amount for goods or services.

Liabilities are divided into 2 various categories: current and non-current liabilities. Current liabilities are obligations that have a maturity date that is less than one year or one business cycle away. These obligations may arise
from a number of transactions, but they are usually covered by several line balance sheet items.

Accounts payable is a major part of most firms' current liabilities. This position represents a credit extended by suppliers to the firm, similar to the accounts receivable assets representing credit extended by the firm to its customers and distributors. This liability is usually paid as inventory is sold and cash is collected from customers.

Accounts Payable is another item that should fluctuate in the long term by a pace comparable to sales. Firms must have sufficient liquidity to cover current liabilities coming due, or else they may have to incur more debt to cover the upcoming costs (Merkulova, 2017).

Long-term liabilities are obligations with maturities over in a year. Long term duties may include deferred income taxes, long-term debt such as bonds, and pension obligations. Most long-term debts that firms accumulate are issuing bonds with periodic interest expense payments. As with cash, longterm debt should be carefully examined.

A company that uses long-term debt correctly can create value for shareholders. However, the amount of long-term debt for the company's books must be reasonable. For example, using long-term debt to fund expansion projects include taxation deductions through interest payments and does not dilute the shareholder's equity, allowing the company to fund profitproducing assets.

Total liabilities is the sum of short and long-term liabilities. This figure should not equal total assets (or worse yet, exceed total assets), as that would imply that shareholders have no assets to lay claim to.

### 3.6.2.3 Stockholders Equity

Stockholders equity is the balancing amount after taking off liabilities from assets. Mainly, this is the firm's net worth or the net assets that shareholders can lay claim to. Common stock has a par value (often just a penny) that is reported and which is generally pointless. Stock offerings for common shares are conducted at a price significantly above the par value.

To account for the difference between the offer price and the face value cost, companies keep an account called "additional paid-in capital". Another
common shareholder's equity account is retained earnings, which reflects the amount of earnings not returned to owners through dividends.

As the name implies, these earnings are "retained" and reinvested to go back to business. The balance sheet provides a snapshot of a firm's assets, liabilities and stockholders equity in a single point of time. It is important to analyze the balance sheet trends over a period of time as well as in relation to major competitors and industry norms.

For many companies, year-over-year comparisons of financial statements are better than quarter-over-quarter comparisons because of seasonal factors. Large orders, sales, or launch of large projects at the end of the quarter can also impact on quarterly submission (Kotler, 2005).

### 3.6.3 The income statement

The income statement is the financial statement of a company that shows how revenue is converted to net income. And this report is a financial report that measures the financial performance of a company for a specific reporting period.

In other words, the income statement may represent the most important figure that companies report - earnings per share.In addition, it provides an opinion on how the entity manages its income and expenses through both operating and non-operating financing activities, which allows an assessment of financial results. Earnings results tracked closely by numerous investors varying from individual investors to analysts working in financial and brokerage companies.

Earnings is a constant indicator of a company's success or failure and is used to determine the value of the company. A firm's worth depends on its ability to make money and generate future cash flows; reported earnings that differ, positively or negatively, from expectations (the so-called earnings surprise ), can cause large movements in a stock's price (Altman, Hotchkiss, 2006).

It also shows the net profit or loss incurred over a specific financial period. It reflects revenue for a certain period, as well as costs or 8 expenses accrued on these incomes, including write-offs and taxes. The purpose of the income statement is to show the management of the company and investors whether the company has made or lost money over the financial period.

The difference between the income statement and the balance sheet is that the income statement is a period of time and the balance sheet is a single point in time. We can split the income statement into two parts, the first part is the operational sections and the second part is the non-operational sections. In the income statement, operating activities are linked to operating items.

This part provides information on income and expenses that show the direct result of ordinary business transactions. A non-operating item discloses information about income and expenses from activities that are not directly related to the ordinary activities of the company (Karlof, 2007).

The income statement items are divided into two parts according to profit allocation and structure. Part of the profit from the specified first sales proceeds, costs and deduction of sales minus the profit from sales; all cost is received less operating profit (or loss), plus or minus operating income and expenses, this is the formula of total profit "loss".

The first part of the distribution of profits minus the total profit payable after tax; profit after tax; distribution according to the scheme from the accumulation fund and profit payments; if the balance, namely retained earnings (K.Palepu, P.Healy, 2000)

$$
\text { Profit }=\text { Revenue }- \text { Cost }
$$

Before the income statement can be analyzed, it is important to understand two separate accounting methodologies. The accrual method of accounting records revenues and expenses when they are recognized, not when cash actually is transferred.

Revenues are recorded when the sale has been completed and expenses are recorded when goods and services that generate the expenses are matched to the revenue. Alternatively, cash-based accounting records sales and expenses that are actually used or received .

For instance, in accrual-based accounting, credit sales are included in revenue on the income statement for the period sales are recognized and recorded as accounts receivable (unpaid invoices owed by customers) on the asset side of the balance sheet. Similarly, accrued expenses or unpaid expenses incurred while generating current revenue, and presented as expenses in the income
statement and is shown as liability on the balance sheet. This is different from cash-based accounting, which records transactions when cash is actually used or generated.

Cash accounting is used by individuals to manage finances. When a person spends money on groceries, cash the transaction is recorded immediately, even if the product is one that will serve several years - for example, dishwasher or sofa. Cash-based accounting is better in tracking cash flows. However, accrual accounting improves ability to match expenses with revenues. In most cases, accepted by the USA accounting principles (GAAP) require accrual-based accounting.

### 3.7 Trend analysis

A trend analysis or so called horizontal analysis may be used to determine if a trend exists, and if so, what the trend indicates. This is a comparative analysis of the financial performance of a company over a long period of time. An aspect of technical analysis that attempts to predict the future movement of a variable based on past data.

Trend analysis is based on the idea that what happened in the past gives traders an idea of what will happen in the future. Trend analysis is a form of bench-marking that is often used to determine the current and future movements of an investment or group of investments. The process may involve comparing past and current financial ratios for different institutions to predict how long the current trend will last. This type of information is extremely useful for investors looking to get the most out of their investment.

Trend analysis is a form of comparative analysis that is often used to identify current and future movement of an investment or a group of investments. The processes may involve comparing past and current financial ratios as they relate to different institutions to predict how long the current trend will last. This type of information is extremely useful for investors who want to make the most of their investments. Trend analysis can be used to identify and predict upswings in stock or commodity, or to determine the potential for an upcoming downturn in value. By comparing the financial ratio of the past with the present and identifying key factors that helped the investment reach its current point, it's possible to use a trend analysis process to predict future values and adjust components of the financial portfolio accordingly.

In credit analysis, detailed examination of the financial performance and cash flows of a company over several accounting periods to determine changes in the financial position of the borrower. Trend analysis is a key part of credit underwriting and is a useful and necessary tool. in determining whether the financial stability of the borrower is improving or deteriorating. Key ratios studied include debt coverage ratio, turnover ratio (conversion of inventory and receivables to cash), as well as the quick assets ratio or quick ratio "current assets divided by current liabilities".

In trend analysis, two parts of the main problem are analyzed, first, how many volumes of financial reporting data have changed during this period, and secondly, how many fractions of this data change with a given period of benchmark. A trend analysis or so-called horizontal analysis provides a way to compare financial data from one period to another, using financial statements from at least two different periods.

The trend analysis or so called horizontal analysis explains absolute and relative changes. It pays attention to taking into account changes in the economic environment, such as changes in capital market conditions, changes in commodity prices. A horizontal analysis can be calculated using two formulas: the former expresses absolute change, and the latter, relative change.

The formula of absolute change:

$$
X_{1}-X_{2}=X_{0}
$$

The formula of relative change:

$$
\frac{\Delta X}{X_{0}}
$$

In these formulas $X_{1}$ means financial item after the fiscal year $X_{0}$ means financial item on the given fiscal year.

Industry circumstances and any fluctuations in the economy and the company must take all conditions into account for accurate interpretation of the analysis results. Mainly, a principal drawback of the company is its dependence on inflationary processes in the economy, since it negatively affects the
accuracy and reliability of the results obtained. Moreover, from the point of view of the auditor, the company should be able to explain all possible changes higher for $+/-10 \%$ (Mrkvička, 2020).

### 3.8 Common-size analysis

The use of common-size analysis or so-called vertical analysis is vital to assessing firm performance as it focuses on the structural measurement of the separate items in the financial statements. The primary objective of the analysis is to determine the proportional value of each item of financial statement in relation to a total base, accounting is $100 \%$ (Palepu, Healy, 2000).

Common size analysis means that a general benchmark is used to convert data from financial statements to percentages, with financial statements expressed in percentage terms. This ratio indicates that the asset / liability / expense includes the entire asset / debt / income ratio. Common-size analysis converts financial statement line items to a percentage of sales (for the income statement) or total assets (for the balance sheet). Through the application of common denominator, common - size analysis compares financial statements across firms and across time "for the same firm".

However, while implementing common-size analysis, some of these bullet points have to be kept in mind:

- changes in expenses in the numerator independent of changes in sales (for example, an increase in the compensation levels of employees).
- changes in sales inconsiderable of changes in costs (for example, because the expense being analyzed is fixed for the period).
- effects of interaction between the numerator and the denominator (increase advertising costs lead to increased sales, but possibly at different rates).
- coincident but independent changes in the numerator and denominator
K.Palepu, P.Healy. (2000). also have stated that the vertical or common-size analysis measured as percentage shows the relationships among components of one financial statement. For example, on a balance sheet, every asset acts as a percentage of total assets; every liability and equity item acts as a percentage of total liabilities and equity. On the income statement, each line item is shown as a percentage of net income. The main advantage of vertical
or common-size analysis is that it can easily compare with all balance sheets of management sizes. It also makes it easy to see the main changes within one financial operation. According to Kobyletsky V. R., 2008 following rules must be taken into account while accomplishing the common-size analysis:
- If an item has a value in the base year and is not zero in the next period, the decline is $100 \%$.
- A meaningful percentage change cannot be calculated if one number is positive and the other is negative.
- Percentage change cannot be calculated if there is no number in the base period

$$
P_{i}=\frac{B_{i}}{\sum B_{i}}
$$

In this formula i means time, $\mathrm{B}_{i}$ is an analyzed variable, $\mathrm{P}_{i}$ - percentage share of total value of the variable.

The composition of the balance sheet, all balance sheet accounts are expressed as percentage of total assets (total capital employed) or total sum of equity and liabilities (total shareholders' funds). This allows users of financial statements to determine the composition of capital.

The structure of assets shows where the company has invested money and how much return on the investment is. The return of non-current assets is higher than on current assets. Vertical analysis regarding assets aims to offset the proportion of long-term and short-term assets. The structure of shareholder's equity determines how assets were funded by using internal or external sources.

Usually when external sources are used, short-term liabilities are more preferable by the company over long-term liabilities as they are more affordable. On the other hand, short-term sources are more risky because the firm must pay them back within a limited time frame which can lead to liquidity problems and, in the worst case, to insolvency. Concerning income, all items in the statement are expressed as a percentage of net sales (turnover) (Růčková, 2005).

In practice, when analyzing a company's capital structure, financial experts recommend applying the balance rules. They are not regarded as strict rules, but only as recommendations for financial analysts to ensure the longterm financial stability of the firm. The rules themselves consist from 4 points (Vochozka, 2017):

- The golden balance rule states that non-current assets should be financed, in particular, by equity or long-term liabilities, while current assets should be financed only by using short-term liabilities. This leads to the conclusion that equity and long-term liabilities have to cover all current assets.

$$
\text { Equity }+ \text { Long-term Liabilities } \geq \text { Non-current assets }
$$

- The golden equivalent rule follows the relationship between non-current assets and equity. According to the rule, non-current assets shall be financed mainly from the equity. It provides that each current unit of equity shall be transformed into a non-current asset.

$$
\text { Non-current assets } \geq \text { Equity }
$$

- Considering the first and second rules, their integration into one equation reveals the following relationship:

$$
\text { Equity }+ \text { Long-term Liabilities } \geq \text { Non-current assets } \geq \text { Equity }
$$

- The golden rule of risk equilibration stands for optimization of the equity to long-term liabilities ratio. The rule points out that equity should exceed long-term liabilities.
- The Golden ratio rule indicates that the growth rate of investment should not exceed the growth weight of revenue. This rule is not only applied to a long-term horizon, but also to the short term.

The difference between vertical analysis and horizontal analysis is that vertical analysis is not influenced by inflation due to all figures being expressed as annual percentages redeeming the distortions of inflation. This supposition means the vertical analysis can be used for the comparison of
financial statements in the long run and with a different range of companies or within the industry itself.

Vertical analysis is also considered a powerful tool for planning, especially if there is particular stability in the proportion of some balance account to the total base. However, when applying vertical analysis, any changes in accounting policies should be taken into account because it might influence changes in financial structure and expenditures.

### 3.9 Financial-ratio analysis

The value of a firm is determined by its profitability and growth. The firm's growth and profitability are influenced by its product market and financial market strategies. The product market strategy is implemented through the firm's competitive strategy, operating policies, and investment decisions. Financial market strategies are implemented through financing and dividend policies.

Thus, the four levers managers can use to achieve their growth and profit targets are: operating management, investment management, financing strategy, and dividend policies. The objective of ratio analysis is to evaluate the effectiveness of the firm's policies in each of these areas. Effective ratio analysis involves relating the financial numbers to the underlying business factors in as much detail as possible. While ratio analysis may not give all the answers to an analyst regarding the firm's performance, it will help the analyst frame questions for further probing (Vochozka, 2017).

The ratio analysis is one of the widely used methods for analyzing financial statements because it enables users to obtain outcomes quickly and without high costs. According to Marriott and Brown, accounting ratios are calculated by expressing one number as a ratio or percentage of another in order to identify important relationships and trends that are not immediately evident from the examination of the individual balances appearing in the accounts.

It is clear from the quotation that the calculation of financial ratios is only a starting point for analyzing a company's overall performance. Moreover, the obtained single number has little explanatory value, and only a deep understanding of the nature of financial ratios and their relative comparison can build up a clear picture of economic and financial transactions within
the company. Therefore, the relative financial ratios are only relevant when the company's results are compared to (Marriott, Brown, 2012):

- aggregate economy
- its industry benchmarks
- predetermined standards or budgets
- its past performance

The term ratio refers to the numerical or quantitative relationship between two items/variables. These relationships could be expressed as:

- percentages
- fraction
- proportion of numbers

Ratio analysis is meant to determine and present the relationship of items or groups of items in the financial statements. It is a crucial technique of financial analysis:

- important in financial position analysis: accounting ratios reveal the financial position of the concern. It helps insurance companies or other financial structures in lending and making financial decisions.
- useful in simplifying accounting figures: ratios help to simplify, summarize and systemize the accounting numbers in order to make them understandable and in lucid form. Financial ratios highlight the interrelationships which exist in the different segments of the business by accounting statement.
- essential in forecasting purposes: if financial ratios are calculated for a number of years, then the trend is established. These trends help in setting up future strategies and forecasting.

Economic fluctuations affect all firms, and comparing their results to the aggregate economy is essential. When assessing data, the economic environment and a company's business cycle should be taken into account. For example, when the economy is in a downturn, it is unreasonable to expect an increase in the profit margin of the firm. On the contrary, a steady margin shows a positive dynamic in a firm during a recession. On the other hand,
during a period of the growing economy, it is important that the company can generate profit and be profitable (Reilly, Brown, 2010).

The industry effect is very significant for firms, especially if the firm operates in industry with homogeneous products such as steel, wood and oil, as these industries experience random shifts in demand. However, nowadays, larger companies are doing business in multi-industry. From this point of view, it is inappropriate to compare a single - industry firm with a multidisciplinary firm. The cross-sectional analysis is applied to financial analysts to troubleshoot such problems. Managers compare the financial ratios of the firm with comparable competitors of the same size, having the same operational characteristics, and which operate in many of the same industries. Otherwise, the comparison results may be misleading.

More than 200 coefficients are used in financial analysis. They all characterize 4 main aspects of the company (Růčková, 2005):

- Profitability ratios
- Liquidity ratios
- Solvency ratios
- Activity ratios


### 3.9.1 Profitability ratios

One of the most essential things for the company is profitability. Profitability ratios are commonly used financial performance analysis tools to measure a company's bottom line. For managers and company owners, profitability is important. If investors want to invest their money in a company, the owner of the company must show its performance.

Profitability ratios measure the ability to profit from invested capital in the form of a return over a financial period. This means that these ratios show the overall efficiency and productivity of the company. These ratios measure how well a company is performing by analyzing how profit was generated relative to its sales, total assets, and bottom line (Helfert, 2001).

A company can be considered as profitable if financial results from sales of products (works, services) cover production costs (expenses). Generally speaking, profitability ratio shows how well the business is doing in relation
to creating profit and measuring the effectiveness of the company. It should be emphasized that profitability is expressed as a relative number, while profit is expressed as an absolute amount. Eventually, profitability ratios should show an upward trend over time. Profit or earnings data is taken from the income statement, while equity or assets are a part of the balance sheet (Abrosimova, Yurkhanyan, 2014).

Since the income statement captures flow data for the whole financial year, while, in contrast, balance sheet items are presented in static numbers on a particular day, this may distort financial reality. Therefore, it is recommended to replace static balance sheet data by calculating the average value of the beginning and end of items' beginning and ending amount to reduce the incompatibility of different categories of data.

Profitability ratios can be divided into two types: margins and returns. Margin measures the company's ability to transfer revenue into profit at various stages of measurement. Returns measure an ability to measure the company's overall performance in generating profit for the owner of the company. Depending on the purpose of the financial analysis, the profitability ratios can be calculated using different categories of margin and profitability. In general, they are usually defined as follows (Fridson, Alvarez, 2002):

- EBITDA (earnings before amortization, depreciation, interest, and taxes) is usually used when an accurate comparison between companies operating in the same industry is required.
- EBIT (earnings before interest and taxes) indicates the remaining earnings after deduction of the costs of long-term production factors.
- EBT (earnings before taxes) is applied to compare financial performance among firms with different tax rates (earnings before taxes).
- EAT (earnings after taxes or net profit) defines a business result achieved by a company during a year. A business result consists of a part paid to shareholders and the rest, undivided profit, held by a company.

Operating profit margin, which has the same value as EBIT, is on the company's income statement. EBIT is earnings before interest and taxes. The operating profit margin is focused on EBIT as a percentage of sales. The operating profit margin ratio is a measure of the total operational efficiency combining all the costs of ordinary day-to-day operations activity. The formula is as follows:

$$
\text { Operating profit margin }=\frac{E B I T}{\text { Revenues }}
$$

Net Profit Margin is an indicator that reflects the overall profitability of a firm's sales. Used to display the ratio of the profit that shareholders are entitled to claim to net sales. It is calculated by dividing the value of net income by the gross income of the company for the reporting period, after which the result is multiplied by 100 . The result is displayed as a percentage. The indicator is extremely important for internal reporting; however, this relative detector is not vital for external analysts. The formula is as follows:

$$
\text { NET profit margin }=\frac{E A T}{\text { Revenues }}
$$

Return on Equity (ROE) is a comprehensive indicator of a firm's performance because it provides an indication of how well managers are employing the funds invested by the firm's shareholders to generate returns. Return on Equity (ROE) is precious to the common shareholders (the owners of the company), since it reveals the rate of return earned on the capital invested by shareholders after accounting for payments to all other capital suppliers. ROE shows how successful the company is using shareholders' investments to generate profits.

According to the shareholder's perspective, the return on equity should be higher than the interest of risk-free securities. On the other hand, a positive ROE value ( $\operatorname{ROE}_{\dot{i}} 0$ ) is sufficient for managers and accountants. The ratio can be calculated either before tax deductions or after tax deductions. If the return distributed to shareholders is estimated, then clearly EAT should be used. However when the efficiency of management in organizing the economic activity of the enterprise is investigated or comparing ROE with rates of returns on other sources of finance, then deduction of tax figures could lead to distortion. In such cases, before-tax returns may be more useful.

Return on equity is essential for the business subject's owners and for lenders has a supporting meaning. In general, the value of indicators should be higher than the interest rate of risk-free bonds. The formula as it follows (Walsh, 2009):

$$
R O E=\frac{E A T}{E q u i t y}
$$

Level of return on equity is strongly dependent on the return on assets and on the interest rate of borrowed capital. The increase of the indicator ROE mostly depends on the level of the business subject's created profit, on a drop in interest rate of the borrowed capital, on a decline in the equity's share, on a business subject's return on assets and a combination of all previous factors.

ROA illustrates how much profit a company is able to generate for each dollar of assets invested. Financial leverage indicates how many dollars of assets the firm is able to deploy for each dollar invested by its shareholders. The formula is down below (Palepu, Healy, 2000):

$$
R O A=\frac{E A T}{\text { Assets }}
$$

Return on Capital Employed (ROCE) is considered to be a more comprehensive profitability ratio, as it focuses on the efficiency of a company as a whole, taking into account all available capital invested in the business (capital employed). The capital employed embraces the owners' equity and the long-term liabilities of the business.

Thus, a numerator shall include not only net profit, but also the return related to these borrowings, which is interest. Denominator is also larger by the amount of the company's long-term borrowings. For investors, a higher ROCE is better due to the fact it must include a reward for the risk taken by investing in the company. The ROCE indicator is widely used to evaluate and compare monopolistic companies. The formula of ROCE as it follows (Reilly, Brown, 2010):

$$
\text { ROCE }=\frac{E B I T}{\text { Owner's Equity }+ \text { Non }- \text { current liabilities }}
$$

### 3.9.2 Liquidity ratios

Liquidity ratios are used to determine the company's ability to pay off its liabilities as they fall due. In case of insufficient amount of liquidity, the company cannot fulfill economic opportunity or to pay off your debt obligations, which could lead to insolvency or, in the worst case, bankruptcy.

Therefore, there is a direct relationship between liquidity and solvency. More precisely, liquidity is the most important condition for a company's solvency. A solvent company has no problems with paying off debts in the long - run horizon, and this is understandable for the company to be a going concern. In detail, the concept of solvency illustrates whether a company can repay its liabilities at the time of their maturity (Henry, 2011).

Liquidity ratios may also be used to evaluate how effectively a company is performing all unexpected needs for cash. The liquidity value should not be too high (as financial funds are tied up in assets, which do not generate any returns) or too low (when the company cannot pay off its debts obligations). When analyzing the liquidity ratio, the following factors should be taken into account. Firstly, more liquid assets and liabilities are easily changeable over time.

Thus, the ratios can easily become outdated. Secondly, the level of liquidity is highly dependent on future cash flows of the company, which are not taken into account when calculating the ratios.

Company's ability to generate short-term assets in cash to cover liabilities is essential when creditors are looking for payment. Company managers often use liquidity ratios to determine if the company will be able to continue its activities in the future perspective.

There exists mutual conditioning of liquidity and solvency indicators. The indicators of liquidity are mentioned below: the individual short-term assets against short-term liabilities. Indicators of solvency engage into the most liquid part of the business subject's - assets and are divided according to level of liquidity of individual assets, which are mentioned in the numerator of financial statements - the balance sheet. The disadvantage of indicators is that these indicators evaluate liquidity according to balances of short-term assets (current assets) which on the other hand mainly depends on future cash-flow.

Liquidity ratios include current ratio, quick ratio and cash ratio. Com-
pany's management will use these ratios in different ways to measure different economic situations (Baran, Pastyr, 2016).

Current liquidity ratio (also known as the Working capital ratio) is the ratio of current assets to current liabilities, an indicator of corporate liquidity in short-term debt to maturity that can be converted into cash for the possibility of debt payment. The formula is as follows (Fridson, Martin, Alvares, 2002):

$$
\text { Current Ratio }=\frac{\text { Current assets }}{\text { short }- \text { term liabilities }}
$$

Current ratio (also known as the working capital ratio) shows owns sufficient short-term assets to cover all of its short-term liabilities. In financial analysis, current assets used in the numerator usually included cash, marketable securities, inventories and prepaid deposits. The ratio depends on the structure and liquidity of current assets, as well as on the industry in which such a company operates.

Typically, this ratio should be around 2, which means that current assets exceed current liabilities, and the company is financially stable and less risky for both creditors and owners. However, this is a broad generalization, and many large companies regularly work with a ratio closer to 1.5 than 2 . It is important that the current liquidity ratio shouldn't be too high. A ratio that is too high may mean that funds are not being used or that too many resources are tied up in current assets such as inventories that can be used to reinvest in non-current assets in order to maintain future productivity.

Typically decreases with the boom lift cycle and increases in recession. As always, the values of the current ratio should be compared to similar figures of the industry's average or should be considered in trend analysis. Any deviations related to specific current assets and liabilities should be studied and their reasons should be explained respectively.

The quick ratio (or acid-test ratio) refers to the ratio of quick assets to current liabilities. It is a measure of corporate liquidity that can immediately realize the ability to repay current liabilities. The quick ratio can be seen as more practical since it is calculated with current assets without inventories, because usually changing inventories into money can take a long
time while some current liabilities do not have extended maturity. The quick assets include cash, short-term investments, accounts receivable, short-term liabilities. The formula is as follows:

Quick Ratio $=$ Cash + Short - term investments $+\frac{\text { Receivables }}{\text { short }- \text { term liabilities }}$
Quick ratio remaining at $1: 1$ is normal; it illustrates that for every $\$ 1$ of liabilities of enterprises will have $\$ 1$ in cash flow to assets to offset the short-term debt paying ability, to ensure a reliable. The quick ratio is too low, the risk of short-term debt is large, the quick ratio is too high, the enterprise in the quick takes up too much capital, and companies will increase the opportunity cost of investment.

However, while using the quick ratio to make comparisons between companies, it is highly important to compare ratios among companies among the same industries - not across industries. The reason why is because certain industries may have londer credit collection cycles than others, which, for example, impact account receivable. The cash ratio shows the ratio of the most liquid assets of the organization - cash and short-term financial investments - to short-term liabilities. The lenders usually pay attention to cash ratio because it shows if the company maintains sufficient cash balances to pay off all of its current debts when they fall due.

Cash is guaranteed to be available to lenders. The ratio reflects the sufficiency of the most liquid assets for quick calculation of current liabilities, and characterizes the "instant" solvency of the organization. The cash ratio is not as popular as the current and quick liquidity ratios and does not have a well-established norm. Most often, a value of 0.2 or more is used as a reference point for the normal value of the indicator. However, a too high value of the ratio indicates unreasonably high volumes of free cash that could be used for business development. The formula is as follows (Baran, 2001):

$$
\text { Cash Ratio }=\frac{\text { Cash }+ \text { Cash equivalents }+ \text { Invested funds }}{\text { Total current liabilities }}
$$

### 3.9.3 Solvency ratios

Solvency ratios are one of the essential tools used to measure the ability of a business to meet its long-term financial obligations. Hence, the solvency ratio measures the amount of a company's profit after tax; excluding noncash depreciation charges compared to the company's total debt obligations. It allows assessing how the company will continue to pay off its debt.

Investors and lenders often look closely at the solvency ratio as a means of assessing the credit rating of a business and assessing the degree of risk of default, which is currently present. Solvency ratios includes debt-to-assets ratio, debt-to-equity ratio and interest coverage.

Debt-to-assets ratio is a measure of the financial leverage of the company. It shows what percentage of the assets is funded by debt. It is clear that the more this percentage, the greater the leverage and the greater the risk. The analyst and management often use financial statement ratios to compare one company to another similar one.

One of a financial statement ratio is debt to asset ratio which is used to compare company financing. This ratio allows an investor to indicate which companies are more likely to be profitable. In addition, this ratio also allows management to determine which areas in the company need improvement to exceed competitor. The formula is as follows:

$$
\text { Debt }- \text { to }- \text { assets ratio }=\frac{\text { total debt }}{\text { total assets }}
$$

The debt-to-equity ratio is an indicator of the ratio of an organization's debt to equity. It belongs to the group of the most important indicators of the financial position of the enterprise, which includes coefficients of autonomy and financial dependence, which are similar in meaning, and also reflect the proportion between the organization's own and borrowed funds.

The term "financial leverage" is often used in a more general sense, speaking of a principled approach to financing a business, when with the help of borrowed funds a company forms financial leverage to increase the return on its own funds invested in a business.

Financial leverage ratio which equals 1 considered as optimal and vital. A value of up to 2 may be acceptable (for large public companies this ratio may
be even higher). With large values of the coefficient, the organization loses its financial independence, and its financial position becomes extremely unstable. It is more difficult for such organizations to attract additional loans. The most common value of the coefficient in developed economies is 1 . The formula is as follows (Mescon, 2009):

$$
\text { Debt }- \text { to - equity ratio }=\frac{\text { total debt }}{\text { total equity }} X 100 \%
$$

Interest coverage ratio (ICR) also known as the times interest earned ratio, refers to the project in the loan repayment period that can be used in the ratio of payment of interest and profit before interest and tax currently payable interest expense. Under normal circumstances, ICR i 1 confirms the ability of the enterprise to repay the interest; $\mathrm{ICR}_{\mathrm{i}} 1$, means the company did not pay the interest sufficient funds. The formula is as follows:

$$
\text { Interest coverage ratio }=\frac{E B T}{\text { Interest payment }}
$$

The interest coverage ratio shows how many times a company can cover its current interest payments with its available earnings. In other words, it measures the margin of safety for a company to pay interest on its debt over a specified period.

### 3.9.4 Activity ratios

Activity ratios are used to assess the management of a company's assets, which is the efficiency and effectiveness of a company's operating activities. They are intended to assess whether the balance sheet amount for each asset type is reliable, taking into account the operating level of the company. The financial analyst must prudently examine a sufficient level of assets. Otherwise, it may lead to unnecessary storage costs or loss of potential revenue.

Even if asset activity level is high and storage costs are low, a company could lose potential sales because customers do not have enough opportunities to choose, or it could be due to the use of outdated, entirely depreciated
assets that may be obsolete. Controversy, although low activity levels offer a wide range of choices, inventory storage costs are higher and later inventory can become outdated or out of date for customers (Friedlob, Schleifer, 2003).

While analyzing the activity ratios, the effect of applied depreciation and asset measurement methods (historical cost or fair value) have to be taken into consideration. Moreover, an average figure shall be used in the denominator, as the amount of assets is likely to change during the year and an average number of a static figure (total assets) is more comparable with a flow indicator - annual sales (Reilly, Brown, 2010).

Total Asset Turnover Ratio indicates the efficiency with which a company uses all of its assets to generate sales by measuring the utilization (or speed of use) of its entire asset base. In general, it expresses how many times per year total assets turn into sales. The recommended ratio level varies significantly from industry to industry. The ratio ranges from less than 1 for large capital intensive industries (steel, heavy industry) to 10 for retailers and service providers. However, it is recommended that this ratio be higher than the industry average.

If the value of the turnover ratio is lower than the industry average, sales should be increased or some of the assets should be sold. It is important that the ratio can also be distorted by the use of leased facilities, adding them to the total amount of assets will lead to an increase in assets and a decrease in turnover, thereby misleading the users of financial analysis. The formula is down below:

$$
\text { Total Assets Turnover }=\frac{\text { Sales }}{\text { Average Total Assets }}
$$

Fixed assets turnover ratio reflects the efficiency of long-term assets used by the company to generate sales. It measures how well non-current assets are being utilized. It is also used when considering buying new long-term assets. The ratio can be further decomposed to evaluate how particular categories of assets (tangible, intangible assets) affect the total amount of fixed assets " disposal.

Further, when analyzing fixed asset turnover ratio, it is necessary to take into account the methods measurement and depreciation, as this may cause
a distortion. Fixed assets are depreciated to a more significant extent to increase the value of the ratio. Then, the ratio should be compared with industry competitors. In general, a higher ratio is preferable. Lower ratio than the industry average means that managers should limit the investments of the company or production capacity should be increased to the maximum. The main factors that reduce the coefficient are: excessive or underutilized fixed assets that do not increase sales. The formula is down below:

$$
\text { Fixed Assets Turnover }=\frac{\text { Sales }}{\text { Average Net Fixed Assets }}
$$

Inventory Turnover ratio indicates the efficiency in management of a company's inventory and making sales from it. The ratio measures how many times the inventory is sold during a year, on average. If the value of the ratio is high, it means that a company has no problem with the illiquid stocks. The higher the inventory turnover ratio, the higher the company's solvency. A value of the ratio lower than the industry average indicates a solvency risk since a company has excessive stocks that are non-productive and generate little profit. Moreover, there is a shortcoming that analysts should be aware of. Sales reflect the market value, while inventories are measured at the acquisition cost (historical price).

This distorts the reality and leads to an overvaluation of turnover. Stocks should be compared with the cost of goods sold (at historical cost) rather than with sales (at selling price) to mitigate the distortion. Nevertheless, the version with sales in a numerator is used more often. Given the inventory turnover values, an average inventory processing period can be calculated.

The average inventory processing period indicates the number of days needed for the inventories to be consumed (for raw materials and material), or to be sold (for inventories of own production). The ratio also reveals a firm's liquidity by measuring the time in which the inventory turns into cash or receivable. The value of the ratio shall be examined relative to other similar companies within the industry. A long processing time indicates that capital is tied up in inventory, which may lead the inventory to become obsolete (particularly in the technology sector).

In contrast, too short a processing time adversely affects sales, since a firm does not have enough inventories to fulfill the customers' orders. Thus, an
economic entity shall have inventory at the level that guarantees continuous production with minimum costs on inventory.

Receivables turnover examines the liquidity of the accounts receivable, measuring how fast receivables are transformed into financial funds. The ratio is often compared to the industry standards, and any deviations from the norm may signify flaws in business performance. The higher the indicator is, the better it is for a company, as a company quickly gets the funds to pay off its current liabilities.

Given the receivables turnover value, the average collection period can be computed. It represents an average time when account receivables are settled by customers. Ideally, when calculating the ratio, cash should be excluded from the denominator, since cash sales are collected immediately. However, total receivables are often used instead of trade receivables. A comparison to the company's credit policy is essential in analyzing the ratio.

The recommended figure is the regular due date of invoices. A more extensive collection ratio is a negative signal of a higher level of bad debts. On the other hand, the due date of invoices has been becoming longer than stated. In light of this, the size of an analyzed company is critical. The more extended due date of receivables can signify financial problems for smaller companies, while more prominent companies can tolerate it.

### 3.9.5 Market Ratios

Financial market ratios are critical sources of information for decision making by investors, stockholders and managers. A distinctive feature of the financial market coefficients are a reflection of the real situation on the market, which enables the users to immediately obtain and process fair market values. Since Procter \& Gamble - Publicly Traded Company (also known as publicly listed company which shares listed on any of the stock exchanges which allow the trading of its shares to the common public i.e., anyone can sell or purchase the shares of these companies from the open market) it's applicable to analyze its market ratio values.

### 3.9.5.1 Earnings per share

Generally, EPS is the amount of earnings attributable to each share of common stock. The essence of the EPS coefficient in simple words is that each shareholder who owns shares of the company has its share in its authorized capital. The authorized capital is equal to the number of issued shares of
this business, meaning each shareholder has a share in the company's profits.
The profit received by the company is distributed in proportion to the share of each shareholder. Accordingly, this coefficient determines how big the return of each dollar invested in the company's shares is in relation to the profit received. The higher the EPS is, the higher the return on invested money to the shares of this business. The formula of EPS is down below:

Earnings per share $=\frac{\text { Net income }- \text { Preferred Dividends }}{\text { End }- \text { of }- \text { Period Common Shares Outstanding }}$
To calculate a company's earnings per share, the balance sheet and income statement are used to find the period-end number of common shares, dividends paid on preferred shares (if any), and net profit or earnings. It is more accurate to use the weighted average number of common shares for the reporting period, as the number of shares may change over time.

### 3.9.5.2 Price-to-Earnings ratio

Price-to- earnings ratio (simply stated, $\mathrm{P} / \mathrm{E}$ Ratio) is the ratio between a company's share price and earnings per share (EPS). This is an important ratio that gives investors a better idea of a company's value. The $\mathrm{P} / \mathrm{E}$ ratio shows market expectations and represents the price that has to be paid per unit of current earnings.

Earnings are important when evaluating a company's stock because investors want to know how profitable a company is and how profitable it will be in the future. In addition, if the company does not grow and the current level of earnings remains constant, $\mathrm{P} / \mathrm{E}$ can be interpreted as the number of years it will take the company to pay back the amount paid for each share. The formula for Price-to-Earnings share is defined as:

$$
\text { Price }- \text { to }- \text { Earnings ratio }=\frac{\text { Market Price per share }}{\text { Earnings per share }}
$$

### 3.9.5.3 Book value per share

Book value per share (or simply book value per share - BVPS) is a method of calculating per-share book value of a company based on common shareholders' equity in the company. Simply confirming, this financial ratio connects the company's share capital to the number of ordinary shares outstanding.

According to this indicator, investors can evaluate the value of one ordinary share of the company. For instance, if a stock's market value is below its book value, then the stock might be considered as undervalued. BVPS can be thought of as the amount of money each share will receive if a company were liquidated based on the balance sheet values. The formula for Book value per share is defined as:

$$
\text { Book value per share }=\frac{\text { Common equity }}{\text { Total outstanding shares }}
$$

Correct interpretation for the book value per share is not presented in international documentation. The multiplier standard can be represented by the following mathematical expression:

$$
B V P S>0
$$

Or even like this:

$$
B V P S \gg 0
$$

Where, the >> sign means "significantly more".
In general, the multiplier will be higher in those businesses where there are a large number of assets: equipment, buildings, machinery. But, for example, in technology companies (IT, Fintech) the value will be lower.

### 3.9.5.4 Dividend payout ratio

The dividend payout ratio tells the investor how much of the income is paid out in dividends. This is especially important when this ratio is greater than 1 , as it indicates that the company is draining its cash reserves in order to pay dividends, which is a trend that is not conducive to the company's stability.

In contrast, if only a small part of the profits is paid out as dividends, the remaining money is likely to be invested in the main activity, which should lead to an increase in the share price. Dividend payout ratio can also be used as an perfect way for description cash dividends as a percentage of earnings paid out in dividends and can be expressed by:

$$
\text { Dividend Payout }=\frac{\text { Dividends per share }}{\text { Total Earnings per share }}
$$

The most important thing that dividend payout ratio shows is the level of maturity of the company. For example, young, growth-oriented companies seek to expand, develop new products and enter new markets, therefore, they reinvest most of the profits in their development. The dividend payout ratio of such companies is very low or close to zero.

### 3.9.5.5 Dividend yield

Dividend yield (simply stated, DD) is defined as the ratio of dividends for a certain period to the price of a share, and is most often calculated as a percentage. The period is usually taken as a year. Sometimes companies pay dividends once a quarter, or twice a year, in which case the corresponding dividend yields can be calculated.

Additionally, when interpreting the value of the dividend yield, market ratios should be taken into account due to the fact dividend yield alone ignores other ways of return to be possibly acquired (for example, an increase in the share price).As an example, companies in fast growing sectors usually do not pay any dividends but invest all they can for expansion, so for most of them the dividend yield will be zero, which investors accept because there is high potential for the share price increase and possible higher future dividends.

The dividend yield can be calculated based on the last full year's financial statement. This is acceptable during the first few months after a company releases its annual report; however, the longer it has been since the publication of the annual report, the less relevant this data is to investors. Alternatively, investors can also add dividends for the last four quarters, which reflects dividend data for the last 12 months. Using a finite number of dividends is acceptable, but this could make the yield too high or too low if the dividend has recently been reduced or increased. The formula as it follows:

$$
\text { Dividend yield }=\frac{\text { Annual dividends per share }}{\text { Average market price per share }} X 100 \%
$$

## Chapter 4

## FINANCIAL PORTFOLIO OF "PROCTER \& GAMBLE" COMPANY

### 4.1 Introduction of "Procter \& Gamble" company

Procter \& Gamble is an American company, one of the leaders in the global consumer goods market. The company is ranked $22^{\text {nd }}$ on the Fortune 500 list and is one of the top US companies in terms of earnings and market capitalization. It is headquartered in Cincinnati, Ohio. Company "Procter \& Gamble" was founded by William Procter and James Gamble, a native of Ireland, in 1837 in Cincinnati (USA).

Initially, the owners simply made candles and brewed soap with their own hands, then distributed their products in Cincinnati.Consequently due to solidity and tradition laid down by the founding fathers, by 1890 Procter \& Gamble was already selling more than 30 different types of soap throughout the country, including the famous Ivory. Growing demand allowed the company to build a new plant in Kansas City, Kansas, and after some time expand its activities outside the United States (the first was a plant in Ontario, Canada). To date, "Procter \& Gamble" has branches in more than 50 countries around the world.

The rapid globalization of the company has led to the creation of a worldwide network of research and development institutes located in the US, Europe, Japan and Latin America. The company's global RD spending has
exceeded one billion dollars a year and employs more than 7,000 people in this field. There are 4 functional departments in the company:

- Business Units (GBUs) - the main focus of activity is aimed at working with consumers, brands and competitors on a global level. Responsible for innovative implementations, profits and performance to investors.
- Development Organizations (MDOs) - responsible for the detailed study of the specifics of the consumer and supplier in each $\mathrm{P} \& \mathrm{G}$ market, responsible for the local application of global initiatives emanating from the GBU.
- Business Services (GBS) - responsible for supporting P\&G's business, including lowering the cost of partner chains to ensure corporate competitiveness,
- Corporate Functions (CF) should be committed to continuous functional innovation and capability improvement across the organization. Currently, the company is developing a long-term structure, that is, it is at the stage of maturity. The organization increases the output of products, expands the range of services provided. Procter \& Gamble owns 23 brands with worldwide sales in excess of US $\$ 1$ billion and another 20 brands with sales in excess of US $\$ 500$ million. It is these 43 brands that are the engine of the company's growth and provide an annual sales growth of $10 \%$.

The P\&G product portfolio is divided into 5 segments. Each includes about 10 brands:

- Home goods - $33 \%$ (brands such as Ariel, Tide, Fairy, etc.)
- Products for children, women and families - 26\% (Pampers, Always, Tampax, etc.)
- Beauty - $19 \%$ (Head Shoulders, Pantene, Old Spice, etc.)
- Health - 13\% (Crest, Oral-B, etc.)
- Haircut and shave - $9 \%$ (Braun, Gillette, Venus)

Procter \& Gamble is a product-diversified company due to that fact consumers' products range from Pringles chips to Olay facials. P\&G is divided into three categories:

Beauty, health and wellbeing and home care. because they make up the majority Net sales of Procter \& Gamble, Soap Cleansing and Cosmetics will be the focus of this session part.

The core of Procter \& Gamble's business is customer service. "We do our best to hear the consumer, to find out his innermost needs and needs." This allows the company to develop and improve products, thereby increasing consumer confidence in brands. None of this would have been possible without the scientists, engineers, technologists, marketers and other professionals who form the Procter \& Gamble team are the backbone of the company's success in the market.

Company's goal is to provide products and services of the highest quality and customer value that improve the lives of consumers around the world. In turn, customers help become a top seller, a business that thrives, which contributes to the well-being of employees and shareholders, and the communities in general.

The company's brands and people are at the heart of P\&G's success. P\&G people embody the company's moral and ethical values with the primary goal of improving the lives of consumers around the world. Procter \& Gamble was one of the first companies to partner with its employees. Today, company employees own approximately $25 \%$ of $\mathrm{P} \& \mathrm{G}$ shares. And in 1998, P\&G opened a stock options program to all of its employees, while in many firms options are reserved for senior management only.

The principle of cooperation allows Procter \& Gamble to get business partners in the person of their employees who are interested in the development of a common cause. This shows that the company does not forget to motivate its employees. The organization thoroughly approaches the choice of personnel and selects only the best of the best. She adheres to the philosophy of "building from within", the essence of which is that you can come to work in a company only in positions of a certain profile and level - initial managerial positions or positions of specialists. Newcomers should have a certain potential, as it is assumed that in 10-15 years they will already be in charge of the unit.
"Cultivation" of top managers, and not an invitation from the outside, is the concept of "building from within". As a result, the company has seen an increase in labor productivity, which is also the most important indicator of work efficiency and the use of labor resources.

Procter \& Gamble's mission statement as it is:

- produce products of the highest quality and consumer value, which contributes to improving the standard of living of people in different countries.
- create an organization and working conditions that attract the most worthy people, ensure the fullest development of their talents, free and inspired work for the prosperity of business, the preservation and development of historical principles of an honest attitude to work and the correctness of actions.
- apply principles that will help the company to lead products in the market in terms of share and profit, which will lead to the prosperity of the common cause, workers and employees, shareholders and the communities.

P\&G is widely recognized around the world as an innovative leader in its industry. Over the past decades, the source of organic sales growth has been almost exclusively the creation of new brands and improved products. The company collaborates with a global network of research organizations, and more than half of P\&G's current products have at least one major component developed by an external partner.

The latter are consistently a significant contributor to the company's achievements as featured in the SymphonyIRI New Product Pacesetters report, the industry's annual ranking of the most significant innovations. Over the past 16 years, $132 \mathrm{P} \& \mathrm{G}$ products have made it to the top of the list, more than the combined result of the company's six major competitors.

P\&G focuses on strategies that are appropriate for long-term health and prosperity and are helpful to the company with increasing returns for shareholders. P\&G accounts for $60 \%$ of global shaving sales and $25 \%$ of the children's, women's and family's goods market. With such large sales volumes, P\&G can capitalize on the price advantage it gains over smaller players because size and scale encourage it to achieve lower costs.

Over the past years, management of Procter \& Gamble has done an important job of getting rid of the company's less productive assets and focusing on profitable ones. Selling more than 100 brands worth $\$ 12.5$ billion. The remaining 65 brands generated more than $95 \%$ of the company's profits. However, there is tough competition, for example, the consumer goods industry is a highly competitive niche.

The scale of P\&G allows it to offer goods at lower prices, but in the end, this competition greatly affects the company's final margin and exchange rates: $\mathrm{P} \& \mathrm{G}$, with a strong global presence, is exposed to changes in exchange rates. The company's financial targets as it is: in fiscal 2019 year , P\&G exceeded key financial targets - organic sales growth, basic earnings per share growth and adjusted free cash flow performance - all while increasing market share and creating leadership levels in shareholder value creation.

Organic sales increased by $5 \%$. This was above original estimate and indicates a significant improvement, with quarterly sales increasing sequentially from $4 \%$ to $4 \%$ and then from $5 \%$ to $7 \%$. GAAP total earnings per share decreased year-over-year, reflecting one-time non-cash accounting expenses aimed at reducing the carrying value of Gillette Shave Care's business.

Free cash flow results were very strong. Adjusted free cash flow was $\$ 12.1$ billion and adjusted free cash flow productivity was $105 \%$, well above original target.

Growth was broad-based in fiscal 2019 across product categories, geographies, and the key revenue growth drivers of volume, price and mix. In 9 out of 10 of the company's global categories, organic sales grew, especially tSkin Personal Care category during adolescence, fabric care, home care, women's care, and personal health care are all high single digits; and Oral Care and Family Care rose by mid single digits.

Organic sales increased in all six regions, while sales in all top 15 markets increased or remained the same. In the US, sales rose $4 \%$, including $7 \%$ in the most recent quarter. This is after averaging about $1 \%$ over the last three fiscal years. In Greater China, we grew $10 \%$ with double-digit growth in the Fabric Care, Women's Care and Skin Personal Care categories.

In addition, P\&G's global organic e-commerce sales grew $25 \%$ year-onyear, accounting for about $8 \%$ of total sales. P\&G's strong market share trends confirm the breadth of revenue growth across categories and market rates going forward. 8 of the 10 global categories maintained or increased share of value, and 33 of our 50 country/category combinations maintained or increased share compared to 26 in 2018 fiscal year, 23 in fiscal 2017 and 17 in fiscal 2016.

The benefits of portfolio selection managers choose a few years ago are
clearly paying off - focusing and strengthening on portfolio in everyday use categories where performance drives brand choice - in categories where company ranks first or second in stocks that have historically grown faster than the balance of the company and done it with more profit. Daily use categories are important to retail partners as they drive shopping trips and consumer loyalty is often higher.

Additionally, shareholders and investors are important factors for the company and its progress in the market, because the use of their funds puts the management in the foreground the task of minimizing financial losses, which is achieved only by maintaining the sustainable economic development of the company.

### 4.2 Financial analysis of Procter \& Gamble

It's been decided by the author that the development of Procter \& Gamble's accounting items over 12 years due to the fact the author believes that 12 -years time period is sufficient time to analyze the financial environment of the company and to derive important conclusions.

Common-size analysis is a method of analyzing financial statement data and its changes over a period. It can be divided into two types, or in other words horizontal common size analysis, which is an analysis of the evolution of financial statement data over time and its changes with respect to a given period as a benchmark. The other is trend analysis or vertical analysis, which analyzes changes in the proportions of selected benchmarks.

Analysis of the internal structure of the vertical common-size analysis is more focused on the project inside the report. The main resources of information are balance sheet, income statement and cash flow statement. The application of the methodology consists in conducting an analysis based on analytical tables.

The indicators of the balance sheet, income statement and cash flow statement make it possible to make an overall assessment of the company, analyze the dynamics of estimated indicators, the structure of the primary items, the main directions of the economic and financial activities of the enterprise, identify trends in changes in the financial condition and factors influencing
these changes. Standard methods of financial analysis are used:
Horizontal and vertical analysis, ratio analysis, as well as comparison with standard values. Horizontal analysis is carried out to obtain a general idea of the development of the company, it allows to evaluate and track the dynamics of the relative change in various groups of assets and liabilities compared to the previous period: whether there has been a change in the share of any of the sections of the balance sheet or group of articles. The purpose of the vertical analysis is to calculate the shares and identify those balance lines that have the largest share of the balance sheet currency.

It's also necessary to mention that accounting data is reported in American dollars (USD\$), the national currency of the company. The financial condition of the enterprise from the point of view of the short term is characterized by indicators of liquidity and solvency, i.e. the ability to timely and in full make settlements on short-term obligations. In the practical part financial ratios will be analyzed.

When comparing the results of these groups, the absolute values of numbers will be determined at the beginning and end of the reporting period. Important to mention, in order to finalize the financial performance of the company, the results of the Procter \& Gamble, will be compared with competitors results for the last 3 years from 2017 till 2019.

### 4.2.1 Financial analysis of balance sheet

The common size analysis of the balance sheet can be divided into vertical analysis and horizontal analysis. In vertical analysis, proportion of current assets, non-current assets, liabilities and equity have been used to analyze the internal structure of each part. In horizontal analysis the growth trend of assets, current assets, non-current assets, liabilities and equity has been used in order to decompose the change of them over 2008-2019.

Common-size analysis is a method of analyzing financial statement data and its changes over a period. It can be divided into two types, one of which is horizontal common size analysis, which is an analysis of the evolution of financial statement data over time and its changes with respect to a given period as a benchmark. The other is vertical common-size analysis, which analyzes changes in the proportions of selected benchmarks. Analysis of the internal structure of the vertical common-size analysis is more focused on the
project inside the report.

### 4.2.1.1 Vertical common-size analysis of the balance sheet

From Table 4.3, goodwill and other non-current assets is owns a high proportion and is stable in a degree of $76 \%-79 \%$. Now, it is right to say these three tables and three charts: On one hand. Due to the fact that the proportion of long-term assets is very high, high liquidity and available for sales of the current assets are scare. Author can get conclusion that, in general, the liquidity of the assets in $\mathrm{P} \& \mathrm{G}$ company is low, operation efficiency is not effective enough, which is not good for the company to transfer the funds if it appeared some financial troubles. On the other hand, the change of the proportion of current assets and long-term assets is small over the time, that means the company's assets structure is stable, it's good for long time development.

### 4.2.1.2 Horizontal analysis of balance sheet

First of all, Table 4.1 and Chart 4.2 show the overall development of the total balance sum (total assets) displayed along with the basic structure of those assets over the last 12 years. From Table 4.1 and Chart 4.1 it can be seen that starting from 2008 till 2012 the growth trend of assets is decreasing from $\$ 143,992$ million to $\$ 132,244$ million mainly due to the worldwide crisis.

Additionally, there is a significant increase of total assets in 2013 and 2014 by 139,263 and 144,266 respectively. Mainly, due to the fact P\&G chose to focus on 4 of the largest industry groups - beauty, baby, feminine and family care, fabric and home care, health care and personal grooming. In general, the trend of assets is volatile during the whole period with high numbers in 2014 and low numbers in 2019 accordingly. According to the table, it can be seen that current assets have a less significant role in total assets. However, starting from 2015 it can be seen a steep decrease in assets mainly due to the fact that the sale of a Duracell brand of electrochemical cells was completed, and in October of the same year, $\mathrm{P} \& \mathrm{G}$ sold 43 cosmetic brands (including Wella and Max Factor brands) to Coty.

A closer and more numbered look at some of the particular movements of selected (most significant as for the value or movement) assets in the balance sheet are shown in Table 4.2. Differences in values between two consecutive years are shown as percentage changes. The changes again fluctuated in observed years from 2008-2019 period. We can clearly see that the number of

|  | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | 2017 | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current assets | 24,515 | 21,905 | 18,782 | 21,970 | 21,910 | 23,990 | 31,617 | 29,646 | 33,782 | 26,494 | 23,320 | 22,473 |
| Noncurrent assets | 119,477 | 112,928 | 109,390 | 116,384 | 110,334 | 115,273 | 112,649 | 99,849 | 93,354 | 93,912 | 94,990 | 92,622 |
| Total assets | 143,992 | 134,833 | 128,172 | 138,354 | 132,244 | 139,263 | 144,266 | 129,495 | 127,136 | 120,406 | 118,310 | 115,095 |

Figure 4.1: Development of the main assets' items in the 2008-2019 (Million US\$)

Source: (Own analysis based on financial data of the company, 2022)


Figure 4.2: Structure of assets in 2008-2019 (Million US\$)
Source: (Own analysis based on financial data of the company, 2022)
total assets was decreasing for $-10,65 \%$ between $2008-2009$ and $-14,26 \%$ in 2009-2010. It mainly depends on the financial worldwide crisis which affected the market in general.

After that there is a positive dramatic increase by $16,97 \%$ in 2011 , which means that the company started to recover after previous years. After positive increase for $31,79 \%$ in 2014 , this is the year when company decided to change the strategy and focus on specific brands, which bring the major part of income in order to improve the results which will be observed and discussed later in the diploma thesis, it can be clearly seen that the total assets decreasing starting from 2015 till 2019 constantly. The main part of current assets is cash and cash equivalents starting with a positive number of $44,31 \%$ in 2008-2009 and falling down for the -39,78\% in 2010.

There is a positive influence on cash in between 2013-2014 years mainly due to the new strategy activation.And, a major improvement of the indicator in 2019, showing a $65 \%$ increase comparing to previous month. Cash and cash equivalent is an important indicator to understand how much assets are liquid and how fast, for example, stocks and other trading securities can be easily sold in the public market and converted to cash.

Also, another major element of current assets is account receivables, mainly being volatile the whole period of time, but remaining positive and changing slightly during the last 3 years ( $5,05 \%$ increase $2017,2,00 \%$ increase in 2018, $5,66 \%$ increase in 2019). Account receivables is a main indicator showing a company's liquidity and ability to cover short-term obligations without additional cash flows. In case of total non-current assets, the trend is volatile as well, starting from $-5,29 \%$ drop in 2009 vs 2008 , and recovering by $6,28 \%$ in 2011 . Total non-current assets faced a positive increase during 2016-2918 years with a slight drop in 2019 fiscal year which in the end significantly affected total assets.

|  | 2009-2008 | 2010-2009 | 2011-2010 | 2012-2011 | 2013-2012 | 2014-2013 | 2015-2014 | 2016-2015 | 2017-2016 | 2018-2017 | 2019-2018 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |  |  |  |  |  |  |  |
| CURRENT ASSEIS |  |  |  |  |  |  |  |  |  |  |  |
| cash and cash equivalents | 44,31\% | -39,78\% | -3,86\% | 60,26\% | 34,06\% | 43,90\% | $-20,02 \%$ | 3,75\% | -21,59\% | -53,87\% | 65,01\% |
| Account receivable | -13,68\% | 8,58\% | 17,62\% | -3,30\% | 7,25\% | -1,87\% | -28,47\% | 4,27\% | 5,05\% | 2,00\% | 5,66\% |
| Materials and supplies | -31,17\% | 8,67\% | 27,25\% | -19,18\% | -2,07\% | 2,23\% | -27,32\% | -6,16\% | 10,10\% | 2,06\% | -3,45\% |
| Work in process | -12,16\% | -10,12\% | 18,71\% | $-4,46 \%$ | 5,40\% | -5,26\% | -23,25\% | 7,24\% | -6,04\% | 11,15\% | 4,08\% |
| Finished goods | -13,69\% | -12,10\% | 10,30\% | -4,72\% | 4,35\% | -3,35\% | -26,43\% | -6,99\% | -6,00\% | 1,00\% | 10,69\% |
| Total inventories | -18,25\% | -7,21\% | 15,59\% | -8,92\% | 2,80\% | $-2,17 \%$ | -26,34\% | -5,28\% | -1,95\% | 2,47\% | 5,89\% |
| Deferred income taxes | -39,91\% | -18,11\% | 15,15\% | -12,19\% | -5,29\% | 15,19\% | 24,18\% | 11,14\% | - | - | - |
| Prepaid expenses and other current assets | $-20,28 \%$ | -0,16\% | 38,01\% | -16,42\% | -0,16\% | 4,54\% | -29,5\% | $-2,03 \%$ | -19,37\% | -4,35\% | 8,41\% |
| TOTAL CURRENTASSETS | -10,65\% | -14,26\% | 16,97\% | -0,27\% | 9,49\% | 31,79\% | -6,23\% | 13,95\% | -21,57\% | -11,98\% | $-3,63 \%$ |
| PROPERTY PIANT AND EQUIPMENT, net | -5,71\% | $-1,12 \%$ | 10,65\% | $-4,30 \%$ | 6,33\% | 2,94\% | -11,88\% | $-1,37 \%$ | 2,62\% | 3,55\% | 3,26\% |
| Goodwill | -5,45\% | -4,42\% | 6,57\% | -6,58\% | 2,63\% | -2,69\% | -16,91\% | -0,61\% | 0,79\% | 1,06\% | -10,85\% |
| Trace marks and other intangible assets net | -4,75\% | -2,97\% | 3,11\% | -5,00\% | 1,88\% | -2,31\% | -18,91\% | -1,93\% | -1,39\% | -1,18\% | 1,31\% |
| TOTAL LONG-IERM ASSEIS | -5,29\% | -3,40\% | 6,28\% | -5,68\% | 3,13\% | -7,91\% | -10,58\% | 4,55\% | 0,60\% | 1,15\% | -2,49\% |
| OTHER NONCURRENT ASSEIS | $-10,11 \%$ | 3,45\% | 9,14\% | 5,85\% | 31,77\% | $-15,32 \%$ | -7,59\% | -4,96\% | 0,81\% | 3,51\% | 29,17\% |
| IOTALASSEIS | -6,36\% | $-4,94 \%$ | 7,94\% | -4,42\% | 5,31\% | 3,59\% | $-10,24 \%$ | -1,82\% | -5,29\% | -1,74\% | $-2,72 \%$ |

Figure 4.3: Movements of assets, 2008-2019 (\%)
Source: (Own analysis based on financial data of the company, 2022)

| S million | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current lisbilities | 30,958 | 30,901 | 24,282 | 27,293 | 24,907 | 30,037 | 33,726 | 29,79 | 30,77 | 30,21 | 28,237 |
| Noncurent liabilities | 43,54 | 40,833 | 42,46 | 43,06 | 43,302 | 40,517 | 40,564 | 40,517 | 38,383 | 34,418 | 37,19 |
| Total liabilities | 74,498 | 71,734 | 66,733 | 70,353 | 68,209 | 70,554 | 74,29 | 66,445 | 69,153 | 64,628 | 65,427 |
| Total sharcholders' equity | 69,494 | 63,099 | 61,439 | 68,001 | 64,035 | 68,709 | 69,976 | 63,05 | 63,05 | 55,778 | 52,883 |
| Total lisbilities and shareholders | 143,992 | 134,833 | 128,172 | 138,354 | 132,244 | 139,263 | 144,266 | 129,495 | 127,136 | 120,406 | 118,31 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| equity | 115,095 |  |  |  |  |  |  |  |  |  |  |

Figure 4.4: Development of liabilities, 2008-2019 (Million US\$)
Source: (Own analysis based on financial data of the company, 2022)


Figure 4.5: Structure of liabilities, 2008-2019 (Million US\$)
Source: (Own analysis based on financial data of the company, 2022)

In Tab 4.4 and Chart 4.5, the trend in total liabilities was generally unstable and decreased from $\$ 74,498$ million in 2008 to $\$ 67,516$ million in 2019, while fluctuating during the whole period. Total current liabilities decreased from $\$ 30,958$ million in 2008 to $\$ 30,011$ million in 2018. Overall shareholder's equity dramatically decreased from $\$ 69,494$ million in 2008 to $\$ 47,579$ million in 2019, with some quite upward numbers between 2012-2014 years.

Overall, the general trend is volatile meaning that the financial performance of the company is not stable and could be affected by different external factors. For example, the financial crisis from 2007 to 2010 may have been the main reason for the oversupply, resulting in a large number of products which cannot be sold, especially daily necessities. Therefore, the company did not have enough capital to operate between 2008-2012.

The decrease showed that during the financial crisis Procter \& Gamble had a really difficult situation with operations, most probably they produced much more than the customers wanted and could afford, which led to the huge gap between supply and demand.

|  | 2009-2008 | 2010-2009 | 2011-2010 | 2012-2011 | 2013-2012 | 2014-2013 | 2015-2014 | 2016-2015 | 2017-2016 | $2018-2017$ | 2019-2018 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Liabilities and Shareholders' Equity |  |  |  |  |  |  |  |  |  |  |  |
| CUFRENT LIABILTIES |  |  |  |  |  |  |  |  |  |  |  |
| Accounts pevable | -11,73\% | 21,25\% | 10,63\% | -1,27\% | 10,82\% | -3,60\% | -3,82\% | 14,59\% | 3,29\% | 7,39\% | .89,11\% |
| Accrued and other liabilities | -22,51\% | -0,49\% | 8,54\% | -10,78\% | 6,50\% | 1,94\% | -10,098 | -7,93\% | -5,71\% | 6,35\% | 21,204 |
| Debt due within one year | 24,73\% | 48,09\% | 17,81\% | -12,85\% | 42,93\% | 25,33\% | -22,99\% | -3,04\% | 16,31\% | 23,10\% | 5,97\% |
| total current labilitis | 0,18\% | 21,42\% | 12,40\% | 8,74\% | 20,60\% | 12,28\% | -11,67\% | 3,29\% | 1,82\% | 6,53\% | 6,28\% |
| LONG-IERMM DEBT | $-12,42 \% 6$ | 3,43\% | 3,15\% | -4,33\% | -9,34\% | 3,66\% | -7,49\% | 3,77\% | -4,79\% | 15,66\% | -2,24\% |
| Deferred income taxe5 | -8,92\% | 1,40\% | 1,54\% | -8,47\% | 6,86\% | -5,62\% | -10,17\% | -0,72\% | -10,83\% | -24,16\% | 11,94\% |
| OTHER NONCURRENT LIABILITIES | 15,64\% | 8,16\% | -2,36\% | 21,42\% | -12,50\% | -0,42\% | -19,96\% | 22,45\% | -20,06\% | 23,14\% | 0,46\% |
| TOTAL NONCLIRRENT LIABUITIES | -6,22\% | 3,98\% | 1,41\% | 0,56\% | -6,43\% | 0,12\% | -0,12\% | -5,27\% | $-10,33 \%$ | 8,05\% | 0,85\% |
| total labilties | -3,71\% | -6,97\% | 5,42\% | -3,05\% | 3,44\% | 5,30\% | -10,56\% | 4,08\% | -6,54\% | 1,24\% | 3,19\% |
| SHAREHOLDER'S EQUITY |  |  |  |  |  |  |  |  |  |  |  |
| Convertible class A preferred $\qquad$ | -3,07\% | -3,55\% | -3,37\% | -3,16\% | -4,85\% | $-2,29 \%$ | -3,06\% | -3,62\% | -3,08\% | -3,88\% | -4,03\% |
| Non-woting class B preferred stock,stated | - | - | - | - | - | - | - | - |  |  | - |
| Common stockstated value \$1 per share | 0,12\% | 0,02\% | 0,00\% | 0,00\% | 0,02\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% |
| Additional paid-in capital | 1,34\% | 0,95\% | 1,15\% | 1,24\% | 0,57\% | 0.59\% | -0,09\% | -0,22\% | -0,11\% | 0,32\% | -0,03\% |
| Reserve for ESoP debt retirement | 1,13\% | -89,93\% | 905.19\% | 0,00\% | -0,37\% | -0,89\% | -1,49\% | -2,27\% | -3,18\% | -3,60\% | -4,82\% |
| Accumulated other comprehensive income/loss | -10,36\% | 132,94\% | -73,74\% | 354,33\% | -19,65\% | 2,17\% | 66,80\% | 24,7\% | -8,02\% | 0,80\% | 1,27\% |
| Treasury stodkat cast | 17,59\% | 9,56\% | 9,74\% | 3,46\% | 3,39\% | 5,33\% | 1,87\% | 6,41\% | 14,04\% | 5,87\% | 1,20\% |
| Retained sarning | 16,99\% | 12,75\% | 9,39\% | 6,60\% | 6,43\% | 5,98\% | -0,22\% | 3,71\% | 9,29\% | 2,62\% | 3,77\% |
| TOTAL SHAREHOLDER'S EQUITY | -9,20\% | -2,63\% | 10,68\% | -5,33\% | 7,30\% | 1,84\% | -9,90\% | 0,00\% | -11,53\% | -5,19\% | -10,03\% |
| TOTAL LIABILITIES AND SHAREHOLDERS EQUITY | -6,36\% | -4,94\% | 7,94\% | -4,42\% | 5,31\% | 3,59\% | -10,24\% | -1,82\% | -5,25\% | -1,74\% | $-2,72 \%$ |

Figure 4.6: Movements of liabilities, 2008-2019 (\%)
Source: (Own analysis based on financial data of the company, 2022)

Numerical changes in numbers of the some particular numbers of the second part of the balance sheet are shown in the Tab 4.6. It represents as a previous tab the change between 2 consecutive years. From Tab 4.6, it can be seen that total shareholder's equity was decreasing till 2011, as other components of the right side of the balance sheet.

It can be also seen that total liabilities and shareholders equity increased to $7.94 \%$ in 2011. In general, total current liabilities were experiencing significant changes over the 12 years. For example, after 4 years of decreasing it went up one more time in 2013 by $20,60 \%$ and kept the trend till next year. Whereas, total non-current liabilities were showing a completely opposite situation in 2013. In the same year, the amount of total non-current assets decreased dramatically by $6,43 \%$. It is worth mentioning that in the same year the amount of debts decreased dramatically by $9,34 \%$. Despite that fact, total liabilities continue to show good results in 2013.

At the same time, decrease of total non current liabilities meant an increase of assets at the same time. When total non-current liabilities were decreasing from 43,302 \$million in 2012 to 40,517 Smillion in 2013, total long-term assets showed an increase from 105,138 millionin2012to108,426 million in 2013.

Mainly, it was due to the fact that Procter \& Gamble started to restructure its business. The company decided to cut the number of brands, intending to sell or liquidate the majority of them. At the same time, $\mathrm{P} \& \mathrm{G}$
is slashing its marketing budget by slashing TV and print advertising spending. Instead, the advertiser will increase marketing spending on sampling, the free distribution of product samples to consumers.

P\&G continued to transition to less expensive digital media in additional sampling. Company provided an opportunity for the consumer to take a sample, while not spending money; to get a taste, to get something for free, to get a sample of something.vMost often, sampling promotions could be found at the direct points of sale of the products of the company offered.

This is due to the fact that most consumers make a purchase decision already at the point of sale of the goods. So, with successful distribution, the buyer will immediately be interested in a new offer and the so-called spontaneous purchase effect will work. Company was also interested in getting more performance from TV and print advertising in part by reducing the number of advertising.

With regard to current liabilities, they have decreased noticeably over the years as it was mentioned in the beginning. Their value decreased by $0,18 \%$ in 2009 mainly due to the fact that account payable and accrued and other liabilities decreased by $11,73 \%$ and $22,51 \%$ respectively. Also, there was a significant decrease of $21,42 \%$ the year after, mainly due to the reduction of debt within one year by $48,09 \%$. In general, the company kept more funds than were used.

### 4.2.1.3 Vertical analysis of balance sheet

According to Tab 4.7 it can be seen that the share of current assets remains unstable during the whole period with no visible trend during the whole period. The highest $26,5 \%$ current assets reached in 2016 and $22,8 \%$ in 2015 respectively. Conversely, non-current assets reached their lowest number in respective years $-68,9 \%$ in 2016 and $69,2 \%$ in 2015.

Clearly, the share of non-current assets is the major part of total assets due to the fact that $\mathrm{P} \& \mathrm{G}$ operates in a capital-intensive industry, which is typical for such companies to process such an enormous amount of noncurrent assets and the company structured its assets in the most favorable manner for its shareholders.

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |  |  |  |  |  |  |  |  |
| CURRENT ASSETS |  |  |  |  |  |  |  |  |  |  |  |  |
| cash and cash equivalents | 2,30\% | 3,55\% | 2,25\% | 2,00\% | 3,35\% | 4,27\% | 5,93\% | 5,29\% | 5,59\% | 4,63\% | 2,17\% | 3,68\% |
| Account Receivable | 4,70\% | 4,33\% | 4,16\% | 4,54\% | 4,59\% | 4,67\% | 4,43\% | 3,53\% | 3,44\% | 3,82\% | 3,96\% | 4,30\% |
| IMVENTORIES |  |  |  |  |  |  |  |  |  |  |  |  |
| Materials and supplies | 1,57\% | 1,15\% | 1,32\% | 1,56\% | 1,32\% | 1,22\% | 1,21\% | 0,98\% | 0,93\% | 1,09\% | 1,13\% | 1,12\% |
| Work in process | 0,53\% | 0,50\% | 0,47\% | 0,52\% | 0,52\% | 0,52\% | 0,47\% | 0,41\% | 0,44\% | 0,44\% | 0,50\% | 0,53\% |
| Finished goods | 3,74\% | 3,45\% | 3,19\% | 3,26\% | 3,25\% | 3,22\% | 3,00\% | 2,46\% | 2,33\% | 2,31\% | 2,38\% | 2.71\% |
| Total inventories | 5.84\% | 5,10\% | 4,98\% | 5,33\% | 5,08\% | 4.96\% | 4,69\% | 3,84\% | 3,71\% | 3,84\% | 4,00\% | 4,36\% |
| Deferred income takes | 1,40\% | 0,90\% | 0,77\% | 0,82\% | 0,76\% | 0,68\% | 0,76\% | 1,05\% | 1,19\% | - | - | - |
| Prepaid expenses and other current assets | 2,79\% | 2,37\% | 2,49\% | 3,19\% | 2,79\% | 2,64\% | 2,67\% | 2,09\% | 2,09\% | 1,78\% | 1,73\% | 1,93\% |
| TOTAL CURRENT ASSETS | 17,03\% | 16,25\% | 14,65\% | 15,88\% | 16,57\% | 17,23\% | 21,92\% | 22,89\% | 26,57\% | 22,00\% | 19,71\% | 19,53\% |
| PROPERTY PLANT AND EQUIPMENT, net | 14,33\% | 14,43\% | 15,01\% | 15,39\% | 15,41\% | 15,56\% | 15,46\% | 15,18\% | 15,25\% | 16,52\% | 17.41\% | 18,48\% |
| Goodwill | 41,51\% | 41,91\% | 42,14\% | 41,60\% | 40,66\% | 39,63\% | 37,23\% | 34,46\% | 34,88\% | 37,12\% | 38,18\% | 34,99\% |
| Trademarks and other intangble assets net | 23,77\% | 24,18\% | 24,68\% | 23,58\% | 23,43\% | 22,67\% | 21,38\% | 19.31\% | 19,29\% | 20,09\% | 20.20\% | 21,04\% |
| TOTAL LONE-TERM ASSETS | 79,62\% | 80,53\% | 81,84\% | 80,57\% | 79,50\% | 77,86\% | 69,21\% | 68,95\% | 73,43\% | 78,00\% | 80,29\% | 80,47\% |
| OTHER NONCURRENT ASSETS | 3,36\% | 3,22\% | 3,51\% | 3,55\% | 3,93\% | 4,92\% | 4,02\% | 4,14\% | 4,01\% | 4,26\% | 4,49\% | 5,96\% |
| TOTAL ASSETS | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% |

Figure 4.7: The proportion of assets, 2008-2019 (\%)
Source: (Own analysis based on financial data of the company, 2022)

Consequently, vertical analysis was applied to the company's balance sheet to determine the composition of the capital of the company and the sources of its financing.

Tab 4.7 presents development of the structure of P\&G assets during 20082019. Over the period, P\&G proceeded on average $30 \%$ in goodwill and which brought up a significant share between 2008-2019 and remains fluctuating throughout the whole period starting from $41,51 \%$ in 2008 and $34,99 \%$ in 2019. The next significant point is trademarks and other intangible assets, which fluctuates in average around $19-23 \%$. The smallest part long-term assets refer to other long-term assets. They account from 4 to $5 \%$ of total value of non-current assets.

It is clear that $\mathrm{P} \& \mathrm{G}$ has a fluctuating tendency. For instance, the share of current assets was declining starting from 2008 from $17,03 \%$ till 2010 year to14,65\% gradually.After there was a slight increase to $15,88 \%$ in 2013 comparing with previous month's $1,23 \%$ increase, which was followed by decrease again in 2017. There is a significant increase of current assets in 2016, up to $26,57 \%$ followed with continuous decrease till the end of fiscal year 2019.

Mainly, it was due to a strategic decision to return positions of the company back to the high results and investing money in innovations. The main share of current assets is cash and cash equivalents which had the lowest
value in 2011 ( $2,00 \%$ ) comparing the whole period of time. Also, according to the results of the analysis, the total non-current assets of the company decreased throughout the period between 2008-2015 constantly, except for a small increase of $81,84 \%$ in 2011.

However, there is a visible increase in 2016 and with continuous increasing trend till the fiscal year 2019. Also, there is a slight decrease in property, plant and equipment to $15,46 \%$ in 2014 which correlated with a decrease of the non-current assets in the same year mentioned above. In general, the proportion of non-current assets is the major in total assets, which means that the liquidity of the current assets of the company is low. On the other hand, the change of the current and non-current assets is remaining steep, which brings up a conclusion that the structure of the company's assets is stable and efficient for long-time development.

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Liabilities and Shareholders' Equity |  |  |  |  |  |  |  |  |  |  |  |  |
| CURRENT LIABILITIES |  |  |  |  |  |  |  |  |  |  |  |  |
| Accounts pavable | 4,71\% | 4,44\% | 5,66\% | 5,80\% | 5,99\% | 6,30\% | 5,86\% | 6,28\% | 7,33\% | 8,00\% | 8,74\% | 0,98\% |
| Accrued and other liabilities | 7,71\% | 6,38\% | 6,68\% | 6,71\% | 6,27\% | 6,34\% | 6,24\% | 6,25\% | 5,86\% | 5,83\% | 6,31\% | 7.87\% |
| Debt due within one vear | 9,09\% | 12,10\% | 6,61\% | 7,21\% | 6,58\% | 8,93\% | 10,82\% | 9,28\% | 9,17\% | 11,26\% | 8,81\% | 8,43\% |
| TOTAL CURRENT LIABILITIES | 21,50\% | 22,92\% | 18,94\% | 19,73\% | 18,83\% | 21,57\% | 23,38\% | 23,00\% | 24,20\% | 25,09\% | 23,87\% | 26,07\% |
| LONG-TERM DEBT | 16,38\% | 15,32\% | 16,67\% | 15,93\% | 15,94\% | 13,72\% | 13,73\% | 14,15\% | 14,90\% | 14,98\% | 17,63\% | 17,72\% |
| DEFERRED INCOME TAXES | 8,20\% | 7,97\% | 8,51\% | 8,00\% | 7,66\% | 7,77\% | 7,08\% | 7,09\% | 7,17\% | 6,75\% | 5,21\% | 5,99\% |
| OTHER NONCURRENT LIABILITIES | 5,66\% | 6,99\% | 7,96\% | 7,20\% | 9,14\% | 7,60\% | 7,30\% | 6,51\% | 8,12\% | 6,86\% | 8,59\% | 8,87\% |
| TOTAL NONCURRENT LIABILITIES | 30,24\% | 30,28\% | 33,13\% | 31,12\% | 32,74\% | 29,09\% | 28,12\% | 31,29\% | 30,19\% | 28,58\% | 31,43\% | 32,59\% |
| TOTAL LIABILITIES | 51,74\% | 53,20\% | 52,07\% | 50,85\% | 51,58\% | 50,66\% | 51,50\% | 51,31\% | 54,39\% | 53,58\% | 55,30\% | 58,66\% |
| SHAREHOLDER'S EQUITY |  |  |  |  |  |  |  |  |  |  |  |  |
| Convertible class A preferred stock,stated | 0,95\% | 0,98\% | 1,00\% | 0,89\% | 0,90\% | 0,82\% | 0,77\% | 0,83\% | 0,82\% | 0,84\% | 0,82\% | 0.81\% |
| Non-voting class B preferred stock,stated | - | - | - | - | - | - | - | - | - | - | - | - |
| Common stock, stated value \$1 per share | 2,78\% | 2,97\% | 3,13\% | 2,90\% | 3,03\% | 2,88\% | 2,78\% | 3,10\% | 3,15\% | 3,33\% | 3,39\% | 3,48\% |
| Additional paid-in capital | 41,88\% | 45,33\% | 48,14\% | 45,11\% | 47,78\% | 45,62\% | 44,30\% | 49,31\% | 50,11\% | 52,86\% | 53,97\% | 55,46\% |
| Reserve for ESOP delot retirement | -0,92\% | -0,99\% | -0,11\% | -0,98\% | -1,03\% | -0,97\% | -0,93\% | -1,02\% | -1,01\% | -1,04\% | -1,02\% | -1,00\% |
| Accumulated other comprehensive income/loss | -2,60\% | -2,49\% | -6,10\% | -1,48\% | -7,06\% | -5,38\% | -5,31\% | -9,87\% | -12,51\% | -12,15\% | -12,47\% | -12,98\% |
| Treasury stock, at cost | -33,05\% | -41,50\% | -47,83\% | -48,63\% | -52,63\% | -51,68\% | -52,55\% | -59,64\% | -64,64\% | -77,83\% | -83,86\% | -87,24\% |
| Retained carning | 34,02\% | 42,50\% | 50,41\% | 51,09\% | 56,98\% | 57,59\% | 58,91\% | 65,49\% | 69,18\% | 79,83\% | 83,38\% | 82,47\% |
| TOTAL SHAREHOLDER'S EqUITY | 48,26\% | 46,80\% | 47,93\% | 49,15\% | 48,42\% | 49,34\% | 48,50\% | 48,69\% | 49,59\% | 46,32\% | 44,70\% | 41,34\% |
| TOTAL LIABILITIES AND SHAREHOLDERS EQUITY | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% |

Figure 4.8: The proportion of shareholder's equity and liabilities, 2008-2019 (\%)

Source: (Own analysis based on financial data of the company, 2022)
In Tab 4.8 it can be seen that the most important element of non-current liability is long-term debt, the higher the proportion of long-term debt, the higher capitalization of corporate debt and the higher the pressure to repay long-term debt. For example, the general amount of long-term debt
from 2008-2019 for the P\&G is volatile and fluctuating from from $16,38 \%$ in 2008 to $17,72 \%$ in 2019 which means that the company was deliberately recovering from the financial crisis by improving its overall financial portfolio.

As well as, the increase in debt was mainly to fund the company's share repurchase program. The increase in long-term debt from 2018 to 2019 was primarily due to net debt issued to stock general corporate purposes. Procter \& Gamble maintains short-term and long-term liabilities, considering appropriate conditions after evaluating some significant factors.

It includes cash flow expectations, cash requirements about operation, investment and financing plans, including acquisitions and share repurchase activities, as well as the total cost of capital. The company will not face much liquidity risk as short-term debt does not bring pressure as long-term debt. The enterprise can raise long-term debt and raise funds by increasing fixed assets, expanding the scope of activities. As a conclusion, it can be clearly seen that the structure of short-term liabilities, long-term liabilities and equity is stable. The company has to control the share of short-term debt and long-term debt, and improve liquidity.

Factors that can influence long-term debt are the situation with supply and demand in the bank's credit policy and in the capital market, the company's need for long-term capital, maintaining the rights and interests of structural stability, as well as adjusting the debt structure and financial risk. This could be the main reason why P\&G created its own way to avoid the impact of the financial crisis and minimized the possibility of getting bankrupt.

First, during the global financial crisis, the company was forced to stop recruiting new staff and change its advertising activities. Advertising for Gillette razors and other Procter \& Gamble products has practically disappeared from television screens, but has appeared on the net. Secondly, the company decided to implement a multi-brand strategy. When it comes to brands, $\mathrm{P} \& G$ 's principle is that if there is room for certain types of markets, it's much better. These "other brands" are also owned by P\&G.

The multi-brand strategy has given P\&G an extremely important market share in the industry. Procter \& Gamble sells well in all brands: different marketing, not just a multi-label brand, but the pursuit of differences between similar products of different brands, including function, packaging, advertising, a special logo is formed for each product.

Therefore, each brand has its own development space, and the market is not overlayed. The second one is brand extension. After strengthening the area, $P \& G$ used the reliable brand effect fixed in the minds of consumers to gain more areas. For instance, cosmetics, household products, food and other fields have also launched their own brands, which is an effective use of the brand extension model.

However, brand extension is not easy, especially in the long term, it comes with the resulting disadvantages: first, the success of the brand expansion will destroy the existing, people will think the company does not work enough for it, the original brand will gradually become vague and unreliable. Brand expansion means diversification or the introduction of more varieties, which violates the focus and proprietary strategies and dissipates the company's limited resources, resulting in bad effects in both ways.

Lastly, P\&G has built "bridges" into its business model to connect internal resources and developments with the outside world: technology entrepreneurship and internet platforms. Also, P\&G's leading scientists monitor what is happening in the outside world in order to make the right decisions in the field of $\mathrm{P} \& \mathrm{G}$ research and development. Through Internet platforms, $\mathrm{P} \& \mathrm{G}$ is joining forces with professionals around the world.

Platforms like InnoCentives allow P\&G to get some of its research work out to outsiders. P\&G engages retired scientists through YourEncore.com, a platform the company launched specifically as an open innovation bridge to the outside world. To sum up, all of the key elements of the balance sheet were volatile mainly with the decreasing trend. However, Procter \& Gamble after implementing some of the innovative decisions, can be seen that the company's financial performance became better and more stable in the 2019 fiscal year.

### 4.2.2 Analysis of income statement

In Analysis of income statement, we can divided into vertical analysis and horizontal analysis.In vertical analysis, we use the proportion of revenues and costs to analyze the structure of income statement.In horizontal analysis, we use the growth trend of revenues and costs to analyze the change in income statement over the time.

### 4.2.2.1 Horizontal analysis of income statement

| Million USS | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue | 79257 | 76694 | 78938 | 81104 | 83680 | 84167 | 83062 | 70749 | 65299 | 65058 | 66832 |
| 67684 |  |  |  |  |  |  |  |  |  |  |  |
| Cost of products sald | 39261 | 38690 | 37919 | 39859 | 42391 | 42428 | 42460 | 37056 | 32909 | 32535 | 34268 |

Figure 4.9: Details of revenues and cost of sales, 2008-2019 (Million US\$) Source: (Own analysis based on financial data of the company, 2022)


Figure 4.10: Growth trend of income, 2008-2019 (Million US\$)
Source: (Own analysis based on financial data of the company, 2022)
In Tab 4.9 and Chart 4.10, it can be seen that all items are changing in a small proportion and generally smooth. Also, it can be mentioned that the cost of products sold have grown significantly in 2013 and 2014. It can be seen that revenue was declining throughout the first three financial years starting from 2008 to 2010.

However, in 2011 revenue was increasing slightly in 2011 to $\$ 81104$ million and was increasing till 2013. In 2014 it decreased slightly to $\$ 83062$ million and decreased all the following years till 2019 fiscal year. However, if we compare 2018 and 2019 results, we can see that despite the general decreasing trend, revenue of the 2019 fiscal year increased comparing to 2018 results.

It could be explained that as part of its strategy over the past five years, PG has reduced its list of brands from 175 to 65 , focusing on the 10 product categories where margins are highest and in the year 2019 benefits of this choice started to finally pay off. It can be seen that the cost of products sold
are developing volatile as well.
They were decreasing the same year from $\$ 39261$ million in 2008 to $\$ 37$ 919 million in 2010. However, the same as revenues, in 2011 it started to increase to $\$ 39859$ million. It is also worth mentioning that every increase of costs is accompanied with a similar and adequate increase of revenue.

The main explanation is that the company decided to try an anti-crisis marketing strategy and after 2011, the financial crisis has gradually eased, and many companies have begun to restart their marketing methods. After 2011, Procter Gamble has increased investment into marketing.

We can see that until 2012, the revenue indeed increased, but went slightly down in 2014 and after years. Mainly, the company decided to focus on leading brands or brands with leadership potential sold in the right countries where the prize size and the probability of winning are the highest, with the products that are on sale.

The company was going out of business, brands, product lines, and nonproductive products that were structurally unattractive or that did not take full advantage of the company's strengths.

| Million USS | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cost of products sold | 39261 | 38690 | 37919 | 39859 | 42391 | 42428 | 42460 | 37056 | 32909 | 32535 | 34268 |
| Seling general and administrative <br> expense | 24017 | 22630 | 24998 | 25750 | 26421 | 26950 | 25314 | 20616 | 18949 | 18568 | 18853 |
| Goodwill and indefinite lived <br> intangible asset impaimment charges | - | - | - | - | 19084 |  |  |  |  |  |  |
| Interest expense | 1467 | 1358 | 946 | 831 | 769 | 667 | - | 2028 | - | - | - |

Figure 4.11: Details of selling and expenses, 2008-2019 (Million US\$) Source: (Own analysis based on financial data of the company, 2022)


Figure 4.12: Details of selling and expenses, 2008-2019 (Million US\$) Source: (Own analysis based on financial data of the company, 2022)

Tab 4.11 and Chart 4.12 represent the main expenses that the company had: cost of products sold, selling, general and administrative expenses, goodwill and indefinite lived intangible asset impairment charges and interest expense, where goodwill and indefinite lived intangible asset impairment charges have the main proportion.

Including that, there is a steep development of cost which can be considered as a good sign as well. It can be clearly seen that the goodwill and indefinite intangible asset impairment charges are decreasing starting from 2015 till the fiscal year 2018. However, charges grew significantly in the 2019 fiscal year to $\$ 8345$ million.

It might be because in april 2018 P\&G announced the acquisition of the over-the-counter business of the German chemical and pharmaceutical company Merck KGaA and in December 2018 the Walker \& Company Brands business was acquired.

Even though the company reported the highest profits in 2013, their interest income remained the lowest the remaining year. In general the trend of cost decreasing from 2014 till 2018 accordingly with the slight increase in 2019 to $\$ 34768$ million.

| $\$_{\text {million }}$ | 200092008 | 2010.2009 | $2011-2010$ | 2012-2011 | 2013.2012 | 2014-2013 | 2015-2014 | 20162015 | $2017-2016$ | 2018.2017 | 2019-2018 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SET SALES | 3,23\% | 2,93\% | 2,74\% | 3,18\% | 0,58\% | 1,31\% | 14,82\% | 7,70\% | 0,37\% | 2,73\% | 1,27\% |
| cost of procucts sold | -1,45\% | -1,99\% | 5,12\% | 6,35\% | 0,09\% | 0,03\% | -12,73\% | -11,19\% | -1,14\% | 5,33\% | 1,46\% |
| selling general and administrative expense | -5,78\% | 10,46\% | 3,01\% | 2,61\% | 2,00\% | -6,07\% | -18,56\% | -8,09\% | -2,01\% | 1,53\% | 1,23\% |
| Goodwill and indefinite lived intanghble asset impaitment charges |  |  |  |  | -80,46\% | -100,00\% |  | -100,00\% |  |  |  |
| Opmating inxome | -3.79\% | 4,21\% | -3,28\% | -14.22\% | 8,95\% | 5,57\% | -27,73\% | 21.65\% | 3,82\% | -1,75\% | -59,98\% |
| interest expense | -7,43\% | -30,34\% | -12,16\% | -7,46\% | -13,26\% | 6,30\% | -11,71\% | -7,51\% | -19,69\% | 8,82\% | 0,59\% |
| other non-operating imcomelexpensane: | 6,43\% | -107, $05 \%$ | -1289, 29\% | -21,32\% | 259,54\% | -77,81\% | 110,53\% | -26,14\% | -224,31\% | -68,81\% | -791,27\% |
| $\begin{gathered} \text { EARNING BIFORIE INCONE } \\ \text { TAXIS } \\ \hline \end{gathered}$ | -3,17\% | 4,40\% | -0,33\% | -14,75\% | 16,10\% | 0,23\% | -26,02\% | 21,40\% | -0,84\% | 0,52\% | -54,46\% |
| income tares on coutinuing operations | 0,00\% | 14,11\% | -19,56\% | 5,12\% | -0,78\% | -7,64\% | -14,25\% | 22,64\% | -8,35\% | 13,12\% | -39,31\% |
| NET EARNINGS FROM CONTINUNG OPER ATIONS | -5,41\% | 2,49\% | 6,87\% | -20,35\% | 22,38\% | 2,67\% | -29,21\% | 21,00\% | 1,67\% | -3,27\% | -59,78\% |
| NET EARNINGSIOSS FROM Discontinued OPERATIONS | 251,53\% | -93,51\% | 27,93\% | 593,01\% |  |  | -1565, $38 \%$ | -150,48\% | 804,16\% |  |  |
| NET EARNINGS | 11.27\% | 5,21\% | 6,35\% | 8,58\% | 4,57\% | 3,36\% | 39,38\% | 48,43\% | 45,33\% | . $36.01 \%$ | 59,78\% |
| BASTC NET EARNINGS PER COMMON SHARE | - | - | - | - | - |  |  | - |  |  |  |
| earnings from contimuing operations | -1,66\% | 4,23\% | 9,19\% | -19,80\% | 24,69\% | 2,97\% | -29,81\% | 22,95\% | 5,57\% | -1,06\% | -100,00\% |
| eamings from diecontinued oparations | 276,00\% | -34,04\% | -87,10\% | 625,00\% |  |  | -1500,00\% | -150,00\% | 857,14\% |  |  |
| DILUTED NET EARNING PER COMNON SHARE | - | - | - | - | - | . | - | - | - | - | - |
| earning from continuing operations | -0,29\% | 4,13\% | 7,65\% | -17,89\% | 23,72\% | 3,11\% | -28,64\% | 22,89\% | 5,73\% | -0,54\% | -60,49\% |
| enming fism discontimed operations | 262,50\% | -33,33\% | 37,93\% | -32,50\% |  |  | $-233,33 \%$ | -150,00\% | -5;00\% |  |  |
| DILUTED NET EARNINGS PER COMMON HHARE | 17,03\% | -3,5\%\% | -4,38\% | -6,87\% | 5,46\% | 3,89\% | -39,15\% | 51,23\% | 51,49\% | -34,35\% | -61,04\% |
| DIVIDENDS PER COMMON SHARE | 13,10\% | 9,76\% | 9,44\% | 8,63\% | 7,01\% | 6,99\% | 5,71\% | 2,70\% | 1,50\% | 3,33\% | 48,75\% |

Figure 4.13: Horizontal analysis of income statement, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)
Tab 4.13 shows the movement of income statement items during the whole period. It shows that operating income differently acts during the whole period with the negative and positive difference.It can be seen that net earnings were decreasing from 2009 to 2012 continuously, with the increase in 2013 and 2014.The main decrease of net earning came to 2019 with $-59,78 \%$ decrease comparing with previous year, despite the fact that revenue in the following year increased to $1,27 \%$ the same years.

The main explanation, why net earning decreased to 3966 million US\$ due to the increase of goodwill and impairment charges. Including net earning, operating income and earning before taxes were decreasing for $-59,98 \%$ and $-54,46 \%$ respectively in 2019 . It should be mentioned that income taxes in 2019 also decreased to $-39,31 \%$ vs previous year.

As we can see from the table above, the changes in net earnings are quite similar to the changes of operating income. This means that the influence of financial operation profit has in absolute has a minor effect on net earnings value.

### 4.2.2.2 Vertical analysis of income statement

| \$ million | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% | 100,00\% |
| cost of products sold | 49,54\% | 50,45\% | 48,04\% | 49,15\% | 50,66\% | 50,41\% | 51,12\% | 52,38\% | 50,40\% | 50,01\% | 51,27\% | 51,37\% |
| selling general and administrative expense | 30,30\% | 29,51\% | 31,67\% | 31,75\% | 31,57\% | 32,02\% | 30,48\% | 29,14\% | 29,02\% | 28,54\% | 28,21\% | 28,20\% |
| Goodwill and indefinite lived intangible asset impairment charges | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 1,88\% | 0,37\% | 0,00\% | 2,87\% | 0,00\% | 0,00\% | 0,00\% | 12,33\% |
| Operating income | 20,16\% | 20,05\% | 20,30\% | 19,11\% | 15,88\% | 17,21\% | 18,41\% | 15,62\% | 20,58\% | 21,45\% | 20,52\% | 8,11\% |
| interest expense | 1,85\% | 1,77\% | 1,20\% | 1,02\% | 0,92\% | 0,79\% | 0,85\% | 0,88\% | 0,89\% | 0,71\% | 0,76\% | 0,75\% |
| other non-operating incomelexpense,net | 0,47\% | 0,52\% | -0,04\% | 0,41\% | 0,31\% | 1,12\% | 0,25\% | 0,62\% | 0,50\% | -0,62\% | -0,19\% | 1,29\% |
| EARNING BEFORE INCOME TAXES | 18,78\% | 18,79\% | 19,06\% | 18,49\% | 15,28\% | 17,64\% | 17,92\% | 15,56\% | 20,47\% | 20,38\% | 19,94\% | 8,97\% |
| income taxes on continuing operations | 4,53\% | 4,69\% | 5,20\% | 4,07\% | 4,14\% | 4,09\% | 3,83\% | 3,85\% | 5,12\% | 4,71\% | 5,18\% | 3,11\% |
| NET FARNINGS FROM CONTINUING OPERATIONS | 14,25\% | 1,39\% | 13,87\% | 14,42\% | 11,13\% | 13,55\% | 14,09\% | 11,71\% | 15,36\% | 15,67\% | 14,75\% | 5,86\% |
| NET EARNINGSIOSS FROM DISCONIINUED OPERATIONS | 0,99\% | 3,59\% | 0,23\% | 0,28\% | 1,90\% |  | 0,09\% | -1,62\% | 0,88\% | 8,02\% |  |  |
| NET EARNINGS | 15,24\% | 17,52\% | 16,13\% | 14,71\% | 13,03\% | 13,55\% | 14,19\% | 10,10\% | 16,24\% | 23,69\% | 14,75\% | 5,86\% |
| BASTC NET EARNINGS PER COMMON SHARE | - | - | - | - | - | - | - | - | - | - | - | - |
| earnings from continuing operations | 0,46\% | 0,46\% | 0,05\% | 0,50\% | 0,39\% | 0,48\% | 0,50\% | 0,41\% | 0,55\% | 0,58\% | 0,56\% | 0,00\% |
| earnings from discontimued operations | 0,03\% | 0,12\% | 0,08\% | 0,01\% | 0,07\% | - | 0,00\% | -0,06\% | 0,03\% | 0,31\% | - | 0,00\% |
| DILUTED NET EARNING <br> PER COMMON SHARE | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% | 0,00\% |
| earning from continuing operations | 0,04\% | 0,44\% | 0,45\% | 0,05\% | 0,37\% | 0,46\% | 0,48\% | 0,40\% | 0,53\% | 0,57\% | 0,55\% | 0,21\% |
| eaming from discontinued operations | 0,03\% | 0,11\% | 0,07\% | 0,01\% | 0,06\% | - | 0,00\% | -0,01\% | 0,00\% | 0,03\% | - | - |
| DILUTED NET EARNINGS PER COMMON SHARE | 0,46\% | 0,56\% | 0,52\% | 0,48\% | 0,44\% | 0,46\% | 0,48\% | 0,34\% | 0,57\% | 0,86\% | 0,55\% | 0,21\% |
| $\begin{aligned} & \hline \text { DIVIDENDS PER } \\ & \text { COMMON SHARE } \end{aligned}$ | 0,18\% | 0,21\% | 0,02\% | 0,24\% | 0,26\% | 0,27\% | 0,29\% | 0,37\% | 0,41\% | 0,04\% | 0,42\% | 0,21\% |

Figure 4.14: Vertical analysis of income statement, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)
Despite the analysis of trends from year to year it's important to understand the relative structure of each income statement. In this vertical analysis of income statements as a base of comparison are used the sum of revenues and how much each of the elements take a part of the revenue.

As we can see, the main source of incomes for the whole period were revenues from sold goods, which in that case all the revenues from: Beauty: P\&G skincare and beauty products. Brands in this segment: Olay, Old Spice, Guard, grooming: Product and Gamble offers shave care products and accessories such as razors, pre shave and after shave products in their grooming segment, healthcare, fabric care and home care: $\mathrm{P} \& \mathrm{G}$ offers fabric care products under the Ariel and Tide brands, baby, women, and family Care: P\&G offers baby care products such as diapers and baby wipes under
the pampers brand.
Obviously, the major part of revenues is the cost of products sold, which fluctuated during the whole period, but with the growing tendency to last 5 years from 2015 till 2019. Another point to mention is selling, general and administrative expenses which took a significant part as well, varying from $30,30 \%$ in 2008 and $28,20 \%$ in 2019, which is the decreasing tendency during the last 5 years.

In general, costs are a significant factor of revenue, indicating that operating income is only a small fraction of overall net sales. It is worth mentioning that the company was focusing on decreasing expenses on marketing campaigns during the last 5 years, using so-cold marketing in house. In 2019, the company outsourced most of its North American media business to Dentsu's Carat.

How much of this work, which included media planning responsibilities for their personal health, baby care, and fabric care brands, is done in-house by two people who know the plan. When the income statement is analyzed, it's important to take into consideration the operating income. Operating income varies from $20,16 \%-8,11 \%$. In general, costs are a significant factor of revenue, indicating that operating income is only a small fraction of overall net sales.

In conclusion, after a huge business restructuring in 2014, when the company got rid of a significant part of its brands, as the author has already mentioned, PG's profit and revenue began to grow steadily only in the end of 2018 fiscal year. Most of the operations were focused around 10 business categories -daily-use products where performance drives brand choice and each division has its own head responsible for sales and brand development.

Also, it's important to mention other external factors such as weakening developing market economics and the unpredictable negative impact of foreign exchange affecting the decreasing trend of revenues. Due to the fact that Procter Gamble is dollar-denominated company headquartered in the US worldwide sales and profits were negatively impacted by foreign exchange, which is also seen from the trend analysis.

### 4.2.3 Analysis of cash flow statement

The final part of common-size analysis of financial statements focuses on the cash flow statement of Procter \& Gamble company. As it was mentioned by the author in the theory section of this article, cash flow is an absolute necessity for any business, it helps to analyze the optimum level of cash and working capital needed in the company.

That's why Graph 4.6 and Table 4.7 provided relevant data about the development of cash flow in Procter \& Gamble during 2008-2019 years. In order to see the trends and development of the company's cash flow there is a detailed analysis provided. In Graph 4.6, we see that operating cash flow is $\$ 15008$ million decreased in 2009 to $0,59 \%$. Operating cash flow significantly increased in 2010 comparing to 2009 to $7,73 \%$ increasing from 14909 \$million to $\$ 16072$ million.

The inflow in 2010 was partly due to a decrease in working capital balances. However, revenue decreased vs 2009. The increase in operating cash flow could be due to the reduction in working capital balances and partly offset by decrease in income compared in 2009. The trend of cash flow is volatile and it's difficult to define a clear development.

After 2010, cash flow has significantly dropped till the year 2013. Generally, with the drop in 2014 and 2017, cash flow of Procter Gamble increased till the end of fiscal year 2019. As well as, account receivable were down the last 3 years due to the improvement of collections, as well as inventories contributed operating cash flow decreased for the last 2 years from 2018 to 2019 due to improvement of management inventory efforts.

Figure 4.15: Horizontal analysis of cash flow, 2008-2019 (\%)
Source: (Own analysis based on financial data of the company, 2022)


Figure 4.16: Horizontal analysis of cash flow, 2008-2019 (\%)
Source: (Own analysis based on financial data of the company, 2022)

In order to see the structure of cash flows respectively its individual components, Chart 4.16 is provided. Chart 4.16 shows the development of three keys of cash flow components: cash flow from operating, investment and financial activities. It's clear that the development of individual parts of the CF is much less stable than the general movement.

Obviously, cash flows from financing and operating activities had high volatility. We can see that financing activities have been lowering the company's cash flows for the last 3 years. There is a clear negative correlation between those two activities, mostly because a large part of the financing activities includes dividend payouts and repayments of debts which understandably increase (oppositely, reduces the cash flows).

As for the cash flows from investment activities, the largest movements could have been seen in capital expenditures, which varied on average about $\$ 3000$ million in the last 3 years. Cash flow from financing activities was decreasing mostly by repayments of dividends to shareholders, especially in 2019 about - 7498 million US $\$$ and repayments of debts - 2225 million US $\$$ in the same year.

In conclusion, as it was mentioned above by the author, cash flows from
financing activities have negative correlation with the overall cash flow and on this matter the company's negative values are regular and normal.


Figure 4.17: Components of cash flow, 2008-2019 (Million US\$) Source: (Own analysis based on financial data of the company, 2022)

### 4.3 Financial ratio analysis

The structure and order of the calculated coefficients will correspond to the theoretical part so it will be analyzed starting with profitability ratios.

### 4.3.1 Profitability ratio analysis

Generally, profitability measures the performance of a company. Profitability is the ability of the company to make a profit, that is, what remains of the income received after deducting all costs and income-related expenses.

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Profitability |  |  |  |  |  |  |  |  |  |  |  |  |
| Operating <br> Profit Margin | 20,16\% | 20,05\% | 20,30\% | 19,11\% | 15,88\% | 17,21\% | 18,41\% | 15,62\% | 20,58\% | 21,45\% | 20,52\% | 8,11\% |
| Net Profit Margin | 15,24\% | 17,52\% | 16,13\% | 14,71\% | 13,03\% | 13,55\% | 14,19\% | 10,10\% | 16,24\% | 23,69\% | 14,75\% | 5,86\% |
| Returin on investment |  |  |  |  |  |  |  |  |  |  |  |  |
| ROA | 8,39\% | 9,96\% | 9,94\% | 8,62\% | 8,25\% | 8,19\% | 8,17\% | 5,52\% | 8,34\% | 12,80\% | 8,33\% | 3,45\% |
| ROE | 17,38\% | 21,29\% | 20,73\% | 17,54\% | 17,03\% | 16,59\% | 16,84\% | 11,33\% | 16,82\% | 27,63\% | 18,65\% | 8,34\% |

Figure 4.18: Profitability ratio analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)


Figure 4.19: Profitability ratio analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)

### 4.3.1.1 Operating profit margin

The overall operating margins is calculated exclusively from operating profits divided by net sales. As it was mentioned, operating profit margin shows how much the operating costs are in comparison to the revenue.

A positive operating margin indicates that a business can make enough money to cover the operating costs. On the other hand, a negative operating margin informs that revenue is not enough to cover operating costs. Mainly, the average operating profit margin during 2008-2011 kept the same and averaged $20 \%$.

However, in 2012 operating profit margin decreased to $15,88 \%$ which means that cost of products sold these years increased and as a consequence revenue increased. Indeed, operating profit margin in 2012 is 0,1588 million US\$ and 0,1910 million US\$ in 2011.

However, the lowest operating profit margin reached $8,11 \%$ in 2019 which is, to be exact, 0,081 million USS mainly due to the fact the operating income reached its lowest in 2019 ( 5487 million US\$) and revenue reached 67684 million US $\$$ which is the highest comparing to the last 3 years.

### 4.3.1.2 Net profit margin

Net profit margin equals the company's net income divided by revenue. As can be seen from Tab 4.18, net profit margin is as well as operating profit margin measured in \%. The reason why Net Profit Margin kept high in 2009 and 2010 is because neat earnings were high in these years, compared to others.

Net Profit Margin reached its highest in 2017 up to $23,69 \%$ due to the fact that net earnings reached 15411 million US $\$$ and selling, general and administrative expense reached its lowest which is 18568 million US $\$$.

Also, net earning, loss from discontinued reached in highest up to 5217 million US\$ in the same year. At the same time, Net Profit Margin reached its lowest in 2019 fiscal year - $5,86 \%$ due to the fact that administrative expenses increased and net earning reached its lowest - 3966 million US\$, which is directly correlated with Net Profit Margin.

### 4.3.1.3 ROA

The total ROA generally reflects how profitable a company is in relation to its total assets. Within it shows how efficient management is at using it in generating income. ROA reached its highest in 2017 reaching $12,80 \%$ while net income reached the highest the same year.

Oppositely, the company reached the lowest of only 3,45\% in fiscal year 2019 which means that the company was utilizing its assets less efficiently over the year. The assets of the company consisted of both debt and equity.

Those 2 are used to fund the operations of the $\mathrm{P} \& \mathrm{G}$ company. And the higher the ROA, the better is the company's economic situation. This is mainly because the company is able to make more money on less investment activities.

### 4.3.1.4 ROE

ROE is the amount of net profit returned as a percentage of equity. Return on equity means a company's profitability by expressing how much profit a company generates with the money that shareholders have invested. In addition, in order to see how effective ROE is, it will be compared to the ROE of "Unilever" and analyzed right after.

It can be seen that the general trend of ROE is volatile during the whole period, however it increased during 2008-2009, which means that company has robust return during the financial crisis. The most significantly ROE changed during the year 2017, which can be seen in a Chart 4.19, mainly due to the fact that long-term debt decreased to 18038 million US $\$$.

### 4.3.2 Liquidity ratio analysis

Liquidity can answer a company's operation. In this particular financial analysis, how current assets which are relatively liquid in nature and its comparison to liabilities was analyzed.

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Liquidity Ratios |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Current } \\ & \text { Ratio } \\ & \hline \end{aligned}$ | 0,79 | 0,71 | 0,77 | 0,80 | 0,88 | 0,80 | 0,94 | 1,00 | 1,10 | 0,88 | 0,83 | 0.75 |
| Quick Ratio | 0,33 | 0,34 | 0,34 | 0,33 | 0,42 | 0,41 | 0,44 | 0,38 | 0,37 | 0,34 | 0,26 | 0,31 |
| Cash Ratio | 0,11 | 0,15 | 0,12 | 0,10 | 0,18 | 0,20 | 0,25 | 0,23 | 0,23 | 0,18 | 0,09 | 0,14 |

Figure 4.20: Liquidity ratio analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)


Figure 4.21: Liquidity ratio analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)

### 4.3.2.1 Current ratio

In general, the current ratio has a volatile trend of development during the whole period. during 2008-2017, it was increasing except for 2009, 2011 and 2013. However, the current ratio is below 1 , which shows that the company does not have a strong position to repay its debts. Current ratio is 1 in 2015, which means that the value of total current assets is the same as the value of total current liabilities. In 2016 current liabilities reached 33782 million US\$, while total current liabilities reached 30770 million US\$ which makes the current ratio equal 1,10 .

### 4.3.3 Quick ratio

Quick ratios were unstable during the first six-years period with the continuous decreasing trend from 2014 till 2018 and increased slightly in 2019. Specifically, paying attention to the last 6 years, it can be mentioned that total current liabilities were decreasing from 2014 to 2018, which means that the company had a good paying ability.

### 4.3.3.1 Cash ratio

Cash ratio is most commonly used as a measure of the company's liquidity. It can illustrate how quickly the company can repay the short-term liabilities. The normal level of cash ratio is $20 \%$, while P\&G cash ratios reach this amount only during 2013-2016. The level of cash ratio which indicates less than $20 \%$ shows that the company's ability of the cash necessary to pay its short-term liabilities has receded. Cash ratio reached its lowest point in 2019 reaching only 0,09 because the assets were decreased and reduced the speed even more than liabilities. Mainly, the company relied on non-cash items to increase operating cash flow.

### 4.3.4 Activity ratio analysis

These ratios are often referred to as operating ratios or management ratios, which measure efficiency with which the business uses its assets. The ratios which will be specifically analyzed are receivables turnover, days sales outstanding (DSO), total assets turnover.

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Activity ratio |  |  |  |  |  |  |  |  |  |  |  |  |
| Receivables <br> Tumover | 11,72 | 13,14 | 14,80 | 12,92 | 13,79 | 12,93 | 13,01 | 15,49 | 14,93 | 14,16 | 14,26 | 13,67 |
| Days sales outstanding (DSO) | 31,14 | 27,77 | 24,67 | 28,24 | 26,47 | 28,22 | 28,06 | 23,57 | 24,44 | 25,77 | 25,59 | 26,70 |
| Total Asset turnover | 0,61 | 0.59 | 0,60 | 0,62 | 0,64 | 0,64 | 0,63 | 0,54 | 0,50 | 0,50 | 0,51 | 0,52 |

Figure 4.22: Activity ratios analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)


Figure 4.23: Activity ratios analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)

### 4.3.4.1 Receivable turnover

Receivable turnover rate refers to a certain period of time (usually a year) that the average number of receivables into cash could be collected. The longest turnover time was in 2016 and reached 14,93 , whereas the lowest turnover was in 2008-11,72.

### 4.3.4.2 Days sales outstanding(DSO)

Days sales outstanding (DSO) is considered as the average number of days it takes a company to receive payments for sale. It can be seen that the highest days sales outstanding were in 2008 reaching 31,14. It means that in that particular amount of days the company was receiving payment for a sale.

As we can see, it's the largest number of DSOs, so we can say that the company was experiencing the delay the most in 2008. However, the lowest the company reached in 2015 with the amount of 23,57 means the company was getting payments the quicker this year. If we consider the last 3 years, DSO was decreasing during 2017-2018 and increased to 26,70 in 2019.

### 4.3.4.3 Total assets turnover

Total assets turnover shows the efficiency with which assets are used. The lowest point in reporting time comes in 2016-2017 years, reaching 0,50 . The highest comes in 2013-2014 reaching 0,64. In general, total assets turnover's value is below 1 , which means that total assets are not able to produce enough revenue at the end of the year. And indeed in 2016-2017 company's assets started to decrease.

### 4.3.5 Solvency ratios

Solvency ratios are also called leverage ratios, which measure a company's ability to meet its long-term obligations and how the company is financed. The basic types of how solvency ratios are visualized are debt ratio, debt-toequity ratio, interest coverage.

|  | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Solvency ratios |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Debt ratio | 0,52 | 0,53 | 0,52 | 0,51 | 0,52 | 0,51 | 0,51 | 0,51 | 0,54 | 0,54 | 0,55 | 0,59 |  |  |  |
| Debt-fo-equity ratio | 1,07 | 1,14 | 1,09 | 1,03 | 1,07 | 1,03 | 1,06 | 1,05 | 1,10 | 1,16 | 1,24 | 1,42 |  |  |  |
| Interest coverage | 10,89 | 11,32 | 16,94 | 18,65 | 17,28 | 21,71 | 21,56 | 17,65 | 23,21 | 30,01 | 27,10 | 10,78 |  |  |  |

Figure 4.24: Solvency ratios analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)


Figure 4.25: Solvency ratios analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)

### 4.3.5.1 Debt ratio

Debt ratio basically means what percentage of the company's assets is financed by debts. It indicates how much assets are financed via debt, the index is comprehensive to evaluate the level of debt in the company. Debt ratio of $\mathrm{P} \& \mathrm{G}$ varies from 0,51 to 0,59 which means that in general debt ratios are normal. It literally indicates that the proportion of liabilities in all total assets is around $50 \%$, which makes $P \& G$ performance low-risky and operations stabilized.

### 4.3.5.2 Debt-to-equity

Deb-t-to-equity refers to the amount of the company's debt relative to company's equity. Lower ratio means, company is able to pay long-term obligations. On that matter, the company reached its lowest point in 2011 and 2013 , which is exactly $103 \%$.

### 4.3.5.3 Interest coverage

Interest coverage illustrates the extent to which a company's operating profit is able to meet current interest payments. it's a risk warning index, especially to recognize if the company is in financial trouble. In the case
of $\mathrm{P} \& \mathrm{G}$, interest coverage exceeds 10 , which makes the company extremely liquid and able to pay the interest without any risk.

### 4.3.6 Market ratio analysis

For the last group of measures related to the market values of the company and consequently is based on the information which is not necessarily published in financial statements. As a result, it would be possible to calculate these measures just for public trade companies i.e for those which are listed in the stock exchange market. 5 significant elements of market ratio are represented in Table 4.26.

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Market ratios |  |  |  |  |  |  |  |  |  |  |  |  |
| Earnings per share | 364 | 426 | 411 | 393 | 366 | 386 | 401 | 244 | 369 | 559 | 367 | 143 |
| Shares | 33,17 | 31,54 | 30,99 | 30,35 | 29,79 | 29,54 | 29,39 | 29,28 | 28,74 | 27,57 | 26,87 | 27,73 |
| Book value per share | 2094,89 | 2000,61 | 1982.68 | 2240,66 | 2149,38 | 2326,05 | 2381,02 | 2153,44 | 2194,03 | 2023,22 | 1968,16 | 1715,53 |
| Dividend payout | 0.40 | 0,38 | 0.44 | 0.50 | 0,58 | 0,59 | 0,61 | 1.06 | 0.72 | 0.48 | 0,76 | 1,00 |
| Dividend yield | 0,93 | 1,05 | 1,16 | 1,27 | 1,38 | 1,47 | 1,58 | 1,67 | 1.71 | 1,74 | 1,79 | 0,92 |

Figure 4.26: Market ratio analysis, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)
If we talk about share price development, which is already displayed in table above and Chart 4.27, it's clear that prices have decreased since the beginning of 2008 with a small recovery increase in 2019. The data has been monitored for the last 12 years from 2008 till 2019 in order to get a better perspective about the crisis development. In general, shares reached the highest value in 2008, most probably due to some promotions and significant marketing activities and the lowest in 2018 due to low net earnings.


Figure 4.27: Development of share price, 2008-2019
Source: (Own analysis based on financial data of the company, 2022)

One of the most important indicators for investors is a stable development is earnings per share. However, it's an upward/downward trend rather than the value of it. Procter Gamble has again a volatile trend in earning per share with no stable development, which has been affected by profit of the company. However, the decreasing trend in the last 3 years is caused by the strategic decision of the company to get rid of small brands and focus on the ones which bring the most revenue.

Mainly, BVPS is calculated as a division of money based items(equity) by dimensionless amounts. Results of BVPS as well as other ratios working with forex rates are greatly influenced by development of the foreign exchange market which is why they should be regarded as a little bit less relevant in common cases. Well, the largest book share per value reached in 2013 was about 23260,05.

Dividend payout does not have a stable pattern compared to earnings per share. Even if the dividend payout will be stable, despite that fact management should take the market situation into consideration. Dividend payout mainly reached 1 in 2019, which means that $100 \%$ of profit of the company was given back to shareholders and 0 left for the future use of the company.

### 4.4 Comparison with financial-ratio analysis of "Unilever" company

In order to understand and process the financial data analysis of Procter Gamble, there will be the comparison with the competitor analyzed. As a competitor, "Unilever" has been chosen as both companies operate in one market field. Unilever is a multinational consumer goods company. Key categories which the company supplies mainly are food and beverages, cleaning products, personal care products and beauty products.

The company's products are currently distributed in over 190 countries. Total number of brands developed by the corporation accounts for over 400 brands. About 2.5 billion people use Unilever products in everyday life, and about 155,000 employees work at the company's facilities around the world.

Key elements of Unilever's strategic vision include a focus on continuous business growth through improved sales and capital efficiency, improved health and the well-being of its customers through the development of food and health and hygiene products, improving living standards through workplace fairness and equal opportunity for women and reducing the environmental impact of business.

In order to see how well both companies manage their financial performances, following ratios have been analyzed: profitability ratio, liquidity ratio, activity ratio. As well as for Procter Gamble, annual reports from 2017-2019 were analyzed and results for each of the categories were explained. It's worth mentioning. that the data for the comparison is in a range of the last 3 years, starting from 2017 till 2019 due to the fact that on the fresh data with the latest trends it will be easier to determine what drives the performances of both companies.

The results of profitability ratios are shown in Table 4.28 and the comparison with the result of Procter \& Gamble are illustrated.

|  | 2017 | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ |
| :--- | :---: | :---: | :---: |
| Profitability <br> Operating Profit <br> Margin | $15,78 \%$ | $25,09 \%$ | $16,82 \%$ |
| Net Profit Margin | $9,65 \%$ | $11,87 \%$ | $18,02 \%$ |
| ROA | $6,71 \%$ | $7,90 \%$ | $11,53 \%$ |
| ROE | $38,04 \%$ | $53,11 \%$ | $71,02 \%$ |

Figure 4.28: Profitability ratios of "Unilever", 2017-2019
Source: (Own analysis based on financial data of the company, 2022)

Starting with operating profit margin, it can be seen that 2017-2018 year were more or less in line for both of companies, however Operating Profit Margin for PG dropped significantly in 2019 to 8,11\%, whereas for Unilever it kept around $16 \%$ which means that Unilever's business operations were better in 2019, which leads to the conclusion that Unilever were more profitable.

If we talk about the net profit margin, both companies have quite the opposite trend, for Procter Gamble net profit margin was decreasing during 3 years continuously, for Unilever it was growing continuously and reaching the highest in 3 years- 18\%, which means that Unilever has better net income generation from current operations. In case of ROA, the situation is the same, for Unilever it kept around $11,53 \%$, however for Procter Gamble it's about $3,45 \%$, which was the lowest for the company in 12 years. It means that Unilever has a better asset utilization than Procter Gamble.

And the last one is ROE, which performed much better for Unilever than for Procter \& Gamble, which means that Unilever is more effective in utilization of available resources. In conclusion, it can be mentioned that Unilever has a better and more profitable business model.

The analysis of liquidity ratios is oriented on the assessment of the existing risks of poor quality of debt management in the current operations. The elements of liquidity ratios shown in Table 4.29:

|  | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ |
| :--- | :---: | :---: | :---: |
| Liquidity Ratios |  |  |  |
| Current Ratio | $78,32 \%$ | $76,81 \%$ | $73,28 \%$ |
| Quick Ratio | $31,67 \%$ | $26,83 \%$ | $20,93 \%$ |
| Cash Ratio | $8,24 \%$ | $5,24 \%$ | $6,10 \%$ |

Figure 4.29: Liquidity ratios of Unilever, 2017-2019
Source: (Own analysis based on financial data of the company, 2022)

The parameter of current ratio is applied to assess the capabilities of the organization in the aspect of the provision of current assets to current liabilities. For both companies the current ratio varies from $70 \%$ to $80 \%$ and keeps at the same level. In general, the current ratio is less than $100 \%$ and can not be considered as the desired outcome for the organization. In both ways, companies can not accumulate the required value of current assets to current liabilities.

The parameter of quick ratio is increased in 2019 for Unilever and fluctuated for Procter \& Gamble, reaching $31 \%$, which means that Procter Gamble is more liquid in this case.

The parameter of cash ratio is fluctuating for Unilever and reaching 6,10\% in 2019, while for P\&G it's $14 \%$, which means that P\&G has a better ability to cover its short-term obligations. In general, PG has a better strategic business development model and in terms of liquidity is more trust-worthy.

The analysis of activity ratios is also called as efficiency ratios is used to indicate how efficiently a company is leveraging the assets on its balance sheet to generate revenues and cash. In Table 4.30 activity ratios, receivables turnover, days sales outstanding (DSO) and total assets turnover will be analyzed. Receivables turnover were decreasing for Unilever as well as for Procter Gamble, reaching $10,57 \%$ and $13,67 \%$ respectively.

Receivables turnover generally means how many times per year a company manages to collect receivables. When we talk about Days sales outstanding, it can be seen that it increased to 34,51 for Unilever and 26,70 for Procter Gamble, which means that the 2 company has a high proportion of cash sales. Total assets turnover shows the efficiency with which assets are used.

For both companies total assets turnover is less than 1, which is generally not a good sign due to the fact companies do not have enough assets to produce enough revenue.

|  | 2017 | 2018 | 2019 |
| :--- | :---: | :---: | :---: |
| Activity ratios |  |  |  |
| Receivables <br> Turnover | 15,62 | 11,72 | 10,57 |
| Days sales <br> outstanding (DSO) | 23,36 | 31,14 | 34,51 |
| Total Asset turnover | $69,52 \%$ | $66,57 \%$ | $63,99 \%$ |

Figure 4.30: Activity ratios of Unilever, 2017-2019
Source: (Own analysis based on financial data of the company, 2022)
In general, Procter Gamble and Unilever have been the two companies that define the home goods space the most, dominating categories such as detergents, soaps, deodorants and condiments. Generally, it seems like Unilever has been more profitable for the last 3 years. There are several reasons why: a peak in Unilever activity in 2017 came after Kraft Heinz, supported by Warren Buffett, offered to buy the company.

Unilever rejected the deal, but shares remained high nonetheless. Apart from this event, these two stocks have been mostly flat for the past five years. Let's take a look at where the two consumer goods companies are today and which one is the best investment. However, in the case of Procter Gamble, the company decided to cut off a major shift in strategy, selling off smaller brands to narrow its focus and invest in the most important moneymakers.

The company sold Duracell Berkshire Hathaway, Cover Girl and dozens of other beauty brands to Coty, and Iams and other pet food brands to Mars, a private company. P\&G appears to be battling competition from small niche brands that have proven attractive to millennials and found ample advertising opportunities in the age of social media and e-commerce. Like Procter Gamble, Unilever has been reporting slow growth lately.

As consumer goods multinationals face several growth hurdles, the company is more focused on expanding its portfolio rather than shrinking it, as PG did. The company has made several acquisitions in recent years, including Dollar Shave Club, ketchup maker Sir Kensington's, Tazo, and Seventh Generation.

## Chapter 5

## DISCUSSION AND RECOMMENDATIONS

Sometimes it seems as if there are more solutions than problems. On closer scrutiny, it turns out that many of today's problems are the result of yesterday's decisions. Thomas Sowell.

After these 5 chapters, the author completed the financial analysis of the company for a certain period of time from 2008 till 2019 fiscal year. In chapter 2 , theoretical introduction of financial analysis is described. In chapter 4, the general company's financial position is analyzed. This chapter helps to understand how the Procter \& Gamble company makes qualitative and quantitative analysis of the financial statements of the company: balance sheet, income statement, cash flow statement.

Generally speaking, during the analyzed period of 12 years from 2008 till 2019 the financial performance of the company was influenced by a lot of external and internal decisions and economic situations. The results of vertical analysis showed that company P\&G has a fluctuating tendency. For instance, the share of current assets was declining starting from 2008 from $17,03 \%$ till 2010 year to14,65\% gradually.After there was a slight increase to $15,88 \%$ in 2013 compared with previous year's.

There is a significant increase of current assets in 2016, up to $26,57 \%$ followed with continuous decrease till the end of fiscal year 2019. If we analyze total assets, it can be noticeable that the company's annual total assets in 2008 were 143992 million US $\$$, whereas it decreased to 115095 million US\$ in 2019 which means that company was still recovering from financial crisis consequences.

Due to the fact that from 2008 till 2013 performance of the company was not profitable and the company was not generating enough revenue to generate, they decided to change the strategy significantly. In 2014, the CEO announced a major change, first of all, there was a significant reduction in the number of brands: about a hundred of them were decided to be sold or closed.Diapers and baby care products began to be promoted, offering them to new mothers as a test even in maternity hospitals.

This approach made it possible by the end of 2014 to regain lost ground in this direction. In the same year, it became known that the corporation intends to significantly cut the advertising budget, as it considers modern advertising to be expensive, but not an effective means of promotion. At the same time, it cannot be said that the company has evened out its position: despite the fact that revenue in 2014 amounted to $\$ 83$ billion, this indicator was unstable during the year and reached $\$ 70$ billion so in 2015.

Further, the financial ratio analysis shows how efficiently a company used its resources in terms of its total assets. Generally speaking, after implementation of the new strategy in 2014, the company slightly showed better results, however in 2019 the financial performance changed to the worst. For example, the amount of net earnings decreased to 3966 million $\$$ US this year, reaching the lowest amount in 12 years, but impairment charges increased to 8435 million US\$, which is a lot.

In addition, the assessment of financial stability was calculated using financial ratios. The liquidity of the company is unsatisfactory, but the company does not own large amounts of assets, and they are easily converted into cash.The company manages its assets relatively well which is shown by the activity coefficients. We can summarize that a company should definitely lower its selling, general and administrative expenses and should be careful in making excessive investments, reducing operating costs in general as it straight away affects operating income.

At the moment, the corporation is still struggling with the crisis. At the same time, the level of its revenue remains a dream for many companies. Procter \& Gamble's problem is not only the presence of unprofitable brands, but also a complex structure that definitely needs to be handled appropriately.

## Chapter 6

## CONCLUSION

Procter \& Gamble is one of the largest manufacturers of consumer goods with a focus on household and personal care products, whose brands include Pampers, Ariel, Gillette, Head \& Shoulders, Pantene, Oral-B and Old Spice.Consumer goods, which include PG products, are non-cyclical, i.e. demand for them is more stable even during recessions than, for example, for selective demand goods.

Also, the main part of the goods is all-season, i.e. sales do not vary depending on the season, with the exception of some health products and some electrical appliances. Despite the fact that Procter \& Gamble 2019 results are the topic for discussion, organic sales continue to grow.

The main advantage of Procter \& Gamble, As part of the restructuring, P\&G has embarked on massive cost reductions. During the restructuring, the company cut costs significantly. And the strategy, which was implemented in 2014 finally started to pay off - focusing on and strengthening portfolio in everyday use categories where performance determines brand choice - by category where company is in position number one or two on the beat, which have historically grown faster than the balance and which operate with more profit.

Daily use categories are important to retail partners because they stimulate shopping trips, and consumer loyalty is often above. Also, P\&G has several brands with annual sales of $\$ 1$ billion or more.

The remaining 65 major brands are at the top of their categories. These products are associated with high quality and consumers will shell out their money for them. To maintain its competitive position, the company started
to invest heavily in research and innovative marketing which it can do thanks to its financial capabilities

P\&G has many of the strengths that make it a time-honored dividend growth company. But legendary companies with a long history, like P\&G, sometimes have to change direction, which the company did. With a significant reshuffling of its brand portfolio, P\&G is forecasted to be in a good position again to capture global growth opportunities.

## Chapter 7

## REFERENCES

A. Ross, S. A., Westerfield, R. W. and Jordan, B. D. (2015) Fundamentals of corporate finance. 11th ed. New York, NY: McGraw-Hill Professional.
B. Dumitrescu, D., Dragota, V. and Ciobanu, A., 2000. Evaluarea intreprinderii. Bucuresti: Editura Economica.
C. Elliott, B. and Elliott, J. (2004) Financial accounting and reporting. 9th ed. Harlow, England: Financial Times Prentice Hall.
D. Vance, D. E. (2002) Financial analysis and decision making: Tools and techniques to solve financial problems and make effective business decisions. Maidenhead, England: McGraw Hill Higher Education.
E. Dinu, E., 2001. Analiza economica si financiara a firmei. Bucuresti: Editura A.S.E.
F. Gheorghiu, A., Iosif, G. and Isfanescu, A., 1999. Ghid practic de analiza economico-financiara. Bucuresti: Tribuna Economica.
G. Livingstone, J., 2002. The Portable MBA in Finance and Accounting, Third Edition. New York: John Wiley Sons.
H. Hawamdeh, S., 2007. Creating Collaborative Advantage Through Knowledge And Innovation. Singapore: World Scientific.
I. Elliott, B. and Elliott, J., 2006. Financial accounting, reporting and analysis. Harlow: Finanical Times/Prentice Hall.
J. Robu, V., Anghel, I. and Serban, E., 2014. Analiza economico-financiara a firmei. Bucuresti: Editura Economica.
K. BREALEY, R., 2022. Fundamentals of Corporate Finance. Columbus: McGraw-Hill US Higher Ed USE.
L. Ryan, B. and Ryan, B., 2008. Finance and accounting for business. London: Soth-Western/Cengage Learning.
M. Peng, Q., 2009. International Conference on Transportation Engineering, 2009. Reston, VA: American Society of Civil Engineers.
N. Rejda, G., 2008. Principles of risk management and insurance. Boston: Pearson/Addison Wesley.
O. Carlon, S., n.d. Financial accounting.
P. Muro, V., 1998. Handbook of financial analysis for corporate managers. New York: AMACOM.
Q. Kimmel, P., Weygandt, J. and Kieso, D., n.d. Financial accounting.
R. Lucarelli, C. and Brighetti, G., 2011. Risk tolerance in financial decision making. Basingstoke, Hampshire: Palgrave Macmillan.
S. Subramanyam, K., n.d. Financial statement analysis.
T. Reinalda, B. and Verbeek, B., 1998. Autonomous policy making by international organizations. London: Routledge.
U. Finney, R., 2000. Office finances made easy. New York: AMACOM.
V. Doumpos, M., Zopounidis, C. and Pardalos, P., 2012. Financial decision making using computational intelligence. New York: Springer.
W. Parnell, G., 2012. Handbook of decision analysis. Hoboken, New Jersey: Wiley.
X. Wang, X., 2006. Financial management in the public sector. Armonk, N.Y.: M.E. Sharpe.
Y. Palepu, K., 2016. Business Analysis and Valuation. Cengage Textbooks.
Z. Standfield, K., 2005. Intangible finance standards. Burlington, MA: Elsevier Academic Press.
. Dickie, R., 2006. Financial statement analysis and business valuation for the practical lawyer. Chicago, IL: ABA Section of Business Law, American Bar Association.
. Soffer, L. and Soffer, R., 2003. Financial statement analysis. Upper Saddle River, NJ.: Prentice Hall.
. Palepu, K., Bernard, V. and Healy, P., 1996. Business analysis valuation. Cincinnati: South-Western College Pub.
. Corporation, N., 2019. Associate Management Analyst. Chicago: National Learning Corporation.
. Shajahan, S. and Priyadharshini, R., 2004. Management information systems. New Delhi: New Age International (P) Ltd.
. Everling, O., 2015. Credit Analyst. Berlin/Boston, Germany: De Gruyter.
. Markarian, G., 2008. Analyst forecasts, earnings management and insider trading patterns. Saarbrucken, Germany: VDM Verlag Dr. Muller.
. Hyde, J. and Cooper, F., 2001. Managing the business of health care. Edinburgh: Bailliere Tindall.
. Scheer, A., 2006. Corporate performance management. New York, NY: Springer.
. Riolo, R., Soule, T. and Worzel, B., 2007. Genetic programming theory and practice IV. New York: Springer.
. Enoch, C. and Segoviano, M., 2014. Switzerland. Washington, D.C.: International Monetary Fund.
. SCHAFFER, R., 2022. INTERNATIONAL BUSINESS LAW AND ITS ENVIRONMENT. [S.l.]: CENGAGE LEARNING.
. HILTON, R., 2019. MANAGERIAL ACCOUNTING. [Place of publication not identified]: MCGRAW-HILL EDUCATION.
. Nisbet, R., Elder, J. and Miner, G., 2009. Handbook of statistical analysis and data mining applications. Amsterdam: Academic Press/Elsevier.

## Chapter 8

## APPENDIX

Appendix A Balance sheet of Procter \& Gamble

Appendix B Income statement of Procter \& Gamble
Appendix C Cash flow of Procter \& Gamble
Appendix D Balance sheet of Unilever
Appendix E Income statement of Unilever

